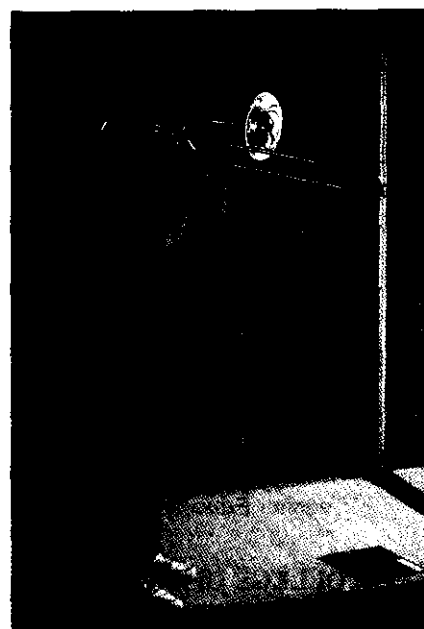
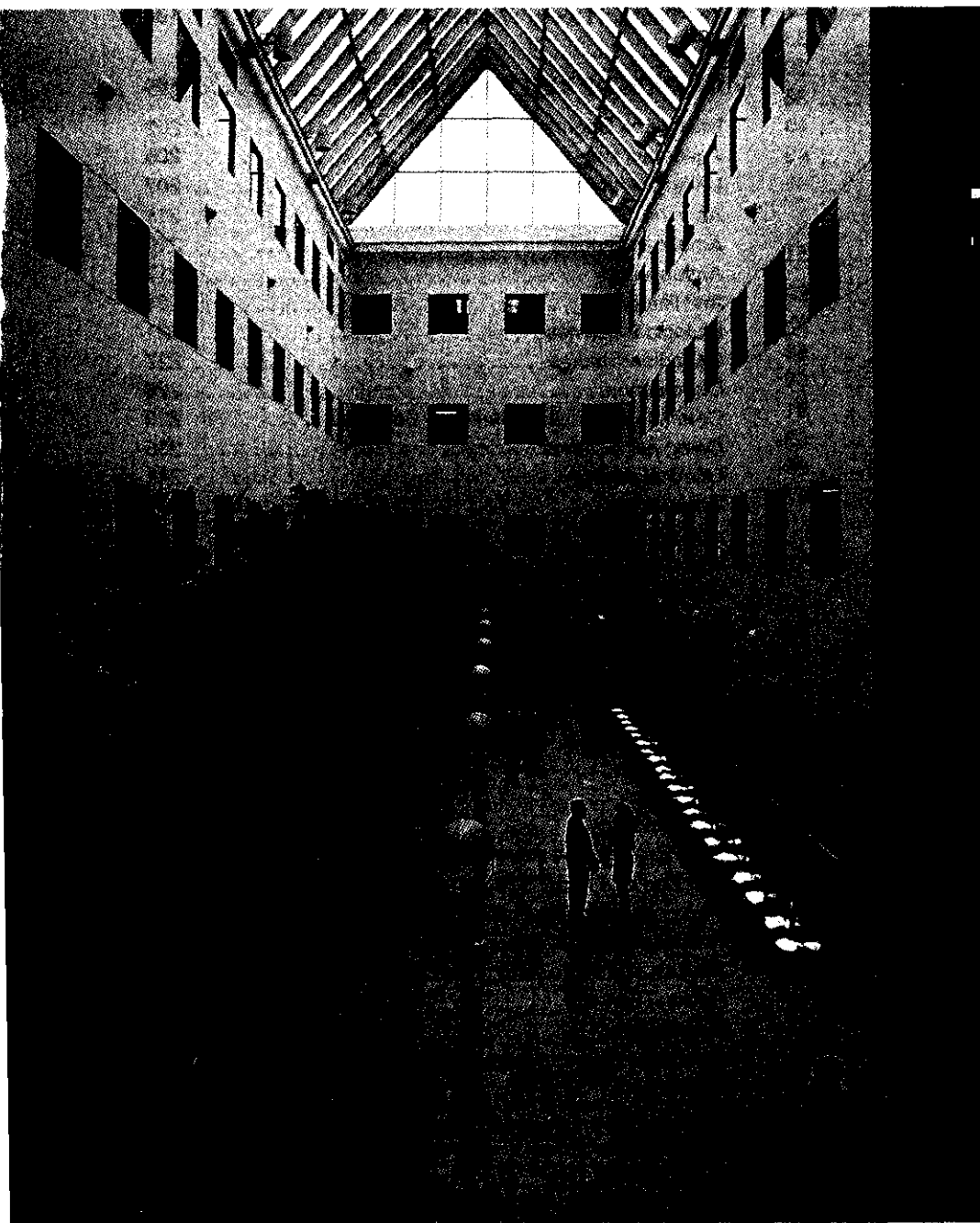


WAYNE STATE UNIVERSITY

UNDERGRADUATE BULLETIN



1991-1993



Wayne State University

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1991-1993 Academic Calendar

Spring/Summer Term, 1991

Term begins	Wed., May 1, 1991
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
Examination week for Spring/Summer Session	Mon., July 29 - Thurs., Aug. 1
Classes end for Summer Session	Tues., Aug. 13
Study Day for Summer Session	Wed., Aug. 14
Examination period for Summer Session	Thurs., Aug. 15 - Fri., Aug. 16
Spring/Summer Term ends	Mon., Aug. 26, 1991

Fall Term, 1991

² University year appointments begin	Tues., Aug. 27, 1991
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 Day recess	Thurs., Nov. 28 - Sat., Nov. 30
Classes end	Wed., Dec. 11
Study Day	Thurs., Dec. 12
Commencement	Thurs., Dec. 12
Examination week	Fri., Dec. 13 - Thurs., Dec. 19
Holiday recess	Wed., Dec. 25, 1991 - Wed., Jan. 1, 1992
Term ends	Tues., Dec. 31, 1991

Winter Term, 1992

Term begins	Wed., Jan. 1, 1992
Final registration	Mon., Jan. 6 - Thurs., Jan. 9
Classes begin	Mon., Jan. 13
Last day for filing degree applications	Mon., Jan. 13
Mail registration for Spring/Summer Term	Mon., Feb. 24 - Fri., March 13
Spring recess	Mon., March 6 - Sat., March 21
Classes end	Sat., April 25
Examination week	Mon., April 27 - Sat., May 2
Term ends	Sat., May 2
Commencement	Tues., May 5
² University year appointments end	Sun., May 24, 1992

Spring/Summer Term, 1992

Term Begins	Sun., May 3, 1992
Final registration	Tues., May 5 - Wed., May 6
Spring and Spring/Summer Classes begin	Mon., May 11
Last day for filing degree applications	Mon., May 11
Memorial Day recess	Mon., May 25
¹ Day scheduled as Monday for Spring and Spring/Summer Sessions	Fri., May 29
Mail Registration for Fall Term	Mon., June 22 - Fri., July 10
Classes end for Spring Session	Sat., June 27
Examination period for Spring Session	Mon., June 29 - Tues., June 30
Summer Session begins	Wed., July 1
Independence Day recess	Fri., July 3
Classes end for Spring/Summer Session	Sat., Aug. 1
Examination week for Spring/Summer Session	Mon., Aug. 3 - Thurs., Aug. 6
Classes end for Summer Session	Tues., Aug. 18
Study Day for Summer Session	Wed., Aug. 19
Examination Period for Summer Session	Thurs., Aug. 20 - Fri., Aug. 21
Spring/Summer Term ends	Sat., Aug. 29, 1992

Fall Term, 1992*

² University year appointments begin	Sun., Aug. 30, 1992
Term begins	Sun., Aug. 30
Final registration	Mon., Aug. 31 - Thurs., Sept. 3
Labor Day recess	Mon., Sept. 7
Classes begin	Tues., Sept. 8
Last day for filing degree applications	Tues., Sept. 8
Mail registration for Winter Term	Mon., Oct. 19 - Fri., Nov. 6
¹ Day scheduled as Thursday	Tues., Nov. 24
¹ Day scheduled as Friday	Wed., Nov. 25
Thanksgiving Day recess	Thurs., Nov. 26 - Sat., Nov. 28
Commencement	Thurs., Dec. 10
Classes end	Wed., Dec. 16
Examination week	Thurs., Dec. 17 - Wed., Dec. 23
Holiday recess	Fri., Dec. 25, 1992 - Fri., Jan. 1, 1993
Term ends	Thurs., Dec. 31, 1992

Winter Term, 1993*

Term begins	Fri., Jan. 1, 1993
Final registration	Tues., Jan. 5 - Fri., Jan. 8
Classes begin	Tues., Jan. 12
Last day for filing degree applications	Tues., Jan. 12
Mail registration for Spring/Summer Term	Mon., Feb. 22 - Fri., March 12
Spring recess	Mon., March 15 - Sat., March 20
Classes end	Mon., April 26
Study Day	Tues., April 27
Examination week	Wed., April 26 - Tues., May 4
Term ends	Tues., May 4
Commencement	Tues., May 4
² University year appointments end	Sun., May 30, 1993

² University Year Appointments begin on the first day of the Fall Term and are a full nine months in length. Individual service assignments are the responsibility of the appropriate dean, or by delegation, the department chairperson.

* Tentative

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.

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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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.

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 428 – 432.)

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
- 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 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:

Center for Academic Ethics
Addiction Research Institute
Bioengineering Center
C.S. Mott Center for Human Growth and Development
Center for Automotive Research
Center for Chicano-Boricua Studies
Center for Health Research
Center for Judaic Studies
Center for Molecular Biology
Center for Peace and Conflict Studies
Center for Prevention and Control of Interpersonal Violence
Center for Urban Studies
Developmental Disabilities Institute
Information Technology Institute
Institute for Manufacturing Research
Institute of Chemical Toxicology
Institute of Gerontology
Institute of Maternal and Child Health
Labor Studies Center
The Management Center
Merrill-Palmer Institute for Family and Human Development
Race Relations Institute
Radiation Oncology Center

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.

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 45 for description of services available to disabled students.

Academic Programs and Degrees Symbols and Abbreviations

The table on the following pages lists the major academic programs and degrees offered by Wayne State University. Academic programs are defined as any combination of courses leading to a specialization, the designation of a major, or to a separate degree designation. An asterisk (*) appended to a subject area indicates that a departmental honors major is also available in that field at the undergraduate level. The following index identifies standard abbreviations for University degrees and certificates, and the columns (Roman numerals) in the table indicating degree categories.



BA	Bachelor of Arts
BAS	Bachelor of Applied Studies
BSET	Bachelor of Science in Engineering Technology
BFA	Bachelor of Fine Arts
BGS	Bachelor of General 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
BTGS	Bachelor of Technical & General 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
MM	Master of Music
MPA	Master of Public Administration
MS	Master of Science
MSET	Master of Science in Engineering Technology
MSLS	Master of Science in Library Science
MSN	Master of Science in Nursing
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 Science
TC	Teaching Certificate
<i>I</i>	<i>Baccalaureate or First Professional Degree</i>
<i>II</i>	<i>Post-Bachelor or Graduate Certificate</i>
<i>III</i>	<i>Teaching Certificate</i>
<i>IV</i>	<i>Master's Degree</i>
<i>V</i>	<i>Specialist Certificate</i>
<i>VI</i>	<i>Doctoral Degree</i>

Academic Programs and Degrees

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

<i>School/College and Major</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>
School of Business Administration						
Accounting	BA, BS					
Business Administration					MBA	
Finance and Business Economics	BA, BS					
Management and Organization Sciences	BA, BS					
Management Information Systems	BA, BS					
Marketing	BA, BS					
College of Education						
Adult and Continuing Education					MEd	
Art Education	BA, BS		TC		MEd	
Bilingual/Bicultural Education	BA, BS		TC		MEd	
Business Education	BA, BS		TC			
Counseling	MA,				MEd	ESC
Curriculum and Instruction						EdD, PhD
Curriculum and Instruction (Elementary)						EdD, PhD
Curriculum and Instruction (Secondary)						ESC
Dance Education (Secondary)			TC			ESC
Distributive Education	BA, BS		TC			
Elementary Education	BA, BS		TC		MAT, MEd	ESC
English Education (Secondary)	BA, BS		TC		MEd	ESC
Evaluation and Research, Education					MEd	EdD, PhD
Family Life Education	BA, BS		TC			
Foreign Language Education (Secondary)	BA, BS		TC		MEd	
General Administration and Supervision						ESC
General Education						ESC
Health Education			TC		MEd	
Health and Fitness Program Management		PBC				
Health Occupations Education	BA, BS		TC			
Higher Education						EdD, PhD
History and Philosophy of Education					MEd	EdD, PhD
Industrial Education	BA, BS		TC			
Instructional Technology					MEd	ESC
Leadership, Educational					MEd	
Mathematics Education	BA, BS		TC		MEd	ESC
Music (Instrumental and Vocal)			TC			
Physical Education	BA, BS		TC		MEd	
Physical Education (K-12)			TC			
Pre-School and Parent Education					MEd	
Psychology, Educational					MEd	ESC
Psychology, School and Community					MA	ESC
Reading					MEd	ESC
Recreation and Park Services	BS				MA	
Science Education	BA, BS		TC		MEd	ESC
Secondary Education			TC		MAT	
Social Studies Education (Secondary)	BA, BS		TC		MEd	ESC
Sociology, Educational					MEd	ESC
Special Education (Administration)						ESC
Special Education	BA, BS		TC		MEd	ESC
Speech Education (Secondary)	BA, BS		TC			EdD, PhD
Sports Administration					MA	
Vocational Education			TC		MEd	ESC
Vocational Rehabilitation Counseling					MA	ESC

<i>School/College and Major</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>
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 Technology				MSET		
Hazardous Waste Control/Management		GC		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 Engineering Technology	BSET					
Operations Research				MS		PhD
Polymer Engineering		GC				

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

Archival Administration	GC					
Child and Family Studies	GC					
Developmental Disabilities	GC					
Gerontology	GC					
Infant Mental Health	GC					
Library Science				MSLS	SPL	

Law School

Corporate and Financial Law				LLM		
Joint JD/MA in Political Science	JD			MA		
Labor Law				LLM		
Law	JD			LLM		
Taxation				LLM		

School/College and Major

I II III IV V VI

College of Liberal Arts

American Studies	BA					
Anthropology*	BA			MA		PhD
Anthropology and Sociology	BA					
Art History	BA			MA		
Audiology				MA		PhD
Biological Sciences*	BA, BS			MS		PhD
Black Studies (Co-Major Program)	BA					
Chemistry*	BA, BS			MA, MS		PhD
Classical Civilization*	BA					
Classics*	BA			MA		
Communication Disorders and Sciences	BA			MA		PhD
Comparative Literature				MA		
Computer Science*	BA, BS	PBC		MA, MS		PhD
Criminal Justice*	BS			MS, MPA		
Dietetics, Medical	BS					
East European Studies				MA		
Economics*	BA			MA		PhD
English*	BA			MA		PhD
English, Teaching College				MA		
Film Studies	BA					
French*	BA			MA		
Geography*	BA					
Geology	BA, BS			MS		
German*	BA			MA		
Greek*	BA					
Hebrew*	BA					
History*	BA			MA		PhD
Human Development	BA					
Humanities*	BA					
Information Systems	BA					
International Studies (Co-Major Program)	BA					
Italian*	BA			MA		
Language, Modern Foreign	PhD					
Latin*	BA			MA		
Linguistics	BA			MA		
Mathematical Statistics	MA					
Mathematics*	BA, BS			MA, MS		PhD
Mathematics, Applied				MA		
Mathematics, Teaching College				MA		
Molecular Biotechnology				MS		
Near Eastern and Asian Studies*	BA					
Near Eastern Languages*	BA			MA		
Nutrition and Food Science*	BA, BS			MA, MS		PhD
Peace and Conflict Studies (Co-Major Program)	BA					
Philosophy*	BA			MA		PhD
Physics	BA, BS			MA, MS		PhD
Polish*	BA					
Political Science*	BA			MA		PhD
Political Science/Law (joint JD/MA)	JD			MA		
Psychology*	BA, BS, BAS			MA		PhD
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					

School/College and Major

I II III IV V VI

College of Lifelong Learning

General Studies BGS, BTGS

School of Medicine

Anatomy and Cell Biology MS PhD, MD/PhD
 Audiology MA PhD
 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
 Medicine MD
 Molecular Biology and Genetics MS PhD
 Pathology PhD
 Pharmacology MS PhD, MD/PhD
 Physiology MS PhD, MD/PhD
 Radiological Physics MS

College of Nursing

Adult Primary Care Nursing MSN
 Adult Psychiatric Mental Health MSN
 Advanced Medical-Surgical Nursing MSN
 Child and Adolescent Psychiatric Nursing MSN
 Community Health Nursing MSN
 Health Care Evaluation SCP
 Nursing BSN PhD
 Nursing Administration SCP
 Nursing Education MSN
 Nursing, Parenting and Families MSN

College of Pharmacy and Allied Health Professions

Anesthesia MS
 Medical Technology BS MS
 Mortuary Science 3 Yr.Certif.
 Mortuary Science BSMS
 Occupational and Environmental Health MS
 Occupational Therapy BS PBC MS
 Pathology Assistant BS
 Pharmaceutical Sciences, Experimental Techniques GC
 Pharmaceutical Sciences MS PhD
 Pharmacy BS
 Pharmacy, Clinical PharmD
 Pharmacy, Hospital MS
 Physical Therapy BS
 Radiation Therapy Technology BS

School of Social Work

Social Work BSW MSW

College of Urban, Labor, and Metropolitan Affairs

Chicano-Boricua Studies (Co-Major Program) BA
 Geography MA
 Industrial Relations MAIR
 Labor Studies BA
 Urban Planning MUP
 Urban Studies (Co-Major Program) BA

UNDERGRADUATE ADMISSION

The Office of Undergraduate 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 332 - 340 .

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 admissions consideration, must be in the Office of 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 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 is selective. In order to qualify for admission an applicant must present scholastic records indicating college preparation 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 Scholastic Aptitude Test (SAT) scores of at least 450 Verbal and 400 Mathematics (or American College Test (ACT) standard composite score of at least 21) are achieved.

Transfer students who have completed at least a year 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.

Applicants who are at least eighteen years of age, who lack high school diplomas and who have been out of high school at least six months, should consult with an admissions counselor if they wish to be considered for admission to a degree program.

Project 350: Special admissions criteria and procedures apply under this program. Contact the special counselor in the Office of Admissions for information. See also descriptive information under Special Student Service Programs, page 47.

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 without entrance examinations 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 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 non-baccalaureate degree-granting institutions. Credits accepted for transfer must be for courses for which a course equivalence exists or which have been determined to be of a traditional academic nature.

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

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

Since some programs do not allow native students to enroll in a course when a 'D' is obtained in a prerequisite course, the grades will not contribute to the Wayne State University honor point average.

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 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 the 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 College. For further information, please consult advisers, school or college offices, or the University Counseling Services.

For information on credit by Special Examination, see page 36.

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 53; *Education* — page 86; *Engineering* — pages 114 – 116; *Engineering Technology* — page 145; *Lifelong Learning* — pages 333, 336; *Nursing* — page 351; *Pharmacy and Allied Health Professions* — pages 363 – 364 and 376; *Social Work* — pages 403 – 404.

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 Offices 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 admission office. Full instructions for admission procedure, 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 Admissions. For information on international student admission to the Graduate School, see the Wayne State University Graduate Bulletin.

Readmission 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 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.

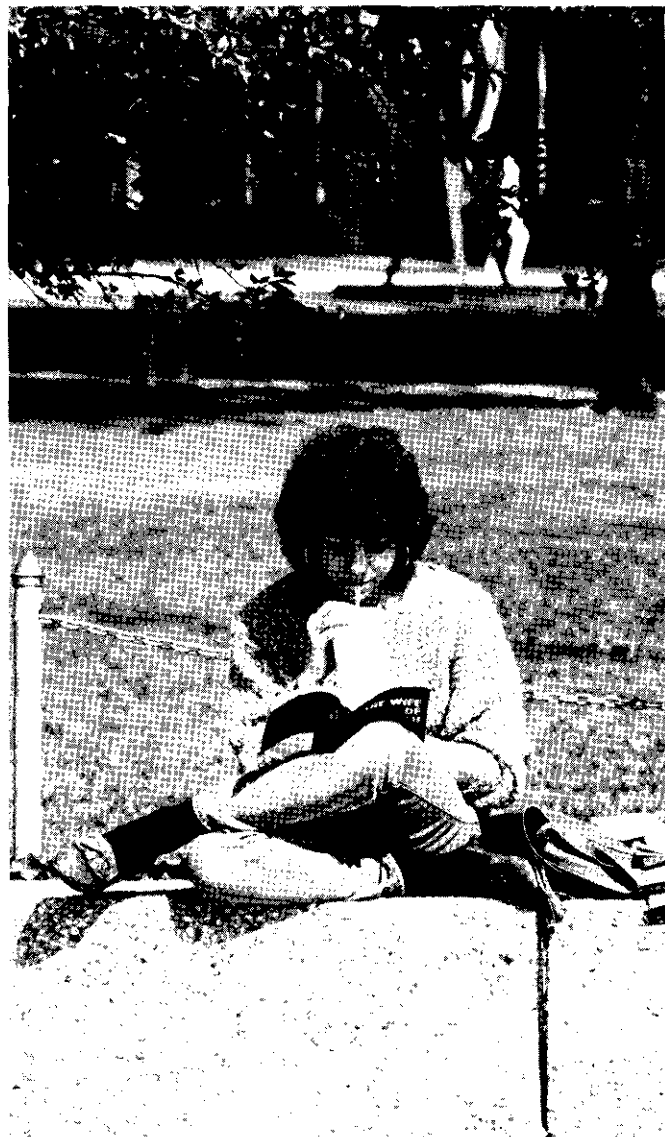
Phoenix Program (Second Start)

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 Building.

Undergraduate Tuition and Fees

Freshmen and Sophomores:

Resident \$50.00 Registration Fee plus \$76.75 per credit.

Non-Resident . . \$50.00 Registration Fee plus \$171.75 per credit.

Juniors, Seniors and Post-Bachelors:

Resident \$50.00 Registration Fee plus \$90.00 per credit.

Non-Resident . . \$50.00 Registration Fee plus \$204.25 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. These fees are not refundable. 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 asked 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 \$50.00 non-refundable registration fee, except that students enrolled in the Visitor Program shall pay a \$25.00 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 involves 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 \$52.00 for one credit hour. For three credit hours, the *additional* fee is \$105.00. 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 \$10.00 fee for a transcript provided within twenty-four hours, \$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:

Lock and storage basket	\$3.00
Half-locker and lock	10.00
Full locker and lock	15.00

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 class and is not refundable.

Payment of Tuition and Fees

Checks or money orders must be made payable to Wayne State University. Master Cards 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.

Mail Registration

Payment of the \$50.00 non-refundable registration fee is required at the time of submission of the Mail Registration Schedule Request form. 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 \$357.00 registration deposit (which includes the \$50.00 registration fee) is required at the time of registration. 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 \$387.00 registration deposit (which includes the non-refundable \$50.00 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 \$50.00 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.

Short-Term Courses: Payment of full tuition and the \$50.00 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 36.)

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 the Registration Office, 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 from the administrative classification 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 from the administrative 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 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, Administrative Services Building I, 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 ticket must be submitted to the Records Office 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 the Records Office. Requests by mail should be addressed to: Central Records Office, Attn: Transcripts, Wayne State University, Detroit, Michigan 48202; and should include a check or money order for the appropriate amount payable to Wayne State University. To ensure prompt attention, the student should include his/her name (including name while in attendance, if different), student identification number, social security number, date of birth, last term of attendance, his/her authorizing signature, and the name and address to which the transcript is to be sent.

Transcripts are not issued to anyone outside the University without the written permission of the student. Requests for official transcripts will not be honored if the student or former student has an outstanding financial obligation to the University.

Cancellation of Tuition

Tuition, *not including the \$50.00 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 Office. 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.

Tuition Cancellation/Refund Schedule

Number of weeks Course/Section	Number of Calendar Days Since First Class Day of the Semester/Session						
	0	1-7	8-14	15-21	22-28	29-42	43+
0-3	100%	0%	.....	.....	.....	.....	.....
4-8	100%	100%	0%	.....	.....	.....	.....
9-15	100%	100%	100%	0%	.....	.....	.....
16-27	100%	100%	100%	100%	0%	.....	.....
28+	100%	100%	100%	100%	100%	100%	0%

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

2 East, 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 Congressional 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 priority deadline of April 1. The Wayne State Application for Financial Aid, along with the Financial Aid Form (FAF) or Family Financial Statement (FFS) are 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 officially 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.

Wayne State University Program for Merit Scholars: The Merit Scholar Program provides full tuition scholarships for selected Michigan high school and community college students who have demonstrated outstanding scholastic ability as they graduate from their educational institutions. Information is available from the Undergraduate Office of Admissions.

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 May 15.

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. The following funds are a few of the many awards available:

Alumni Association Annual Scholarship

Barba Family Scholarship

Albert C. Dames Trust Scholarship

Albert Feigenson Scholarship

Douglas and Winifred Fraser Scholarship

Henry M. Seldon Scholarship

Women of Wayne Incentive Scholarship

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.

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 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 Office and their respective College/School Advising Offices 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 requires undergraduate students to fulfill the University-wide General Education Requirements. The Requirements will be implemented in accordance with the following schedule:

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

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

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

Transfer students who are not covered by the above schedule and who 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 outlined on page 25.

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 at the end of this section.

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 of 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.

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 Placement 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: AGS 306, 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, which may be repeated only once.)

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 at the end of this section. 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, or 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; CSC 100, 101, 102, 105, 203, 206, 208, 210 or any higher-level CSC course; GST 271; NUR 111; SPC 317; SPJ 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: PHI 105; SPC 211 or GIS 326; 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 these 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, 161, 220; GST 202; 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; HIS 110, 120, 130, 140, 160, 161, 171, 195, 304, 335, 368, 369; HON 425; HUM 310; N E 368, 369; 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, 101, 102, 180; GEG 110, 200, 313, 320; GSS 271; HIS 200; HON 421; P S 100, 200, 224; SOC 200, 202, 204, 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 the foreign culture requirement 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:

ANT 315, 352, 354, 355; ARM 475; CBS 241, 242; FRE 271, 272; GER 271, 272, 341; GIS 341, 343; GRK 371; HIS 244; HON 426; N E 200, 355; NUR 480; RUS 351; SOC 355; 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, 101, 111, 112; DNC 231; ENG 245, 246; FLM 201, 202; GUH 273; HON 424; HUM 101, 102, 103, 303; MUH 130, 132, 133, 137, 138; 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, 219, 220, 250, 272, 311, 312, 314; FRE 270 (or: GER 270; ITA 270; RUS 270; or SPA 270); GUH 271; HON 210, 420; HUM 210, 211, 220, 222; LIN 272; PHI 101, 102, 103, 104, 110, 210, 211, 232, 350, 355, 370; P S 351, 352; RUS 360, 365; SPC 216.

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 newly-matriculated students at Wayne State 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. (F,W)

University Requirements Prior to Fall Term 1987

The following requirements apply to all undergraduate students who matriculated at Wayne State University prior to Fall Term 1987 and to all entering undergraduate students not covered in the General Education Implementation Schedule on page 21:

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:

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.

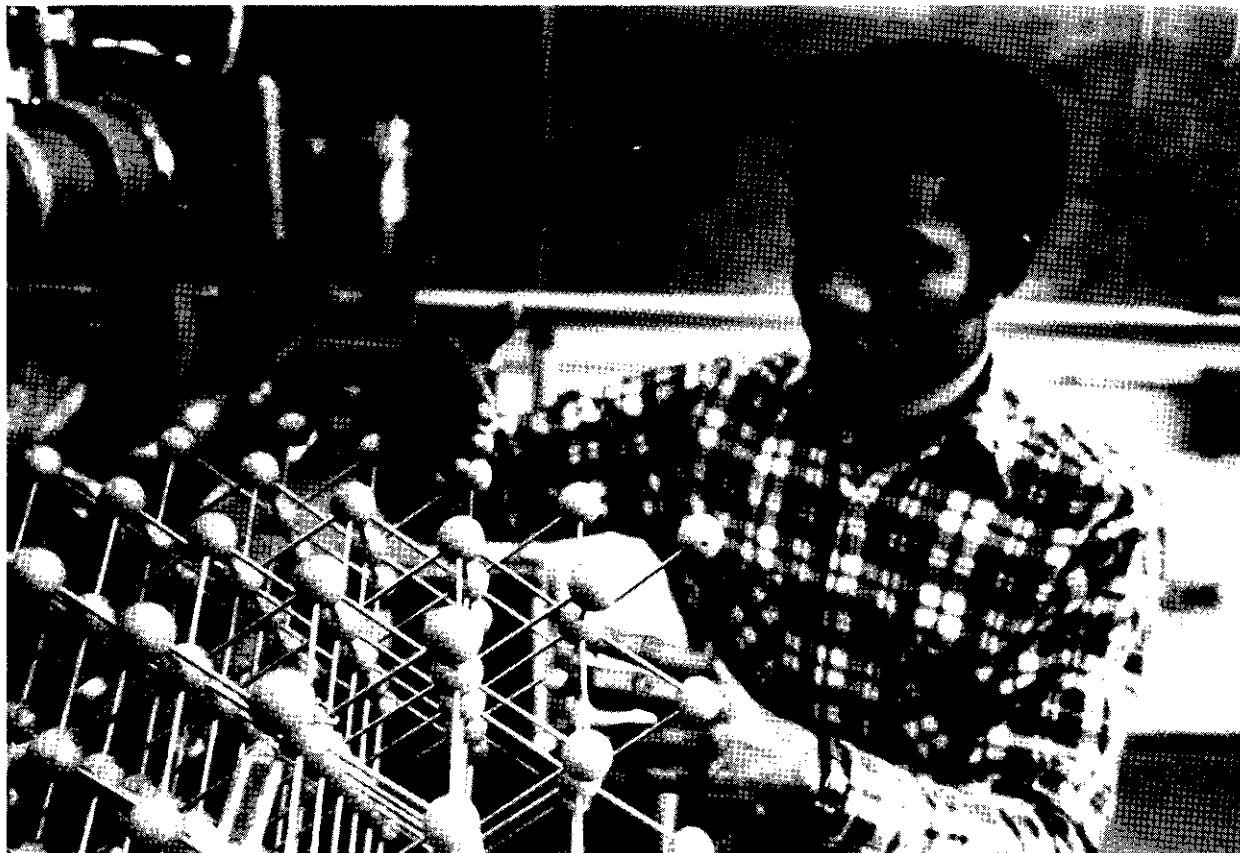
Students who do not establish proficiency by the time they earn sixty credits toward a bachelor's degree will have up to two semesters (or equivalent), without penalty, in which to meet the requirements. During that period they must pass the English Proficiency Examination and/or the Mathematics Proficiency 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. (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: 494 College Comp: 50 Freshman Eng: 50	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: 487 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
<hr/>						

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)	489	4
	Physics (E & M)	4 or 5	4-8	(or Phys. Sci. subscore)	(49)	4
	Physics (Mechanics)	4 or 5	4-8			
Life Science (LS)	Biological Science	3, 4, or 5	4-8	General Biology (S)	50	3
				General Psychology (S)	50	3
				Natural Science (G)	489	4
				(or Biol. Sci. subscore)	(50)	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)	488	4	
			(or History subscore)	(50)	4	
American Institutions (AI)						
American History*	3, 4, or 5	3-7	American Hist. I (S)	50	3	
			American Hist. II (S)	50	3	
American Government*	3, 4, or 5	3-4	American Govt. (S)	50	3	
Basic Social Science (SS)						
	3, 4, or 5	3-4	Intro. Sociology (S)	50	3	
			Intro. Macroeconomics (S)	50	3	
			Intro. Microeconomics (S)	50	3	
			Social Sci. & History (G)	488	4	
			(or Soc. Sci. subscore)	(50)	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)	489	3
	Music History	3, 4, or 5	2-3	(or Fine Arts subscore)	(50)	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)	489	3
				(or Literature subscore)	(49)	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
 CSC 100 — (CL) Introduction to Computer Science. Cr. 3
 CSC 101 — (CL) Introduction to Computing. Cr. 3
 CSC 102 — (CL) Computer Science I. Cr. 4
 CSC 105 — (CL) FORTRAN Laboratory for Engineers. Cr. 1–2
 CSC 203 — (CL) Computer Science II. Cr. 4
 CSC 206 — (CL) Introduction to FORTRAN. Cr. 3
 CSC 208 — (CL) Computer Concepts for Engineers. Cr. 4
 CSC 210 — (CL) Introduction to COBOL. Cr. 3
 GST 271 — (CL) Computers and Society. Cr. 4
 NUR 111 — (CL) Introduction to Computers and Technology for Health Care Professionals.
 Cr. 2
 SPC 317 — (CL) Fundamentals of Public Relations. Cr. 4
 SPJ 321 — (CL) News Editing. Cr. 4

Critical Thinking Competency (CT)

GIS 326 — (CT) Methods of Search and Critical Thinking. Cr. 4
 PHI 105 — (CT) Critical Thinking. Cr. 3
 SPC 211 — (CT) Argumentation and Debate. Cr. 3

Foreign Culture (FC)

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 in Translation:
 The Modern Period. Cr. 3
 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 341 — (FC) The Africans: A Triple Heritage. Cr. 4
 GIS 343 — (FC) The Chinese: Adapting the Past, Building the Future. 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
 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
 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
 HIS 161 — (HS) African Civilizations Since 1800. Cr. 3
 HIS 171 — (HS) East Asian Civilizations Since 1840. Cr. 3
 HIS 195 — (HS) Society and the Economic Transition. Cr. 3
 HIS 304 — (HS) Historical Studies in War and Society in the Modern World. Cr. 3
 HIS 335 — (HS) Revolution in the Modern World: 1750 to the Present. Cr. 3
 HIS 368 — (N E 368) (HS) Islamic History: The Formation of the State. Cr. 3
 HIS 369 — (N E 369) (HS) Islamic History: The Formation of the Empire. Cr. 3
 HON 425 — (HS) Seminar in Historical Studies. Cr. 3 (Max. 9)
 HUM 310 — (HS) Historical Epochs in Contrast. Cr. 3
 N E 368 — (HS) Islamic History: The Formation of the State. (HIS 368) Cr. 3
 N E 369 — (HS) Islamic History: The Formation of the Empire. (HIS 369) Cr. 3
 P S 353 — (HS) Community—Building in the History of Western Political Thought. Cr. 4

continued on next page

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

Intermediate Composition Competency. (IC)

AGS 306 — (IC) Law: Analysis 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 Afro-American Literature: Literature and Writing. 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. 3-4
 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. 4
 BIO 161 — (LS) Honors Biology I: Basic Principles. Cr. 5
 BIO 220 — (LS) Introductory Microbiology. Cr. 4
 GST 202 — (LS) Changing Life on Earth. Cr. 3-4
 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
 MAT 180 — (MC) Elementary Functions. Cr. 4
 MAT 201 — (MC) Calculus I. Cr. 4

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 219 — (PL) Asian Literature in Translation. 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. 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
 GUH 271 — (PL) Art and Aesthetics: Literature and Philosophy. Cr. 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 — (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.
 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
 SPC 216 — (PL) Contemporary Persuasive Campaigns and Movements. Cr. 4 (Max. 8)

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 I. Cr. 5
 GEL 102 — (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. 3
 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
 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) Contemporary 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
 ECO 100 — (SS) Survey of Economics. Cr. 4
 ECO 101 — (SS) Principles of Macroeconomics. Cr. 3-4
 ECO 102 — (SS) Principles of Microeconomics. Cr. 3-4

continued on next page

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

Social Sciences (SS) (cont'd.)

ECO 180 — (SS) Contemporary Urban Problems. Cr. 3
 GEG 110 — (SS) World Regional Patterns. Cr. 4-5
 GEG 200 — (U S 200) (SS) Introduction to Urban Studies. (HIS 200) (SOC 250) (P S 200)
 Cr. 4
 GEG 313 — (SS) Introductory Urban Geography. Cr. 4
 GEG 320 — (SS) Western 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) (GEG 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) (GEG 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 204 — (SS) Applied Approach with Data Analysis for Understanding Society. Cr. 3
 SOC 250 — (U S 200) (SS) Introduction to Urban Studies. (HIS 200) (P S 200) (GEG 200)
 Cr. 4
 SOC 330 — (SS) Social Institutions and Social Structure. Cr. 3
 SOC 351 — (SS) The Nature and Impact of Population on Society. Cr. 3
 SOC 410 — (SS) Social Psychology. Cr. 3
 U S 200 — (SS) Introduction to Urban Studies. (HIS 200) (SOC 250) (P S 200) (GEG 200)
 Cr. 4

Visual and Performing Arts (VP)

A H 100 — (VP) Introduction to Art. Cr. 4
 A H 101 — (VP) Great Art of the World. Cr. 3
 A H 111 — (VP) Paleolithic through Gothic Art Survey. Cr. 3
 A H 112 — (VP) Renaissance through Modern Art Survey. Cr. 3-4
 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 130 — (VP) Music Literature: Appreciation through Performance Attendance —
 Keyboard and Song. Cr. 3
 MUH 132 — (VP) Music Literature: Appreciation through Performance Attendance —
 Opera, Oratorio, Mass. Cr. 3
 MUH 133 — (VP) Music Literature: Appreciation through Performance Attendance —
 Symphonic and Chamber. Cr. 3
 MUH 137 — (VP) Music History Survey: Appreciation through Performance Attendance —
 Roots to 1750. Cr. 3
 MUH 138 — (VP) Music History Survey: Appreciation through Performance Attendance —
 Haydn to 1950. 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 Art. Cr. 0
 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. 3
 A H 593 — (WI) Writing Intensive Course in Art. Cr. 0
 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
 CRJ 593 — (WI) Writing Intensive Course in Criminal Justice. Cr. 0
 CSC 371 — (WI) Data and File Structures. Cr. 4
 DNC 593 — (WI) Writing Intensive Course in Dance. Cr. 0
 ET 499 — (WI) Senior Project. Cr. 3
 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
 FRE 510 — (WI) Advanced Speaking and Writing. Cr. 4
 GEG 302 — (WI) Spatial Organization: Concepts and Techniques. Cr. 3
 GEL 593 — (WI) Writing Intensive Course in Geology. Cr. 0
 GER 593 — (WI) Writing Intensive Course in German. Cr. 0
 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 320 — (WI) Italian Grammar and Composition. Cr. 3
 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
 M E 450 — (WI) Mechanical Engineering Design II. Cr. 5
 M S 430 — (WI) Medical Science. Cr. 2
 M T 310 — (WI) Medical Technology Parasitology. Cr. 3
 MAT 593 — (WI) Writing Intensive Course in Mathematics. Cr. 0
 MKT 533 — (WI) Business Communication. Cr. 3
 MSE 450 — (WI) Materials Selection and Design. Cr. 3
 MUH 333 — (WI) Music History and Literature III. Cr. 3
 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 435 — (WI) Occupational Therapy Seminar. Cr. 3
 P E 355 — (WI) Motor Learning and Control. Cr. 3
 P S 593 — (WI) Writing Intensive Course in Political Science. Cr. 0
 P T 470 — (WI) Research Practicum. Cr. 2
 PHI 593 — (WI) Writing Intensive Course in Philosophy. Cr. 0
 PHY 560 — (WI) Applied Electricity and Magnetism. Cr. 3
 PHY 685 — (WI) Experimental Physics Laboratory. Cr. 2
 POL 593 — (WI) Writing Intensive Course in Polish. Cr. 0
 PPR 512 — (WI) Hospital Pharmacy Externship. Cr. 4-7
 PSY 593 — (WI) Writing Intensive Course in Psychology. Cr. 0
 R P 463 — (WI) Philosophy of Recreation and Park Services. Cr. 3
 R T 436 — (WI) Clinical Practicum V. Cr. 4
 RDG 443 — (WI) Teaching Reading in Subject Matter Areas. Cr. 3
 RUS 593 — (WI) Writing Intensive Course in Russian. Cr. 0
 S W 471 — (WI) Social Welfare in the United States: Current Programs. Cr. 2
 SOC 420 — (WI) Methods of Social Research. Cr. 3
 SPA 510 — (WI) Advanced Composition. Cr. 3
 SPB 593 — (WI) Writing Intensive Course in Communication. Cr. 0
 THR 512 — (WI) Development of the Drama I: Greek to Eighteenth Century. Cr. 4

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.

Merit Scholars: Students awarded merit 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 individualized 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 cumulative 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

3 West, Helen Newberry Joy Student Services Center; 577-2680

The University Advising Center provides academic advising to all students with undeclared majors and to some pre-professional students. The Center is staffed by professional advisers supplemented by advanced undergraduate and graduate peer 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 student's 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 toward the completion of 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 Departments of Physical Therapy, Radiation Therapy, and Mortuary Science.

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 usually must 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. Students learn about university programs and services, receive academic advising, and register for classes during the one-day program. A Transfer Student Orientation is offered at which university programs and services are emphasized.

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.

ACADEMIC REGULATIONS

Each student, except those in the annual medical program, is required to register at the beginning of each term of attendance according to the procedure and schedule published in the official *University Schedule of Classes*. Registration must be completed before the student may attend classes. For registration dates and the alphabetic appointment schedule, the student should consult the *Schedule of Classes*, available at the Registration and Scheduling Office, 2 West, Helen Newberry Joy Student Services Center.

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;
- During Mail Registration, the student should indicate the Audit option on the Mail Registration Schedule Request form and make sure that the approval process has been completed with his/her Dean's 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 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 41.

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 \$50.00 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 the Central Records Office, 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 Form lists 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 the Records Office, 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 Cards from the admitting 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 \$50.00 Registration fee (or submit a Tuition Deposit Deferral form);

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

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

d) obtain releases for any Holds indicated on their Status Forms or Authorization to Register Cards; 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 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 \$50.00 Registration Fee and the non-refundable \$30.00 Late Registration Fee, prior to registering; and

b) after the first week of classes, students must pay their full tuition, the non-refundable \$50.00 Registration Fee and the non-refundable \$30.00 Late Registration Fee, at the Cashier's Office, First Floor, Administrative Services Building I, 5950 Cass Avenue corner Antoinette Street.

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 the Central Records Office, Helen Newberry Joy Student Services Center. Authorization to Register Cards for newly admitted students are available from the admitting office; the Undergraduate 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 courses before the conclusion of the first two weeks of classes are entitled to 100% tuition cancellation, and the courses dropped do not appear on the students' academic records.

5. Students who officially drop 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 17.

College of Liberal Arts: Students may satisfy all or part of one or more group requirements by examination subject to the provisions above.

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 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,

Fine, Performing and Communication Arts, and Urban, Labor, and Metropolitan Affairs.

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.

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 student after the close of each semester in which the student has registered. 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 <i>Incomplete</i>	See below for explanation of this mark.
R <i>Repeated</i>	See page 34 for explanation of this mark. (this mark applies to undergraduate students only)
W <i>Official Withdrawal</i>	See below for explanation of this mark.
X <i>No grade reported</i>	See below for explanation of this mark.
Y <i>Deferred</i>	See below for explanation of this mark.
Z <i>Auditor</i>	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 the University Records Office 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 36.

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 his/her 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.

Changes 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 the Records Office 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 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 34 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:

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

The specific minimum 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 Records 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 Office for Graduate Admissions, the college or school, or the individual department.

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

In most departments (see departmental sections for variants), a regular admission may be authorized for the master's degree applicant upon an adviser's recommendation, if the applicant's 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 of graduate admissions is authorized to deny admissions to any applicant whose previous education does not conform to Graduate School standards. The Office for Graduate Admissions 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 Office for Graduate Admissions. Coursework completed after the baccalaureate which is presented as the qualifying basis for graduate admission cannot be applied toward a graduate degree at Wayne State University.

Upon recommendation of an adviser and the Graduate Officer of the appropriate college or school, qualified status may be granted to an applicant whose 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 Office for Graduate Admissions, 165 Administrative Services Building I (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 Graduate 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 Office for Graduate Admissions for complete information.

College of Nursing: The deadline date for Summer and Fall doctoral applicants is February 15.

*Wayne State University faculty members holding the rank of Assistant Professor or above may not be admitted to graduate degree programs in the University.

GRADUATE NON-DEGREE ADMISSION*

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

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

No student should select or continue in any of the graduate non-degree admission classifications if he/she has any interest in earning a degree. There is no assurance that credits earned while holding a non-degree classification will be acceptable in a degree program, or that prerequisites may not have to be specified if the student later becomes a degree applicant. If the student decides to seek admission to a graduate degree program, he/she should apply to the appropriate College Graduate Officer for a 'Change of Status' *before* completing nine credits. Depending on the applicant's highest previous degree, he/she may apply for admission to one of the following Graduate Non-Degree Admission classifications:

1. **PRE-MASTER'S:** A student with an acceptable grade point average and an earned bachelor's degree from an accredited institution may apply for this rank. Applicants must submit an *Application for Graduate Admission* and request that official transcripts from all previously attended colleges and schools be forwarded directly to the Office for Graduate Admissions.

2. **POST-MASTER'S:** This rank is reserved for those students who evidence an earned master's degree at the time of application. Students holding Wayne State master's degrees should contact the Graduate Officer of the college they wish to enter. Those with master's degrees from other institutions must submit an *Application for Graduate Admission* and transcripts.

3. **POST-DOCTORAL:** This rank is reserved for those students who evidence an earned doctoral degree at the time of application.

Graduate Guest Admission: Graduate students from other accredited institutions may be admitted to elect a limited number of credits at Wayne State University. Interested students are directed to contact the Office for Graduate Admissions to obtain a *Graduate Guest Application*, which must be signed by the graduate dean of their home institution before it can be accepted for consideration. A guest admission is valid for only one semester and must be renewed with each subsequent registration. Admission as a Graduate Guest student does not constitute permission to register as a degree applicant. 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 Office for Graduate Admissions before regular status as a graduate student can be authorized.

As a courtesy, the University permits a student admitted to Senior Rule status to pay undergraduate fees for those graduate courses elected toward his 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 Office for Graduate Admissions. Application deadlines for Senior Rule admission are the same as for regular graduate admission.

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

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

Permit to Register: The Permit to Register graduate admission status serves those students who wish an opportunity for one semester of graduate study but are presently not intending to pursue a degree, or who intend to participate in a sponsored institute program.

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 Office for Graduate Admissions.

Visiting Doctoral Guests: Persons with earned doctorates who are certified as Visiting Doctoral Guests may obtain University library privileges and attend classes upon invitation of the department involved. No official record of attendance is kept on such guests. Permission may be obtained from the Graduate School.

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 Graduate 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 Admissions 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 who 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 grade point averages 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 Office for Graduate Admissions, 165 Administrative Services Building I, 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 \$13,000 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 Director of the Office for Graduate Admissions.



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

5229 Cass Avenue

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

5229 Cass Avenue

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.

Computing Services — (C&IT)

Computing and Information Technology Division

5925 Woodward Avenue; 577-4762

Computing and Information Technology (C&IT) is a service division of Wayne State University dedicated to providing high-quality information systems and associated services, promoting and supporting innovative and effective applications of information technology, and creating information technology opportunities for WSU through joint ventures with other organizations.

C&IT supports the missions and goals of Wayne State University and its units, defines university-wide architectures and standards for information systems and strategies to implement them, supports the development of unit-level strategies, and strives to make C&IT a premier information systems provider known for quality, innovation, and value. The division's computing goals are to: make computing available to the Wayne State University community of faculty, staff, and students; make computing affordable, responsive, highly dependable, and available on demand; and incorporate computing technology into all appropriate aspects of Wayne State University—instruction, research, public service, and administration.

Since 1985 when this service division was created, much progress has been made toward implementing a technology environment that enhances the academic and administrative programs at Wayne State. Central facility computers have been upgraded and expanded, campus-wide networks have been installed, and computing laboratories have been opened. C&IT also provides data communications access to state, national, and international networks.

Central Computing Resources: C&IT operates a number of mainframe computer operating systems and central processing units (CPUs):

MTS (the Michigan Terminal System) and IBM's VM/CMS (Virtual Machine/Conversational Monitor System) run on an Amdahl 5890/180E with 64 MB of main memory and 24 channels;

IBM's MVS (Multiple Virtual Storage), including CICS (the Custom Information Control System), runs on an IBM 3081 GX with 64 MB of main memory and 16 channels; and

NOTIS (the Northwestern Online Total Integrated System) runs under MVS/CICS on an IBM 4381 with 16 MB of main memory and 6 channels. C&IT runs NOTIS for Wayne State's University Library System.

A full range of software extends the capabilities of these computer operating systems, including utilities, programming languages and compilers, statistical and mathematical libraries, graphics, database management systems, and text/word processing languages.

Storage capacities and output devices at C&IT include: 146 gigabytes of disk storage, Xerox 8700 and 9700 laser printers, two high-speed line printers, and a Calcomp 1055 large-scale graphics drum plotter (4-color).

All computer operating systems at Wayne are accessible from WSUnet, the University's wide-area data communications network, which connects major buildings—linking about 3,000

terminals/microcomputers on campus—and supports X.25, Ethernet, and SNA/SDLC data communications.

Dial-in access to WSUnet is available via Merit/MichNet using an asynchronous communications program, such as Kermit. ASCII terminals on Merit/MichNet can access the SNA network through mainframe-based ASCII-to-IBM 3270 protocol conversion software. IBM 3270 terminals on the SNA network can access Merit/MichNet through mainframe-based IBM 3270-to-ASCII protocol conversion software.

Links with Merit/MichNet provide faculty, staff, and students with access to the Internet (NSFNET, ARPANET), SprintNet, Autonet, and Datapac networks. WSUnet also has a link to the BITNET academic network which provides electronic mail and file transfer services throughout the United States and around the world.

Central Computing Projects: University departments can establish mainframe computing projects for their employees. Departments are not charged for their employees' use of non-consumable resources, such as computing (CPU) time or disk storage. Departments are charged, however, for the use of consumable resources (paper, etc.). Wayne State undergraduate or graduate students can obtain mainframe computing projects at a special rate—the cost of computing is substantially discounted and the first \$10.00 of computing time is free. Students may open a computing project at any of C&IT's general-purpose student laboratories. The project and ID remain active until the student leaves the University.

Student Computing Laboratories: C&IT operates two general-purpose student laboratories and a special-purpose Research Support Laboratory. The general-purpose laboratories are located on the lower levels of the Student Center Building and the Science and Engineering Library. Each laboratory contains Macintosh and IBM (or-IBM compatible) computers, dot-matrix and laser printers, and a full range of general-productivity software, including word processing, database, spreadsheet and communications. The Research Support Laboratory is located in Room 10 of the College of Education. It contains high-end Macintosh and IBM computers, laser printers, and a full-range of research support software, including statistical, graphics, research publishing, database, and communications.

C&IT's laboratories may be used by students, university employees, and members of Wayne State's Alumni Association. There is no charge for using computers, software, or dot-matrix printers. There is a nominal charge for laser printing. The Computing and Information Technology Newsletter, published bimonthly, includes the current hours for C&IT's labs and telephone numbers for inquiring about the availability of computers and software.

Organization: Computing and Information Technology is administered by a vice president who reports directly to the University's president. There are nine major departments in the division:

Administration and Security manages the financial, personnel, billing, and general business functions of the division; secures the facility; and develops and administers security policies and procedures for University information systems.

The Information Technology Institute (ITI) conducts joint-venture research and development projects in information technology; works with Wayne State faculty to identify research projects; and secures external funding from government, business, and industry.

The Management Information Support Center (M.I.S.C.) develops, supports, and maintains WSU's administrative information systems, i.e., FAS (Financial Accounting System) and HRS (Human Resources System); and maintains WISE (Wayne's Information System Environment) which provides online access to official University systems, documents, and information of general interest to the campus community.

Marketing and Development promotes the external use of the University's computing, communications, and information processing resources; supports customers from government, education, health

care, business, and industry across the United States and in twenty foreign countries; and produces promotional materials (print, radio, and video) for C&IT and external customers.

The Michigan Small Business Development Center (MI-SBDC) oversees and manages a statewide network of thirty counseling and service centers for the purpose of providing management and technical assistance to Michigan's existing and prospective small business owners.

Planning and Support Services (PaSS) helps students, faculty, administrators, and external customers use C&IT's diverse resources and services; provides consulting (telephone, online, and walk-in), planning (local computing environments), training seminars, and documenting/publication services; completes special projects; and operates general-purpose student computing laboratories and the Research Support Laboratory.

The University Computing Center (UCC) develops, operates, and maintains C&IT's central (main frame) computing resources and the data communications technology to make these resources available; supports and provides access to campus (WSUnet), state (Merit/MichNet), and international computer networks (BITNET and the Internet).

University Telecommunications recommends, installs, and operates Wayne State's transmission facilities (wiring, cable, microwave, and satellite) for voice, data, and video; operates the University's main switchboard and the Telephone Office where all orders for telephone service and repair are processed.

University Television operates Wayne State's educational television broadcast facilities and manages broadcast services and operations for the Community Telecommunications Network (CTN), a consortium of local educational institutions and public broadcasting stations.

Telephone Numbers of General Interest:

General C&IT Information	577-4762
Office of the Vice President	577-4722
Administration	577-4732
Administrative Information Center	577-0669
Business Services Office	
Computing projects for WSU faculty & staff	577-4642
Computing projects for WSU students	577-2067
Computing & Instructional Labs:	
General Purpose—Science & Eng'g. Library	577-5805
General Purpose—Student Center Building	577-5485
Research Support Laboratory	577-5804
Consulting Offices:	
General Purpose	577-4778
Research	577-5804
Distribution (of mainframe-printed output)	577-4755
Information Security	577-3203
Information Technology Institute	577-0731
Management Information Support Center	577-1950
Marketing and Development	577-2085
Michigan Small Business Development Center	577-4848
Network Control	577-4746
Planning and Support Services	577-5515
Research Support Laboratory	577-5804
Seminar Registration	577-5805
Telephone Office	577-1978
Telephone Repair	577-2218
University Computing Center	577-0153
University Telecommunications	577-4728
University Television	577-2603

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 intervention 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. 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.

Office of Undergraduate Admissions

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

The Office of Undergraduate 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: Central Records, Registration and Scheduling, and Information Systems. Central Records is responsible for maintaining students' academic permanent records, graduation processing, issuing transcripts, 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 Information Systems unit is responsible for the preparation and dissemination of student enrollment reports, responding to internal and external requests for enrollment data and development of the Office's systems and procedures.

Office of Scholarships and Financial Aid

2 East, 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 fall term. For additional information, see page 20; and telephone: 577-3378.

University Advising Center

2 West, Helen Newberry Joy Student Services Center; 577-2680.

The University Advising Center's staff members advise all students with undeclared majors and some pre-professional students. Using professional and peer 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, and publishes the student handbook. For further information, see page 33.

University Counseling Services

583 Student Center; 577-3398

University Counseling Services has two major purposes: (1) to help students promote individual development in ways which will maximize benefits from their University experience, and (2) to help them find ways of coping with problems which interfere with their educational attainment. To implement these goals, non-credit courses in the areas of college and career orientation, reading efficiency, and study skills, are offered through this office. These courses (including Reading Efficiency courses) and the staff of University Counseling Services may be found on page 424.

To meet the different needs of students, other services are provided in a number of additional formats and contexts as described below.

Achievement Center, 112 State Hall, 577-3165, 577-3491: The Achievement Center is a multi-media 'walk-in' service for students who find an immediate need to improve or refine their academic skills. Mini-workshops are presented daily during fall and winter terms on such topics as test anxiety, note-taking skills, reading, writing, memory improvement and achievement motivation. In addition, individualized help is provided to deal with a wide range of problems which students confront in the University.

Educational Resources for Students with Disabilities, 583 Student Center, 577-2006, TDD only 577-3365: Through this office numerous resources are available to students with physical, cognitive or emotional impairments. Services are designed to facilitate the full participation of students throughout the campus. Resources include pre-admission counseling, orientation to the campus, information about campus accessibility, individual personal counseling, workshops, seminars, role models, information, consultation regarding management of academic coursework, individual administration of examinations, reading and recording services,

interpreters, notetakers, study rooms, parking, referrals and advocacy, and information for faculty and staff. Students are invited to contact the Office regarding questions related to their individual situations.

Learning Center, 598 Student Center, 577-3165: The structured programs offered by this office are designed for students who want assistance in developing the learning process skills necessary to achieve realistic educational goals. Service is provided through courses (see page 424), individualized laboratory experiences, and through programs coordinated with academic departments or special program offices.

Psychological Counseling Service, 583 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.

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, so students can more realistically determine and accomplish their career and educational goals.

Minority Programs, 575 Student Center, 577-4291: Minority Programs and the Minority Resource Center provide individualized personal counseling and advising, role modeling, networking with other offices and departments of the University as well as with the community, workshops, seminars, discussions, newsletters, intercultural exchange, graduate and professional school information, and conferences. Activities are oriented to the needs and concerns of various minority populations, including ethnic minorities and alternative life style minorities. Participation is open to everyone.

Re-Entry to Education Program, 575 Student Center, 577-4103: This program offers workshops, programs, and support services to day and evening students. Services and programs are designed to meet the needs of students who have interrupted their education and are now pursuing a degree at either the undergraduate or graduate level.

Testing and Evaluation, 698 Student Center, 577-3400: Testing is provided to students for entrance examinations, freshmen tests, qualifying examinations for course selection, proficiency examinations, and tests required by professional associations and graduate schools. Testing and Evaluation services are also provided to faculty and academic personnel and include preparation of class reports based on teacher-made tests or qualifying examination data, consultation regarding test programs commercially available, consultation on construction of course examinations, scoring of departmental examinations and student course evaluations. Research studies are undertaken to provide background data for planning adequate services and other resources for the student body.

Women's Resource Center and Programs, 575 Student Center, 577-4103: This office provides services for University students, faculty, staff, and to community persons who want help in solving academic, personal, or family problems or who need information to assist in academic research related to the needs of women. Programs and workshops are free or at low-cost enrollment. Although activities focus on the needs of women, participation is open to men as well.

International Services Office

3 West, Helen Newberry Joy Student Services Center; 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. 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.

Military and Veterans Affairs

3 West, Helen Newberry Joy Student Services Center; 577-3374

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

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 cumulative h.p.a.s below these minima 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 restoration policies and requests should be directed to an Office of Military and Veterans Affairs counselor.

V.A. Vocational Rehabilitation: Vocational rehabilitation programs help the 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 \$76.00 a month for a maximum amount of \$911 with no charge against basic entitlement.

V.A. Work-Study Jobs: Part-time student assistant positions are usually available at the V.A. Regional Office or V.A. hospital (and sometimes on campus). Full-time students who qualify may work up to

twenty hours per week, are limited to 250 hours per semester, and receive the Federal minimum wage.

University Placement Services

1001 (First Floor) Faculty Administration Building; 577-3390

University Placement Services provides help to students and alumni in defining career and employment goals and assist them in their search for employment opportunities.

Cooperative Education: The Cooperative Education Program provides students with opportunities to combine alternating periods of classroom learning with periods of paid on-the-job application in industry, business, government and social service agencies. The program is available to students in business administration, engineering and selected liberal arts curricula.

Summer Internships: The Summer Internship Program provides students with career-related paid employment. Preprofessional positions are available throughout the United States with a wide range of employers.

Student Employment: Student employment is available to those in search of financial assistance, or who wish to explore various career opportunities. Full or part-time jobs, either on a summer, seasonal, or continuous basis, are available on-campus through the Student Assistant Program or off-campus through an open posting process or 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. A joint effort with Eastern Michigan University, job fairs attract 120 varied employers and over 2000 students from fifty-one colleges and universities in Michigan.

Job Bulletin, Resume, 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.

Additional Services: A comprehensive Placement Library is available for information on over 1000 employers. Annual surveys of Wayne State University graduates are conducted to determine kinds of jobs and salaries obtained by former students and the satisfaction they feel about their jobs. A speaker's bureau is available to community, faculty and student groups, giving information on employment, resumes and interviewing techniques.

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 economically or educationally disadvantaged 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.

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,' 'Friar Tuck's,' 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.

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, athletic tickets, SMART and DOT bus

tickets, laminating and dri-mounting services, overnight photo-finishing service, school supplies, international identification cards, 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.

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. The student-run radio station, WAYN, broadcasts campus-wide during fall and winter semesters. Student activities advisers are available to assist students who want to organize new student groups. The staff coordinates various campus events such as the International Fair, Student Organizations Day, Commencement Corps, Holiday Bazaar, and leadership training.

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 Tuesdays; the Wayne Underground Music Series, on Wednesdays; and Multiformity: An Entertainment Series, on Thursdays.

Health Services

4K, University Health Center; 745-4774

Students are encouraged to use the Health Service at any time 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.

Students may choose to purchase hospitalization insurance for a reasonable fee. The policy provides stipulated amounts for hospitalization, surgery and emergency room fees. Forms for purchasing this insurance are available from G-M Underwriters, Inc., telephone: 652-8404; or in the Student Assistance Resource Center, 135 Student Center.

Medical visits to the Health Service are by appointment, which can be made by telephoning 745-4774. Transportation from the main campus is via the Three Center Mini Bus.

Athletics, Intramurals and Recreation

Matthaei Facility: 126 Matthaei Building; 577-4295

Intramural Sports: 154-3 Matthaei Building; 577-4261

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, table tennis, volleyball, and wallyball. For sign-up information or schedules, visit the Intramural Office, 154-3 Matthaei Building; or call: 577-4261.

The University sponsors thirteen NCAA Division II intercollegiate teams. There are seven men's sports—baseball, basketball, cross country, fencing, golf and tennis; five women's sports—basketball, fencing, softball, tennis, and volleyball; and one co-ed sport—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 eleven teams in Michigan, Ohio, and Indiana. 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: Ferris State University, Grand Valley State University, Hillsdale College, Lake Superior State University, Michigan Technological University, Northern Michigan 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.

OTHER UNIVERSITY SERVICES

UNIVERSITY LIBRARIES

The University Libraries are housed in six separate units, five of which are free-standing buildings. As of 1988, the library system reported holdings of 2,375,000 volumes, 16,400 current journal subscriptions, and 2,099,000 microforms, in addition to over 550,000 pamphlets and numerous films, filmstrips, maps, sound recordings, and videocassettes.

The library system includes the Purdy/Kresge Library complex, the Arthur Neef Law Library, the Science and Engineering Library, the Vera Parshall Shiffman Medical Library, the Pharmacy and Health Learning Resource Center, and the Federal-Mogul Library Annex. 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, a Detroit metropolitan library network. Through terminals in the libraries, users can access over 7,725,000 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 Center for Research Libraries with its 3,500,000-volume collection. At the Center for Research Libraries are found government documents, newspapers, and statistical materials from around the world, as well as specialized journals and older research materials.

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

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 Science Program. The Purdy/Kresge Library is the largest of the University's libraries.

The Purdy/Kresge Library contains approximately 1.4 million books, 13,000 current journals, extensive microform collections, and the largest government document collection on campus. In addition, the Media Library within the Purdy/Kresge Library holds over 7,000 films and videotapes. Media Services provides photographic services, design services, and film rentals. The Leonard Simons Collection contains rare Michigan history texts.

The Purdy Library also houses the Folklore Ethnic Archive as well as the offices of the Dean of Libraries and Library Science. 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 Liberal Arts. 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 journals. 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

Telephone: 577-1088

The Shiffman Medical Library, located in the Detroit Medical Center since 1970, 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 200,000 volumes and about 3,000 journal subscriptions. The Computer Resources Lab, opened in 1988, provides computer hardware and software support for curriculum support, patient management, medical decision making and research, as well as for tutorials. The Shiffman Medical Library is an active participant in the Greater Midwest Regional Library Network and can draw upon its interlibrary loan resources to provide access to the nation's biomedical information.

The Learning Resources Center, a special collection in the College of Pharmacy and Allied Health Professions, contains primarily textbook and non-print materials, especially videotapes, audiotapes, and slides.

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 400,000 volumes makes it the second largest law library in Michigan. The Library subscribes to 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.

University Archives

Walter P. Reuther Library; 577-4024

The University Archives, College of Urban, Labor and Metropolitan Affairs, was established in 1958 to collect, preserve, organize and make available to qualified researchers those University records which have research value. The Archives also collects the records of student organizations, professional associations and personal papers of faculty members who have contributed to the development of the University and higher education. The collections include manuscripts, photographs, publications, tape recordings, Board of Governors Proceedings, catalogs, schedules of classes and an extensive vertical file. The Archives currently holds over 500 newsletters and publications including *Wayne Report*, *The South End* and less commonly known titles such as *Crumbs and Ravelings*, *Gabriel's Horn* and *Short Circuit*.

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.

Housing Office

700 Merrick; 577-2116

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

Katherine Faville Hall houses juniors, seniors, and graduate students in fully furnished apartments. Roommates are administratively assigned and most apartments are designed for double occupancy. Nine-month contracts and summer session contracts are available.

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 Tower 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 faculty, staff and graduate students.

The Chatsworth Annex offers spacious, unfurnished two-bedroom units. Families with children are welcome. Residents pay their own utility bills except for heat and water.

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

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

University Ombudsperson

1322 Faculty Administration Building; 577-3487

Ombudsperson: Louis Stern

The Office of the Ombudsperson exists to assist students, faculty and staff in solving University-related problems. It can help students break through bureaucratic inertia, overcome unfair treatment, or obtain consideration of extenuating circumstances. It does so primarily by providing information and advice, by facilitating communication and by recommending changes in policies and procedures to the President of the University.

Students may request assistance on academic problems related to advising, grades, graduation requirements, records, registration, teaching behavior, and the like, or nonacademic problems relating to classrooms, financial aid, housing, library, parking, payroll, public safety, or tuition. The Ombudsperson chairs the Tuition and Fees Appeals Board which is the final arbiter of tuition and fee appeals.

The Ombudsperson is not required to advocate a student's point of view, or to act or request action for a student. Requests and complaints to the Ombudsperson's Office are investigated and independence of judgment is exercised in responding to them. The Ombudsperson will hold names and information in confidence when requested to do so.

Campus Security and Safety

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 (577-2053; 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, security talks to employee groups, an engraver loan program to mark property, and alarm system installation.

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.

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 and 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 program requires a minimum of thirty-three graduate credits beyond the pre-program foundation requirements. The M.B.A. program is 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 part of an urban university, the School makes a special commitment to foster basic and applied research that will benefit business enterprises. Equally important is the dedication to excellence in the instructional programs that create and support the business leadership that is critical to the continuing revitalization of southeastern Michigan.

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*

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

DIRECTORY OF THE SCHOOL

Dean	226 Prentis Building; 577-4501
Associate Dean for Academic Affairs	226 Prentis Building; 577-4503
Associate Dean for Research and Director of the Bureau for Business Research	Rands House; 577-4547
Assistant Dean for Student Affairs	226 Prentis Building; 577-4500
Business Manager	226 Prentis Building; 577-4502
Assistant to the Dean	226 Prentis Building; 577-4473
Manager, Development	226 Prentis Building; 577-4502
Manager, Computing Operations	6 Prentis Building; 577-4546
Director, The Management Center	Rands House; 577-4449
Director, Professional Development Division	Rands House; 577-4353
Director, W.S.U. Small Business Development Center	2727 Second Avenue; 577-4850
Director of Student Services	103 Prentis Building; 577-4510
Student Senate Office	209 Prentis Building; 577-4783
Department of Accounting	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

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 may 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 for 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 with deficiencies in both 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.

Business Law

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

Economics

- ECO 101 (3 cr.) (SS) Principles of Macroeconomics
and
ECO 102 (3 cr.) (SS) Principles of Microeconomics
Note: Either ECO 101 or 102 will satisfy the basic Social Science Group Requirement.

English

- ENG 102 (4 cr.) (BC) Introductory College Writing
Prereq: placement examination or ENG 101.
- and*
- ENG 301 (3 cr.) (IC) Intermediate Writing
Prereq: ENG 102 or equiv.

Mathematics

- MAT 150 (3 cr.) Finite Mathematics for the Social & Management Sciences
Prereq: Qualifying Examination.
- or*
- MAT 180 (4 cr.) (MC) Elementary Functions
Prereq: Qualifying Examination.
Note: Required as a prerequisite for most advanced computer science courses.

Philosophy

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

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.

Statistics

- FBE 330 (3 cr.) Quantitative Math. I: Probability & statistical Inference
(recommended) Prereq: MAT 150 or higher or equiv.
- or*
- ECO 410 (3 cr.) Economic and Business Statistics I
(alternate) Prereq: ECO 102; MAT 150 or 180 or equiv.

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 21). In reviewing that material, students should note that MKT 533 satisfies the Writing-Intensive major course requirement for business administration curricula; ACC 263 satisfies the Computer Literacy requirement; PSY 101 (4 credits) is recommended for satisfaction of the Life Science group requirement; and ECO 101 or 102 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 must satisfactorily pass the Mathematics Proficiency Test.

— 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 563	Business Information Systems
FBE 523	Financial Markets, Institutions and Securities
FBE 529	Business Finance

FBE 540	Quantitative Methods II: Statistical Methods. Must be satisfactorily completed in the first sixteen credits after admission to the School of Business Administration.
MGT 550	Organization and Management Theory
MGT 552	Behavior in Organizations
MGT 560	Introduction to Production Management
MGT 589	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 530	Marketing Management
MKT 533	(WI) Business Communication. Prereq: successful completion of English Proficiency Examination in Composition and all other pre-business administration requirements.
MKT 535	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 and Organization Sciences and Marketing require six courses (eighteen credits).

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 Engineering, or the College of Fine, Performing and Communication Arts, with the following exceptions:

1. Computer Science courses below the 300 level may be used to satisfy this requirement;

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 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 53.

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.

Professional Development Co-op 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.

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 Office of Student Services, 103 Prentiss 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.

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 obtain 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.

English Proficiency Examination

The English Proficiency Examination in Composition is a pre-business administration requirement. **Each student must pass the examination before admission to the School of Business Administration, or within the first sixteen credits following admission to the School.** 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 25, 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 will no longer satisfy the competency requirement; see page 22 under 'Mathematics.' 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 39.

Grievance Procedures

Grade Appeals Procedure: It is the instructor's prerogative to evaluate student work and assign grades in accordance with his or her academic and professional judgment. Grounds for appeal of grades are: 1) the application of non-academic criteria in the grading process; 2) sexual harassment; or 3) evaluation of student work by criteria not directly reflective of performance relative to course requirements. In those instances where a student disputes the final grade awarded, for one or more of the above reasons, the following steps should be taken to appeal the grade in question:

a. *Informal Review:* The student should discuss the disputed final grade with the instructor of the course. If the dispute is not resolved informally, the student may initiate a formal appeal.

b. *Formal Appeal Procedure:*

1. Within thirty calendar days following official notification of final grades for the term in which the disputed grade was awarded, and when the informal review fails to resolve the dispute, the student should submit a written appeal detailing his/her objections along with supporting documentation to the instructor. The instructor should respond in ten work days.

2. If the dispute remains unresolved, the student shall submit a written statement detailing his or her objections, along with supporting documentation, to the Department Chairperson, within ten work days following receipt of the instructor's response.

If the dispute continues to remain unresolved, the student should obtain information about further appeal procedures from the Office of Student Services.

Other Grievances: Grievances not related to grades should be brought directly to the appropriate departmental chairperson or to the Office of the Dean. Additionally, the University Ombudsperson (see page 50) is available to all students to assist in the resolution of University-related problems.

A copy of the School of Business Administration's grievance procedures is available in the Office of the Dean, or in the Office of Student Services, 103 Prentis Building.

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 of Courses

See page 34 in the General Information section of this Bulletin for University policy on course repetition.

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 for 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 36 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

Scholarship 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.

Alumni/Corporate Scholarship: Designated for business administration students demonstrating high academic achievement, leadership, and service. Funded through Recognition and Awards Banquet contributions. Established in 1986.

Richard H. Austin Excellence in Accounting Scholarship: Established to recognize potential abilities and academic achievements of minority accounting students.

Stanton P. Bockneck Memorial Scholarship: Awarded for the first time in 1988, this award is designated for students demonstrating high academic achievement in accounting.

Abraham J. Brillhoff Scholarship: Beta Alpha Psi Excellence in Writing: This award is given in honor of Abraham J. Brillhoff to an undergraduate and graduate accounting student, for outstanding manuscript writing.

Business/Professional Advertising Association Scholarship — Detroit Chapter: Annually awarded to undergraduate marketing majors with high academic achievement.

John N. Cadaret Memorial Scholarship: Awarded in memory of Dean Cadaret, this recently-established award is designated for business students demonstrating high academic achievement.

Commerce High School Alumni Scholarship: Designated for business administration students demonstrating high academic achievement.

Commercial Real Estate Women (CREW) Scholarship: Established in 1990 by the association of Commercial Real Estate Women. Awarded to a student interested in commercial real estate.

Dana Corporation Foundation Minority Scholarship: Established in 1989, this award is designated for minority business administration students demonstrating high academic achievement.

Delta Sigma Chi Scholarship Key: Awarded to the academically highest-ranked student in the graduating class of the School.

Charles E. Dover Scholarship in Business Administration: Designated for students demonstrating high academic achievement in business administration.

Farmer's Insurance Group of Companies Scholarship: Designated for students interested in insurance careers.

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.

Financial Executives' Institute Award for Excellence in Scholarship: Recognizes the academically highest-ranked business administration student in the December graduating class.

Sam and Leonard Fink Memorial Scholarship: Awarded to business administration students demonstrating high academic achievement.

Golden State Minority Foundation Scholarship: Annually awarded to minority business administration students demonstrating high academic achievement.

Verna S. Green Business Administration Scholarship: Established in 1989 to recognize outstanding academic achievement of a business administration student.

Charles and Katherine Hagler Scholarship in Public Relations: Established in 1989 in memory of Charles and Katherine Hagler, for recognition of an outstanding public relations student.

David D. Henry Award: Awarded to the outstanding male and female graduates of the University's December commencement class, based upon leadership, activities and service to the University, consistent with high scholarship.

Hillel Foundation Scholarship: Funded by B'nai Brith Hillel Foundation for award to an outstanding Jewish accounting student.

George R. Husband Scholarship: Awarded to accounting majors demonstrating high academic achievement.

Wilfred Kean Memorial Scholarship: Established in 1989 in memory of alumnus Wilfred Kean. Designated for a student enrolled in evening classes in the School.

Manufacturers Bank Minority Scholarship: A newly-established scholarship program designated for academically-talented minority business students interested in banking careers.

Lydia McHenry Chaimberlain Scholarship: Established in 1989 in memory of former faculty member Lydia Chaimberlain for recognition of an outstanding business communication student.

Michigan Bell Scholarship: Established in 1987, a scholarship/internship program designated for students in business administration, computer science, and engineering demonstrating high academic achievement.

Bruce E. Mullican Memorial Scholarship: Established in 1984 in memory of M.B.A. alumnus Bruce E. Mullican. Designated for students with demonstrated interest and involvement in small business management.

Peat Marwick—Wayne State Alumni Scholarship: Funded solely by Wayne State Alumni with Peat Marwick Main and Company, this award is designated for accounting majors demonstrating high academic achievement.

Aubrey C. Roberts Memorial Scholarship: Awarded to accounting majors demonstrating high overall scholarship and outstanding academic achievement in accounting subjects.

Slocum Foundation Scholarship: Awarded to marketing students of high academic achievement specializing in advertising/public relations.

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 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.

Financial Executives Institute Award for Excellence in Scholarship: Awarded annually to the business administration student in the December graduating class with the highest honor point average.

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.

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 or management. To be eligible for membership in this honor society, a student must rank in the upper five per cent of the junior class, upper ten per cent of the senior class, or upper twenty per cent of the master's program.



SUPPORT SERVICES and ORGANIZATIONS

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, administers the Consumer Panel, and provides professional services to the community.

Communications Laboratory

The Richard A. Marr Communications Laboratory provides an exciting, modern instructional facility, utilized in many business administration courses. Equipped with the most current audio-visual hardware from the laboratory, students have an opportunity to videotape, review and critique speeches, presentations and panel discussions required in their course work.

Microcomputer Facilities

With the increasing use of microcomputers in business administration courses, the School of Business Administration has established six modern microcomputer laboratories with a total of 125 Macintosh and IBM compatible work stations in the Prentis Building and Rands House. Four of these serve as microcomputer classrooms, two are designated for student walk-in traffic, and one is used primarily for microcomputer seminars.

The computers in each classroom are networked, providing all workstations with access to twelve laser printers. Several are connected to the University's mainframe computer. Through the laboratories, students have access to fifteen laser printers as well as an eight-pen color plotter.

Currently over 400 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 (P.D.D.) is the non-credit instructional component of the School of Business Administration. The P.D.D.'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 programs in-house as well as on campus and at other locations in the Detroit metropolitan area.

The P.D.D. also regularly conducts a series of programs focusing on the starting and operating of a small business. Additionally, 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

Director of the Professional Development Division may be reached at: 577-4353. Director of the Management Center is Mr. Rod Beaulieu; telephone: 577-4449.

Small Business Development Center

In the fall of 1983, Wayne State University 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, comprised of numerous subcenters throughout the state, is designed to provide comprehensive management and technical assistance to the small business community.

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

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

The director of the Michigan SBDC is Dr. Norman J. Schlafmann (577-4848). 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 small business owners/managers. Selected seniors and graduate students are invited to participate in this program in conjunction with their course work 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.

Office of Student Services

The Office of Student Services is responsible for evaluating student academic credentials, admissions processing, initial advising, and graduation certification of business administration students. In addition Student Services personnel prepare and distribute the *Plan of Work* for students enrolled in both the undergraduate and graduate degree programs.

Any student seeking academic, vocational, or personal counseling should make an appointment with the Office of Student Services (577-4510) or a member of the undergraduate counseling staff (577-4505).

Placement Services

The School of Business Administration interacts with the University Placement Services 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 bulletin boards and in showcases in the Prentis Building.

Student Organizations

Alpha Kappa Psi, the oldest national professional fraternity in business, 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 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 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/Professional Advertising Association (B/PAA) 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 B/PAA 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.

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 National Association of 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 Planning Forum is the nation's largest professional association for corporate planners. It has become widely known for its significant contributions to the development of the planning process, the education of its members, and acceptance of the profession in the business world. The Wayne State chapter participates regularly in activities of the Detroit professional chapter.

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*.

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: Rands House; 577-4530

Chairperson: Alan Reinstein

Professors

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

Associate Professors

Anthony Billings, Donald E. Gorton, K. Gregory Jin, Myles S. Stern, James F. Wallis (Emeritus)

Assistant Professors

Fouad K. AlNajjar, Vivian L. Carpenter, H. Alex Chang, David C. May (visiting), Effy Oz, Jack D. Schroeder, Adrienne L. Slaymaker, Albert D. Spalding, Jr., Larry Van Syckle

Senior Lecturer

Susan D. Garr

Lecturers

Pamela J. Jones, Gerald Lohse, Margaret A. Merriman, Sandra G. Penn, Audrey Taylor

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 53.

DEGREE REQUIREMENTS: Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on pages 54-55, 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 14-39 and 53-57 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. Students who concentrate in accounting must complete the following courses:

ACC 510	Advanced Accounting Theory I
ACC 511	Advanced Accounting Theory II
ACC 512	Advanced Accounting Theory III
ACC 513	Accounting Systems Design and Control
ACC 514	Auditing
ACC 516	Cost Accounting
ACC 517	Taxes on Income
ACC 553	Business Law II
ACC 617	Governmental and Not-for-Profit Accounting

— 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. 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 597	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.

ACCOUNTING COURSES (ACC)

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 433.

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 101 and ECO 102, MAT 150; coreq: ACC 263. Material fee as indicated in *Schedule of Classes*. Introduction to financial accounting principles; preparation and interpretation of balance sheets and income statements. (T)

302. Elementary Managerial Accounting Theory. Cr. 3

Prereq: ACC 301, sophomore standing, ECO 101 and ECO 102, MAT 150; or ACC 301, bachelor's degree. Material fee as indicated in *Schedule of Classes*. 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)

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)

512. 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)

513. Accounting Systems Design and Control. Cr. 3

Prereq: ACC 511, 563, 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 540. Principles and procedures of auditing; professional standards and responsibilities of the certified public accountant. (T)

515. Principles of International Accounting. Cr. 3

Prereq: ACC 511. Introduction to the principles of international accounting. Comparison of various accounting systems, foreign currency, consolidation and international harmonization in accounting. (Y)

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)

553. Business Law II. Cr. 3

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

563. Business Information Systems. Cr. 3

Prereq: ACC 301, 302, 263 or equiv., MAT 150; coreq: MGT 550. 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)

582. Systems Analysis and Design. Cr. 3

Prereq: ACC 563. 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 563. Material fee as indicated in *Schedule of Classes*. Effective use of data base management systems for processing management information; design and administration of systems. (T)

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. (T)

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. (T)

597. 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. (T)

617. 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)



FINANCE and BUSINESS ECONOMICS

Office: 328 Prentis Building; 577-4520

Chairperson: James L. Hamilton

Professors

James L. Hamilton, Milton H. Spencer

Associate Professors

Robert C. Bushnell, Walter J. Chamberlin (Emeritus), Barbara Price, Kelly R. Price, Joel M. Shulman, David R. Verway, Frank L. Voorheis

Assistant Professors

Richard A. Ajayi, Mark E. Bayless, Theodore Bolema (visiting), Timothy Butler, Rick A. Cooper, Johannes G. Denecamp, Mahmoud Haddad, Antoinette M. Somers

Senior Lecturer

Donald Houtakker

Lecturers

Jack R. Kuzminski, Sheri T. Tice

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 53.

DEGREE REQUIREMENTS: Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on pages 54-55, 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 14-39 and 53-57 respectively.

Corporation 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. Students should complete core courses FBE 529 and FBE 540 before beginning the following major requirements:

FBE 621	Stock Market and Investments
FBE 627	Advanced Business Finance
ACC 510	Advanced Accounting Theory I
ACC 516	Cost Accounting

Plus two of the following:

FBE 622	Portfolio Management
FBE 632	Principles of International Business Finance
FBE 633	Bank Management
FBE 634	Speculative Markets: Futures and Options
FBE 635	Real Estate Finance
FBE 637	Risk Management

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. Students should complete core courses FBE 523 and FBE 540 before beginning the following major requirements:

FBE 621	Stock Market and Investments
FBE 622	Portfolio Management
FBE 634	Speculative Markets: Futures and Options

Plus three of the following:

FBE 627	Advanced Business Finance
FBE 632	Principles of International Business Finance
FBE 633	Bank Management
FBE 635	Real Estate Finance
FBE 637	Risk Management

FINANCE and BUSINESS ECONOMICS COURSES (FBE)

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 433.

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, former FBE 530 or equiv. Measures of central tendency and dispersion. Introduction to probability; normal, binomial, exponential, and Poisson distributions. Statistical inference and sampling methods. (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)

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

Prereq: ECO 102; 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)

529. Business Finance. Cr. 3

Prereq: ECO 102, 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)

540. 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)

621. The Stock Market and Investments. Cr. 3

Prereq: FBE 523 and 540 or equiv.; FBE 529 and ECO 410 recommended. Introduction to the securities markets and how they function. Interpreting market changes; capital building through stock investments; factors influencing stock market prices; sources of investment information; strategies and theories of investing. (T)

622. Portfolio Management. Cr. 3

Prereq: FBE 540 and 621. Principles of portfolio construction and administration applicable to various institutions including banks, insurance companies, mutual funds, and pension trusts. (F,W)

627. Advanced Business Finance. Cr. 3

Prereq: FBE 529 and 540. Working capital management, capital budgeting, valuation theories, and long term financing policies. Emphasis on role of financial management in maximizing the value of the firm. (F,W)

632. Principles of International Business Finance. Cr. 3

Prereq: FBE 529. 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)

633. Bank Management. Cr. 3

Prereq: FBE 529 and 540 or equiv. 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. (F,W)

634. Speculative Markets: Futures and Options. Cr. 3

Prereq: FBE 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. (F,W)

635. Real Estate Finance. Cr. 3

Prereq: FBE 540 or equiv. Analysis of methods and problems of transferring real property. Examination and analysis of financing methods for real estate transactions and real estate investment strategies. (T)

637. Risk Management. Cr. 3

Repeat of former FBE 520. 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. (F,W)

MANAGEMENT and ORGANIZATION SCIENCES

Office: 328 Prentis Building; 577-4515

Acting Chairperson: Thomas J. Naughton

Professors

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

Associate Professors

K.S. Krishnan, Thomas J. Naughton, Harvey Nussbaum, Donald H. Palmer (Emeritus), Irving Paster (Emeritus), Fred P. Unruh (Emeritus), Harish L. Verma

Assistant Professors

Karen A. Bantel, Yitzhak Fried, Barbara C. Goodman, Ronald H. Humphrey, Ariel S. Levi, Peter Mudrack

Lecturers

Brian R. Chambers, John Perentesis

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 53.

Degree Requirements: Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on pages 54-55, 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 14-39 and 53-57, respectively.

Management Core

The specializations in management and organization sciences are designed for students planning managerial careers in business, industry, and the public sector. Management theory, concepts and practice are presented. The major is oriented toward the development of skills basic to problem recognition and solution.

Students specializing in general management, operations management, human resource management/labor relations, and entrepreneurship and small business management will complete the following core courses, and then select from the designated courses in the area of specialization listed below.

MGT 561	Management Decision Making
MGT 570	Personnel Administration

General Management

This specialization focuses on the overall skills required of managers. It is the broadest of the four specializations, providing knowledge and skills in planning, decision making, human resource management, operations management, and the management of small businesses. Students complete the following:

MGT 566	Managing the Small Business
MGT 574	Collective Bargaining
MGT 667	Models in Operations Management I

Plus one other management and organization science course at the 300 level or higher.

Entrepreneurship and Small Business Management

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 the Small Business

Plus one undergraduate business course approved in advance of student course registration by the faculty adviser for the entrepreneurship and small business management specialization. Examples of such courses are:

ACC 517	Taxes on Income
ACC 553	Business Law II
FBE 635	Real Estate Finance
FBE 637	Risk Management
MGT 574	Collective Bargaining
MKT 547	Industrial Marketing
MKT 570	Retail Management
MKT 644	Sales Management

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:

ACC 516	Cost Accounting
MGT 667	Models in Operations Management I
MGT 696	Models in Operations Management II

Plus one of the following:

MKT 560	Transportation and Distribution Management
MKT 562	Business Logistics

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 the following:

- MGT 574 Collective Bargaining
 MGT 577 Advanced Personnel Management

Plus two of the following:

- MGT 670 Labor Relations in the Public Sector
 MGT 674 Administering the Labor Agreement
 MGT 678 Current Issues in Employee Relations



MANAGEMENT COURSES (MGT)

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 433.

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)

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)

550. Organization and Management Theory. 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)

552. Behavior in Organizations. 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)

560. Introduction to Production Management. Cr. 3

Prereq: ACC 263 or equiv., FBE 330 or ECO 410, and MGT 550. 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)

561. Management Decision Making. Cr. 3

Prereq: FBE 330 or ECO 410, and MGT 550 and MGT 552 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. (T)

565. The Entrepreneur and Venture Creation. Cr. 3

Prereq: ACC 301, FBE 529, MGT 550, MKT 535. 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 the Small Business. Cr. 3

Prereq: ACC 301, FBE 529, MGT 550, MKT 530. Differences between small and large company environments and problems. Focus on knowledge and skills required for efficient and effective small business management. Selected students may replace a library research project with an actual small business consulting project. (T)

570. Personnel Administration. Cr. 3

Prereq: MGT 550 and 552, 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 550 and 552, 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 Personnel 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)

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

Prereq: MGT 550 or consent of instructor. No credit after former B A 589. 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)

667. Models in Operations Management I. Cr. 3

Prereq: MGT 560 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. (Y)

670. Labor Relations in the Public Sector. Cr. 3

Prereq: MGT 574 or consent of instructor. Repeat of former MGT 608. Investigation of management-employee relations, unionization and collective negotiations in the public sector. (Y)

674. Administering the Labor Agreement. Cr. 3

Prereq: MGT 574 or consent of instructor. Interpretation, application, and enforcement of labor agreements. Grievance processing and arbitration. Alternative methods of resolving contract disputes. (Y)

678. Current Issues in Employee Relations. Cr. 3

Prereq: nine credits in personnel and industrial relations. A terminal course investigating contemporary personnel, industrial relations, and manpower issues and problems in industrial relations and human resource management. (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)

696. Models in Operations Management II. Cr. 3

Prereq: MGT 560, FBE 540 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. (Y)

MARKETING

Office: 300 Prentis Building; 577-4525

Chairperson: Edward A. Riordan

Professors

Hugh M. Cannon (Adcraft Club/Leonard Simon—Larry Michelson Professor in Advertising), H. Webster Johnson (Emeritus), J. Patrick Kelly (K mart Chair in Marketing), John L. Mason (visiting), Ferdinand F. Mauser (Emeritus), Fred W. Morgan, Edward A. Riordan

Associate Professors

Ishmael P. Akaah, Mary S. Irwin (Emerita), George C. Jackson, Leon R. Klein (Emeritus), James T. Low, John J. Rath (Emeritus), Jone M. Rymer, Louis L. Stern, Attila Yaprak, David L. Williams

Assistant Professors

John D. Beard, Francis J. Brown (Emeritus), Alice Herge (Emerita), M. Christine Lewis, Jeffrey J. Stoltman

Lecturers

Jennie R. Needleman, Donna L. Santo

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 53.

DEGREE REQUIREMENTS: Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on pages 54-55, 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 14-39 and 53-57 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.

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

MKT 545	Consumer Behavior
MKT 585	Promotion Strategy
MKT 641	Marketing Research and Analysis

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, images, issues, ideas, and people.

MKT 549	Principles of Advertising
MKT 646	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

One course from a Departmental list

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 548	Market Forecasting
MKT 644	Sales Management

One course from a Departmental list



MARKETING COURSES (MKT)

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 433.

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)

530. Marketing Management. (Dsc: 1.5; Lct: 1.5). Cr. 3

Prereq: ECO 102. Planning the marketing program within social, economic and legal environments. Market segmentation and behavior, market systems and strategy, international marketing. (T)

533. (W) 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)

535. Marketing Analysis and Decision Making. Cr. 3

Prereq: MKT 530 and FBE 540. Application of marketing principles in the analysis of problems in the areas of marketing objectives, and product, price, promotion and distribution strategy. (T)

545. Consumer Behavior. Cr. 3

Prereq: MKT 530. Concepts and theories to explain consumer and organizational buyer behavior. Application of this understanding to marketing management and public policy decision making. (T)

547. Business Marketing. Cr. 3

Prereq: MKT 530 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 530 and FBE 540. 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 530. 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)

560. Transportation and Distribution Management. Cr. 3

Prereq: MKT 530. 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 540 and MKT 530. Achieving efficient physical flow of goods to fulfill production and marketing objectives through the integration of transportation, inventory and acquisition. (Y)

570. Retail Management. Cr. 3

Prereq: MKT 530. Retailing concepts and problems. Competitive structure, store location, organization, buying, inventory control, sales promotion, pricing, credit policy, customer services, research and franchising. (Y)

585. Promotion Strategy. Cr. 3

Prereq: MKT 530. Development of integrated strategies, plans and programs in advertising, personal selling, publicity and promotion, and their implementation in the overall marketing effort. (T)

641. Marketing Research and Analysis. Cr. 3

Prereq: MKT 530, FBE 540. 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)

644. Sales Management. Cr. 3

Prereq: MKT 530. Organization and direction of a sales organization including selection, training, compensation, supervision, motivation, budgets, quotas, territories, and sales analysis. (T)

646. 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)

650. International Marketing Management. Cr. 3

Prereq: MKT 530. 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)



COLLEGE OF EDUCATION

DEAN: Donna B. Evans

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 reaccruited regularly since that time. Full accreditation for its programs was again granted in 1984 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
- Business Education
- Distributive Education
- Elementary Education
- English Education—Secondary
- Family Life Education
- Foreign Language Education
- Health Occupations Education
- Industrial Education
- 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 Services*¹

**MASTER OF ARTS IN TEACHING Majors*

Elementary Education — with concentrations in

- Bilingual—Bicultural Education
- Elementary Education
- Science Education

Secondary Education — with concentrations in

- Bilingual—Bicultural Education
- English Education
- Foreign Language Education
- Mathematics Education
- Science Education
- Social Studies Education
- Vocational Education

**MASTER OF ARTS with majors in*

- Counseling
- Recreation and Park Services
- School and Community Psychology
- Sports Administration
- Vocational Rehabilitation Counseling

**MASTER OF EDUCATION with majors in*

- Adult and Continuing Education
- Art Education
- Bilingual—Bicultural 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
- Gifted Child Education
- Mentally Impaired
- Learning Disabilities

- Vocational Education

¹ For specific requirements, consult the Wayne State University Graduate Bulletin.

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

***EDUCATION SPECIALIST CERTIFICATES**

with majors in

Counseling
Educational Sociology
Elementary Curriculum and Instruction
English Education—Secondary
General Administration and Supervision
Instructional Technology
Mathematics Education
Reading
Science Education
Secondary Curriculum and Instruction
School and Community Psychology
Social Studies Education—Secondary
Special Education
Special Education—Administration
Vocational Education
Vocational Rehabilitation Counseling

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

Counseling
Curriculum and Instruction — with concentrations in

Art Education
Bilingual–Bicultural Education (Ed.D. only)
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
Special Education—Administration
Vocational Education

ACADEMIC REGULATIONS

For complete information regarding academic rules and regulations of the University, students should consult the General Information section of this bulletin, beginning on page 5. The following additions and amendments pertain to the College of Education.

Normal Program Load

The normal undergraduate student load is sixteen credits per semester. Only in exceptional cases is a student allowed to elect a heavier program. Approval of the adviser and authorization by the Director of the Division of Academic Services must be secured in those cases where the student petitions to carry more than eighteen credits within a full semester.

If a significant portion of a student's time is spent in outside work, corresponding adjustments must be made in his/her college schedule. Undergraduate students who are working full time may elect a maximum of eight credits with approval of the adviser.

Readmission

Following an Interruption in Residence

Undergraduate students whose attendance at Wayne State has been interrupted for three or more years will be required to apply at the College of Education Division of Academic Services for readmission to the College. Deadline dates for such applications are the same as those for regular admission to the College. In instances of prolonged absences of five years or more, it may be necessary to revalidate credits, either through examinations or refresher courses, within the student's major and the professional education sequences.

Attendance

Regularity in attendance and performance is necessary for success in college work. Although there are no officially excused absences as far as College policy is concerned, the conscientious student is expected to explain absences to the instructor. Such absences may be due to illness; to participation in inter-college activities certified by the sponsoring faculty member; or other similar types of absence for which the student can present to the instructor evidence that he/she was engaged in authorized University activities. Each instructor, at the beginning of the course, will announce his/her attendance requirements.

Transferred Credits and Residence Requirements

College credits earned in accredited institutions other than Wayne State University may be transferred by an undergraduate to apply toward meeting requirements for degrees and teaching certificates in the College, provided (1) the student has been accepted as a matriculated student in the College, (2) the grades received in courses where transfer is desired have been satisfactory, and (3) credits so earned are applicable to the student's curriculum.

In general, a maximum of fifteen credits may be earned by correspondence and extension courses and applied toward an undergraduate degree.

Weekend College (College of Lifelong Learning): Weekend College credit may be used toward a College of Education degree; however, it does not count toward fulfillment of major or minor requirements.

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

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 2.0, 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, 489 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: 489 Education; 577-1600

Assistant Dean: James Boyer

Graduate Advising: Stuart Itzkowitz, Toni Nicholas

Undergraduate Advising: Felicia Grace, Mary Manion

Teacher Certification: Carol DeRubeis, Janice Pemberton

Administrative Placement: R. Duane Peterson

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 continuing certification and for those seeking additional certificate endorsements and conversions.

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 3 West, 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 are available to students enrolled in the College of Education whose cumulative honor point average is no less than 3.0 (unless stated otherwise); approximately thirty-five are awarded in April of each year. Interested students may obtain application forms and additional information in Rooms 441 and 469 Education Building. *Application deadline is January 15.*

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:

Donna B. Evans Room 441, Education Building; 577-1620

Associate Dean, curriculum:

Paula Wood Room 441, Education Building; 577-1620

Assistant Dean, Academic Services:

James Boyer Room 489, Education Building; 577-1600

Assistant Dean, Administrative and Organizational Studies:

Burnis Hall Room 389, Education Building; 577-0210

Assistant Dean, Teacher Education:

Sharon Elliott Room 241, Education Building; 577-8111

Assistant Dean, Theoretical and Behavioral Foundations:

Alan Hoffman Room 341, Education Building; 577-0210

Assistant Dean, Health, Physical Education and Recreation:

Sarah Erbaugh Room 261, Matthaei Building; 577-5998

Mailing address for all offices:

Wayne State University,
5425 Second Avenue,
Detroit, Michigan 48202

HEALTH, PHYSICAL EDUCATION, and RECREATION

Office: 261 Matthaei Building; 577-6210

Assistant Dean: Sarah J. Erbaugh

Associate Professors

David B. Blievernicht, Sarah J. Erbaugh, Vernon Gale, Frank McBride, Diane Pick

Assistant Professors

Amos O. Aduroja, Herman Engels, Avanelle Kidwell, Robert Kohl, Karen K. McPherson, Peter A. Roberts, Todd Seidler, William W. Sloan, John C. Wirth, Weimo Zhu

Lecturers

Judy Bowen, Timothy Domke, S. Dee Ellis, Carol Mushett, Mary W. Paonessa

Degree and Certificate Programs

*BACHELOR OF ARTS in Education
with a major in physical education*

*BACHELOR OF SCIENCE 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,
and clinical/community health*

**MASTER OF EDUCATION with a major in physical education
and specializations in science of human movement,
and educational theory and practice*

**MASTER OF ARTS with a major in recreation and park services*

**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.

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 86. 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 489 Education Building. (Forms for transfer of college are available at either Room 266 Matthaei or Room 489 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. An overall honor point average of 2.5 or above.
2. Satisfactory completion of the University English Proficiency Examination and Mathematics Proficiency Examination.
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 489 Education Building.

DEGREE REQUIREMENTS: A total of 124 credits are required for completion of this degree: forty credits in general education (including satisfaction of the University General Education requirements, see page 21); a minimum of fifty credits in physical education; thirteen credits in health, recreation, and anatomy and physiology; and a minimum of twenty-three credits in education courses for the teacher certification program or a minimum of twenty credits in education courses for the other specialized option. Students in the teacher certificate program 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 73 and 86, and 14-39, respectively. All major, minor, and education courses must be completed with grades of 'C' or better 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.

HEALTH FOUNDATION SEQUENCE

(Required with each option)

	<i>credits</i>
ANA 301 —Introduction to Human Anatomy	4
HEA 233 —First Aid and CPR	3
R P 568 — Outdoor Skills	2
PSL 322 —Fundamentals of Physiology	4

PHYSICAL EDUCATION CORE

(Required with each option)

Credits

PE 191 —Professional Perspectives in Physical Education	2
PE 340 —Life Span Motor Development	3
PE 354 —Cultural Foundations of Physical Education	3
PE 355 —Motor Learning and Control	3
PE 357 —Physiology of Exercise	3
PE 358 —Kinesiology	3
PE 550 —Evaluation and Measurement in Health & Physical Education	3
Total:	20

TEACHING CERTIFICATION OPTION

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	5
PE 442 —Student Teaching and Seminar II	5
EDP 331 —Educational Psychology	3
RDG 443 —(W) Teaching Reading in Subject Matter Areas	3
TED 516 —Analysis of Secondary School Teaching	3
Total:	23

EXERCISE SCIENCE OPTION

PE 256 —Individual Problems in Physical Education	3
PE 435 —Internship in Fitness	4
PE 533 —Principles of Athletic Training	3
PE 632 —Fitness Leadership	3
HE 565 —Health and the Aging Process	3
Electives	4
Total:	20

Physical Education Activity 10

Professional Education Requirements 20

Bachelor of Arts in 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.

Student Teaching

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 R P 568.

5. The following courses must be satisfactorily completed. (An incomplete grade does not constitute satisfactory completion.): ANA 301, PSL 322, EDP 331, TED 516, 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 Lifeguard Instructor and Water Safety Instructor Certificates.

Teaching Certification

Students who complete all of the Physical Education Department 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; see page NO TAG of this bulletin for further information or 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 the Physical Education Department—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 Departmental adviser.

PHYSICAL EDUCATION CORE

(Eight Credits required, including P E 191)

credits

P E 191 —Professional Perspectives in Physical Education	2
P E 340 —Life Span Motor Development	3
P E 355 —Motor Learning and Control	3
P E 357 —Physiology of Exercise (Prereq: ANA 301, PSL 322, or equiv.)	3
P E 358 —Kinesiology (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 526 —Home & Hospital Ed. of Children with Physical Impairments	4
SED 514 —Behavior Management: Mental Impairments	3
SED 511 —Mental Retardation and the Cognitive Process	3

Total: 24-28

Physical education majors must consult with a special education adviser, and special education majors must consult with a physical education adviser, prior to electing courses for this endorsement.

Health Education Minor

Health education, a relatively new field of specialization, plays an educational leadership role in the promotion of health and the prevention of disease, encouraging the introduction of comprehensive health education curricula into schools and the development of health education programs in the clinical setting, community, and workplace. 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 endorsement which allows one to teach health at the middle and high school 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 with a professional major in allied health or health science fields, and provides a pedagogical component in the health professions.

The requirements for a minor in health education include courses in three areas: 1) basic health science; 2) health aspects of the human environment; and 3) professional health pedagogy. 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	2-3
HEA 232 —Dynamics of Community and Environmental Health	2
H E 330 —Health of the School Child	3
H E 333 —School Health Education	3
H E 434 —Reproductive Health Education	3
H E 480 —Practicum in Health Education	2
Electives	2-4
Total: 24-28	

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. Non-teaching degrees are currently awarded through the College of Education. 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 the Association and are open to students and professionals in metropolitan Detroit.

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 14 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 coordinator in this department prior to admission into the program. For further information, students are urged to contact the Department; telephone: 577-4269.

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 21), 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 73 and 86, and 14-39, respectively. Since changes in courses may occur through periodic curriculum revision, students should consult with their advisers 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'.

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 necessary for students having difficulty in this area.)

	<i>credits</i>
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 Eleven Credits)

BIO 103 or BIO 105 (Required for the Recreation Programming Option only)	
—(LS) Human Environmental Biology	3
—(LS) An Introduction to Life	3
ANA 301 —Introductio to Human Anatomy (Required for Therapeutic Recreation emphasis only)	4
PSL 322 —Fundamentals of Physiology (Required for Therapeutic Recreation emphasis only)	4
¹ AST 201 or GEL 101	
—(PS) Descriptive Astronomy	4
—(PS) Geology: The Science of the Earth	4

GENERAL EDUCATION

(Nineteen to Twenty-three Credits)

¹ P S 101 —(AI) 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 ANT 352	
—(FC) Anthropology of Business	3
—(FC) Stability and Change in Contemporary Africa	3
¹ HUM 102 —(VP) Experiencing the Arts	3
¹ PHI 101 —(PL) Introduction to Philosophical Systems	3
Electives	4

EVALUATION and MEASUREMENT (Three Credits)

P E 550 —Evaluation and Measurement in Health & Physical Education	3
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¹ Or other elective fulfilling University General Education Group Requirement.

COMPETENCY EXAMINATIONS

Competency must be demonstrated in subject areas indicated by passing the following examinations: English Proficiency, Critical/Analytical Thinking, Computer Literacy, and Mathematics.

Major Requirements: Concurrent with the general and professional education requirements, students must complete sixty-four credits in Recreation and Park Services courses consisting of the following core courses, and nine elective credits. Attendance at two departmental Professional Development Seminars is also required prior to graduation.

CORE REQUIREMENTS

(Thirty-seven to Thirty-eight Credits)

R P 260—Principles of Leadership and Recreation Programming	4
R P 264—Camp Leadership and Administration	3
R P 360—Social Recreation Programming	3
R P 362—Introductory Field Work	3
R P 367—Introduction to Therapeutic Recreation ¹	3-4
R P 462—Internship	9
R P 463—(W) Philosophy of Recreation and Park Services	3
R P 465—Recreation and Park Administration	3
R P 664—Legal Issues in Leisure Service Systems	3
P E 550—Evaluation and Measurement	3

ELECTIVES

(Twenty-seven Credits chosen from the following:)

R P 265—Cultural Arts in Recreation	3
R P 563—TR: Program Development (Required for Therapeutic Recreation emphasis)	3
R P 585—Recreation Services for the Aging	3
R P 586—Independent Study	1-2
R P 588—Outdoor Skills	2
R P 594—Facility Planning and Design	3
R P 596—Readings in Recreation	1
R P 598—TR: Mental Health	3
R P 660—Outdoor Education	3
R P 663—TR: Program Implementation (Required for Therapeutic Recreation emphasis)	3
R P 667—Outdoor Recreation	3
R P 669—Workshop	1-2
R P 693—TR: Physical Disabilities	3
R P 698—Leisure Education	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 20). 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 in any college or university within the State. Applications are available from a Departmental adviser after January 1 of each year.

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.

¹ Four credits required for Therapeutic Recreation emphasis.

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 433.

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)

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)
- 337. (P E 357) Physiology of Exercise.** Cr. 3
Prereq: six credits in human anatomy and physiology. Material fee as indicated in *Schedule of Classes*. Human functions and their response to physical stress. (T)
- 338. (P E 358) Kinesiology.** Cr. 3
Prereq: six credits in human anatomy and physiology. 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. (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)
- 532. (P E 632) Fitness Leadership.** Cr. 4
Prereq: ANA 301, P E 357 or equiv. Material fee as indicated in *Schedule of Classes*. Physiology, anatomy, psychology and methodology of group fitness leadership. (T)
- 533. (P E 533) Principles of Athletic Training.** Cr. 3
Prereq: ANA 301 or equiv. Needs and responsibilities of an athletic trainer-teacher in high school or college setting. Information, skills required in administering an athletic training room. (B)

534. (P E 534) Prevention and Care 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, knee, muscle, and other injuries of the locomotor system and of the skin. Application of heat, light, diathermy, water; massage and special exercises. Bandaging, first aid procedures; training table; observation and directed experiences. (W)

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. (T)

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. Reproductive Health Education. Cr. 2
 Program planning, curriculum development and classroom teaching strategies in the areas of human sexuality, reproductive health and venereal disease; satisfies Michigan Department of Education requirement for qualification to teach 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. (T)

564. Health of the Pre-School Child. Cr. 3
 Conditions and practices which protect and promote healthy growth in the young child; environmental sanitation, preventive health practices, care in case of illness or injury, meeting emotional health needs, and early sex education. (I)

565. Health and the Aging Process. Cr. 3
 Dynamics of later life with specific emphasis on health maintenance. Physiological aspects of aging and an overview of chronic conditions of the aged. For preprofessionals and paraprofessionals in the field of services to the aging. (I)

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)

644. Workshop in Health Education. Cr. 1-3(Max. 6)
 Content areas in health education; lecture, discussion and individual or group projects. Topics may reflect current interests in health. (I)

653. Clinical/Community Health Education Program Development. 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)

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)

251. Officiating Techniques. (PEA 210). Cr. 1-2(Max. 4)
 Prereq: consent of adviser and chairperson. (Max. 4) Development of competence in officiating selected team and individual sports: basketball, football, softball, swimming, gymnastics, and track and field. (F,W)

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. (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)

340. Life Span Motor 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. A movement education approach which focuses on beginning movement concepts and skills utilized in teaching games, gymnastics and 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 more advanced movement and aesthetic concepts and skills. Investigation of individualized approaches which use movement themes, traditional dances, sport forms, and creative work in games, gymnastics and dance. (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,W)

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. (W)

- 355. (WI) 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. (HEA 337). 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. Kinesiology. (HEA 338). 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. 4**
Prereq: P E 632, HEA 233. Experience in phases of assigned organization relative to health and exercise programs for various populations. (F,W)
- 441. Student Teaching and Seminar I. (Fld:15; Smr: 3). Cr. 5**
Prereq: admission to student teaching as listed in physical education 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 for students electing separate contacts; coreq: 441 for students electing double contact. Offered for S and U grades only. (F,W)
- 452. Field Experience in Coaching. Cr. 2 (Max. 4)**
Prereq: consent of adviser and department chairperson. Internship in two approved sports. (F,W)
- 533. Principles of Athletic Training. (HEA 533). Cr. 3**
Prereq: ANA 301 or equiv. Specific needs and responsibilities of an athletic trainer-teacher in a high school or college setting. Emphasis on information, skills required in administering an athletic training room. (F)
- 534. Prevention and Care of Athletic Injuries. (HEA 534). 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, knee, muscle and other injuries of the locomotor system and the skin. Application of heat, light, diathermy, water, massage and special exercises. Bandaging, first aid procedure; 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. (F)
- 551. Principles of Coaching. Cr. 3**
Prereq: admission to senior college. Specific topics on the coach and the athlete in areas of administration, motor learning, physical growth, motor skill acquisition, philosophy, psychology and sociology. (B)
- 632. Fitness Leadership. (HEA 532). 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)
- 654. Workshop in Physical Education and Athletics. Cr. 1-4(Max. 8)**
Teachers, school administrators and consultants working cooperatively on current problems in physical education and athletics. (S)
- ## 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)
- 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)

127. Aqu aerobics. 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. Aerobics/Running: Cardiorespiratory Conditioning. 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)

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)

157. Squash. Cr. 2 (Max. 4)

Analysis and practice of racquet skills, court strategies, rule interpretation and officiating procedures. (F,W)

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)

166. Racquet Sports. Cr. 2 (Max. 4)

Students learn and play various racquet sports, including competitive badminton, pickleball, and soft tennis. Skill development and competition. (F)

168. Triathlon: Technique and Conditioning. Cr. 2 (Max. 8)

Prereq: swimming skills. Analysis and practice of training skills and techniques required for participation in several forms of the sport of triathlon. (Y)

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. 1

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)
- 210. (P E 251) Officiating Techniques. Cr. 1-2(Max. 4)**
Prereq: consent of adviser and chairperson. Development of competence in officiating selected sports. Skills, signals, rules, and interpretation; personal preparation, officials' associations, supplementary officials; opportunity for certification; rule differences for men's and women's competition, where appropriate. Regularly scheduled for the following sports: baseball, basketball, football, volleyball; others as needed. (F,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)
- 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. (T)
- 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)
- 565. Recreation Services for the Aging. Cr. 3**
Programming for the aged and the aging in a variety of leisure settings; communication of program availability and stimulation of participation. (B;W,S)
- 566. Independent Study. Cr. 1-2(Max. 6)**
Supervised research, applied or action, in the student's area of concentration or interest. (F,W)
- 568. 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)
- 594. Facility Planning and Design. Cr. 3**
Fundamentals of planning and design emphasizing leisure facilities in the urban setting; elementary studio design projects and field inspections. (B)
- 596. 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)
- 598. 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 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)
- 664. Legal Issues in Leisure Service Systems. Cr. 3**
Identification and exploration of legal concepts and issues related to professional leisure and recreational agencies and services. (B)
- 665. Supervision and Management in the Leisure Services. Cr. 4**
Supervision and management of recreation personnel, facilities and services; decision making, communication and public relations techniques. One hour arranged. (B)

667. Outdoor Recreation. Cr. 3

Meaning, significance, historical background; facilities, agencies and programs at the federal, state and local levels; organizations and future projections. (B)

**669. Workshop In Recreation and Park Services.
Cr. 1-2(Max. 6)**

Students and professionals explore current problems in the field or professional challenges. (T)

693. 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)

698. 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

Donald J. Bissett, Asa J. Brown, Leonard Kaplan, Peter L. Sanders, Gary R. Smith, Samuel B. Stone

Associate Professors

Rudi Alec, Fred G. Attebury, Navez Bhavangri, Daniel E. Behmer, James Boyer, John S. Camp, Sharon W. Elliott, Annamarie Hayes, Stella S. F. Liu, David H. Makinson, Rodolfo Martinez, John T. Norman, Jr., Arthur R. Park, Beverly N. Parke, Richard M. Parres, Virginia L. Pearson, James H. Quina, R. Craig Roney, Joseph Sales, Sr., Jacqueline Tilles, Paula Wood, Anga Youssef

Assistant Professors

James H. Blake, Loretta B. Jones, Jo-Ann Snyder, Edward Walker, Jr., Marshall Zumberg

Degree and Certificate Programs

BACHELOR OF ARTS in Education

with majors in the following areas:

- Art Education
- Business Education
- Distributive Education
- Elementary Education
- English Education—Secondary
- Family Life Education
- Foreign Language Education
- Health Occupations Education
- Industrial Education
- Mathematics Education
- Science Education
- Social Studies Education—Secondary
- Special Education—with concentrations in
 - Speech Impaired
 - Mentally Impaired
- Speech Education—Secondary

BACHELOR OF SCIENCE in Education

with majors in the areas listed above

**MASTER OF ARTS IN TEACHING*

with majors in:

- Elementary Education—with concentrations in:
 - Bilingual—Bicultural Education
 - Early Childhood Education
 - Science Education
- Secondary Education—with concentrations in:
 - Bilingual—Bicultural Education
 - English Education
 - Foreign Language Education
 - Mathematics Education
 - Science Education
 - Social Studies Education
 - Vocational Education



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

***MASTER OF EDUCATION**

with majors in

- Adult and Continuing Education
- Art Education
- Bilingual-Bicultural 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
 - Gifted Child Education
 - Mentally Impaired
 - Learning Disabilities
- Vocational Education

***EDUCATION SPECIALIST CERTIFICATE**

with majors in:

- Elementary Curriculum and Instruction
- English Education—Secondary
- Mathematics Education
- Reading
- Science Education
- Secondary Curriculum and Instruction
- Social Studies Education—Secondary
- Special Education
- Special Education—Administration
- Vocational Education

***Ed.D. and Ph.D. Degree Majors**

- Curriculum and Instruction—with concentrations in
 - Art Education
 - Bilingual-Bicultural Education (Ed.D. only)
 - 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
- Vocational 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 vocational education and special education) in the above named areas but who do not wish to enter a Master of Arts in Teaching degree program.

Combined programs are available in the following curriculum areas in which students complete requirements leading to baccalaureate degrees in the College of Liberal Arts, or the College of Fine, Performing and Communication Arts, and the teaching certificate requirements in the College of Education:

COLLEGE OF LIBERAL ARTS

- English Education—Secondary
- Foreign Language Education—Secondary
- Mathematics Education—Secondary
- Science Education—Secondary
- Social Studies Education—Secondary
- Speech Education—Secondary

COLLEGE OF FINE, PERFORMING and COMMUNICATION ARTS

- Dance Education
- Music Education



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* 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, business education, distributive education, industrial education, family life 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 14-39.

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 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 pages 22-22).

3. 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.

4. 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 an accredited institution, 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 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 be admitted to the Combined Program through Academic Services, 489 Education Building.

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 2.0. 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, or health of the school child.
5. Completion of University General Education and Competency requirements (see page 21).

Bachelor of Arts in Education Language Requirement: In addition to the above requirements, programs of candidates for the Bachelor of Arts degree must include 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. Additionally, the major and minor subjects may be taught in the sixth through eighth grade.

Admission Requirements: see above, page 86.

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 21), but the dual application of any course to both College and University General Education categories cannot be used to reduce the total degree requirement below 124 credits.

<i>ENGLISH (Two Courses)</i>	<i>credits</i>
ENG 102 —(BC) Introductory College Writing	4
Intermediate Composition (IC) — see General Education Requirements, page 21	

FOREIGN CULTURE (see General Education Requirements, page 21)

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

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	3
HIS 161 — (HS) African Civilizations Since 1800	3
HIS 195 — (HS) Society and the Economic Transition	3
HIS 287 — (HS) The Transformation of Western Society	3
HIS 304 — (HS) War and Society in the Modern World	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 — (HS) Islamic History: The Formation of the State	3
N E 369 — (HS) Islamic History: The Formation of the Empire	3

HUMANITIES (see General Education Requirements, page 21)

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 101 — (PS) Music, Color, and Perception: The Physics	3-4
PHY 102 — (PS) Conceptual Physics: The Basic Science	3-4
PHY 104 — (PS) Einstein, Relativity and Quanta: An Introduction	3
PHY 213 — (LS) 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	4
— (LS) Human Environmental Biology	3-4
— (LS) An Introduction to Life	3-4

MATHEMATICS (One Course)

MAE 505 or MAT 111	
—Mathematics for Elementary School Teachers	3
—Mathematics for Elementary Teachers I	3

SOCIAL STUDIES (Three Courses)

P S 101 or P S 103	
—(AI) American Government	4
—(AI) The American Governmental System	3
GEG 110 —(SS) World Regional Patterns	4
HIS 204 or HIS 205	
—American Foundations: United States to 1877	3-4
—Modern America: United States since 1877	4

SPEECH (One Course)

SPB 101 —(OC) Oral Communication: Basic Speech	3
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THE UNIVERSITY and ITS LIBRARIES: All students must complete this course 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 course may be taken while in the College of Liberal Arts:

ELE 320 —Literature for Children	3
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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 — (WI) Teaching Reading in Subject Matter Areas	3
SED 501 —Exceptional Child in the Regular Classroom	2
TED 602 —Computer Applications in Teaching I	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 K-8 certification must complete one of the following majors:

ENGLISH MAJOR (Minimum Thirty Credits)

ENG 102 — (BC) Introduction to College Writing	4
ENG 220 —(PL) Shakespeare	3
ENG 239 — (IC) Introduction to Afro-American Literature: Literature & Writing	4
ENG 272 — (PL) Analysis of English (or equiv.)	3
ENG 301 — (IC) Expository 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 — Children's Literature	3
Literature Elective	4

ENGLISH/SPEECH GROUP MAJOR (Minimum Thirty-six Credits)

ENG 102 — (BC) Introduction to College Writing	4
ENG 220 — (PL) Shakespeare	3
ENG 239 — (IC) Introduction to Afro-American Literature: Literature and Writing	4
ENG 272 — (PL) Analysis of English (or equiv.)	3
ENG 301 — (IC) Expository 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 — Children's Literature	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 150 or MAT 180	
— Social and Management Science	3
— (MC) Elementary Functions *	4
MAT 151 or MAT 201	
— Calculus for the Social and Management Sciences	3
— (MC) Calculus I *	4
STA 102 — Elementary Statistics	3

Electives (seven to nine credits) from:

MAT 180 — (MC) Elementary Functions (Cr. 2 only, after MAT 150)	3
MAT 186 — Discrete Mathematics for Computer Science I	4
MAT 202 — Calculus II	4
MAT 203 — Calculus III	4
CSC 100 or CSC 101	
—(CL) Introduction to Computer Science	3
—(CL) Introduction to Computing	3

NATURAL SCIENCE GROUP MAJOR (Thirty-six Credits)

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
GEL 102 — Interpreting 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

SOCIAL STUDIES GROUP MAJOR (Thirty-six Credits)

P S 101 or P S 103	
—(AI) American Government	4
—(AI) The American Governmental System	3
GEG 110 — (SS) World Regional Patterns	4
HIS 110 or HIS 120 or HIS 350	
—(HS) The Ancient World	4
—(HS) The Medieval World	4
— Explorers' Age: 1400 – 1750	3
HIS 130 — (HS) The World and the West: 1500–1945	3-4
HIS 204 — American Foundations: United States to 1877	4
HIS 205 — Modern America: United States Since 1877	4
ANT 210 or ANT 520	
—(SS) Introduction to Anthropology	4
— Social Anthropology	3

Electives from:

HIS 160 — (HS) African Civilizations to 1800	3
HIS 161 — (HS) African Civilizations since 1800	3
HIS 335 — (HS) Revolution in the Modern World: 1750 to Present	3
HIS 573 — The History of West Africa	4
HIS 579 — Cities and Empires: European, Muslim, Chinese and Russian	3

Six to nine elective credits are also acceptable from anthropology, economics, geography, history, political science, or sociology

MINOR AREAS OF STUDY: Students seeking a K-8 endorsement must complete one of the following minors:

ART EDUCATION MINOR (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 522 — Methods and Materials: Painting	3
AED 523 — Ceramics Education I	3
AED 528 — Methods and Materials: Printmaking	3
AED 615 — Instructional Applications of Computer Graphics	3

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	4
ELE 604 — Role of Content Areas in Early Childhood	3
ELE 606 or ELE 607	
— Work with Families in Urban Settings	2
— Parent Intervention Programs in Home and School	3
ELE 608 — Pre-Primary Goals and Practice	2
ELE 634 — Teaching Reading in Early Childhood Education	3
PSY 343 or PSY 344	
— Infant Behavior *	3
— Child Behavior *	3
Early Childhood Electives	3-4

* May be elected while in College of Liberal Arts.

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 270 or ENG 271 or ENG 272	
—Introduction to Contemporary English	3
—Linguistic Approaches to Language Acquisition	3
—(PL) Basic Concepts in Linguistics	3
ENG 314 — (PL) Survey of English Literature	3
ELE 320 —Literature for Children	3

ENGLISH/SPEECH GROUP MINOR (Twenty-six 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 270 or ENG 271 or ENG 272	
—Introduction to Contemporary English	3
—Linguistic Approaches to Language Acquisition	3
—(PL) Basic Concepts in Linguistics	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 —Introduction to Human Anatomy	4
PSL 322 —Fundamentals of Physiology	4
HEA 231 —Dynamics of Personal Health	2-3
HEA 232 —Dynamics of Community and Environmental Health	2
H E 330 —Health of the School Child	3
H E 333 —School Health Education	3
H E 434 —Reproductive Health Education	2
H E 480 —Practicum in Health Education	1-2
Electives	3-4

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 150 or MAT 180	
—Finite Mathematics for the Social and Management Sciences	3
—(MC) Elementary Functions	4

Electives (one course):

MAT 151 —Calculus for the Social and Management Sciences	3
MAT 186 — Discrete Mathematics for Computer Science I	4
MAT 201 — Calculus I	4
MAT 202 — Calculus II	4
CSC 100 —(CL) Introduction to Computer Science	3
CSC 101 —(CL) Introduction to Computing	3

MUSIC MINOR: Students should consult with a music education adviser in the Music Department, College of Fine, Performing and Communication Arts.

NATURAL SCIENCE GROUP MINOR (Twenty-four Credits)

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
BIO 151 —(LS) Basic Biology I	4
BIO 152 —Basic Biology II	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 —Life Span Motor Development	3
P E 355 —(WI) Motor Learning and Control	3
P E 357 —Physiology of Exercise	3
P E 358 —Kinesiology	3
P E 550 —Evaluation and Measurement in Health & Physical Education	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 259 — Physical Education in Secondary Schools II (Cr. 3, Max. 6)	6

Students must contact the Physical Education Department for advising: appointments with Ms. Avanelle Kidwell 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	
—(AI) American Government	4
—(AI) The American Governmental System	3
GEG 110 —(SS) World Regional Patterns	5
HIS 130 or HIS 140	
—(HS) The World and Europe: 1500-1945	4
—(HS) The World Since 1945	4
HIS 204 —United States to 1877	4
HIS 205 —United States Since 1877	4

Elective (choose one from the following):

HIS 224 —History of Michigan	3-4
HIS 350 —Explorers' Age: 1400-1750	3
HIS 160 —(HS) African Civilization to 1800	3
HIS 161 —(HS) African Civilization since 1800	3

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 or the College of Fine, Performing and Communication Arts. For information regarding these combined degree programs, see pages 156 and 213, respectively.

Admission Requirements: see page 86.

DEGREE REQUIREMENTS: The following requirements in various curricular areas supplement the degree requirements outlined above (see page 86).

PRE-PROFESSIONAL REQUIREMENTS: The following courses and course options are required of all students seeking secondary (grades 7–12) certification regardless of selection of major or minor studies. Some of these courses may also satisfy the University General Education Requirements, but the dual application of any course to both College and University General Education categories cannot be used to reduce the total degree requirement below 124 credits.

GENERAL COURSE REQUIREMENTS

ENG 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	
—First Aid and CPR	3
—Health of the School Child	3
—Dynamics of Personal Health	2–3
TED 225 —Introduction to Education (optional)	3

FOREIGN CULTURE (see General Education Requirements, page 21)

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	3
HIS 161 — (HS) African Civilizations since 1800	3
HIS 171 — (HS) East Asian Civilization since 1840	3
HIS 195 — (HS) Society and the Economic Transition	3
HIS 287 — (HS) The Transformation of Western Society	3
HIS 304 — (HS) War and Society in the Modern World	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 — (HS) Islamic History: The Formation of the State	3
N E 369 — (HS) Islamic History: The Formation of the Empire	3

HUMANITIES (see General Education Requirements, page 21)

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
PHY 213 — (LS) 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	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 101 — (SS) Principles of Macroeconomics	4
GEG 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 Phases I–III represents the sequence in which students may elect these courses (substitutions between the phases is possible), however, all of the courses in Phases I and II must be completed before taking TED 578.

PHASE I

TED 516 —Analysis of Secondary School Teaching	3
Methods I —(see below)	3
EDP 331 —Educational Psychology	3

PHASE II

TED 565 —Pre-Student Teaching Field Experience for Secondary Majors	5
Methods II —(see below)	3
RDG 443 — (WI) Teaching Reading in Subject Matter Areas	3

PHASE III

TED 578 —Directed Teaching and Conference	10
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Courses which may be elected in any Phase:

EHP 360 —Introduction to the Philosophy of Education	3
TED 602 —Computer Applications in Teaching I	3
BBE 500 —Multicultural Education in Urban America	2
SED 501 —Exceptional Child in the Regular Classroom	2

TEACHING METHODS (Two Courses)

COMPUTER SCIENCE EDUCATION	
TED 602 —Computer Applications in Teaching I	3
TED 603 —Computer Applications in Teaching II	3
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 in Secondary Mathematics 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 —Methods and Materials of Instruction in Secondary School Science II 3
- SCE 603 — 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 Education 1-8

SPEECH EDUCATION

- SPE 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 Afro-American Literature: Literature & Writing 4
 - Topics in Afro-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

* Replaces SCE 507 for Unified Science Group Majors only.

MATHEMATICS MAJOR (Thirty Credits)

- MAT 201 —(MC) 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
- MAT 614 —Topics in Mathematics for High School Teachers II 3
- MAT 615 or MAT 221
 - Topics in Mathematics for High School Teachers III 4
 - Elementary Probability and Statistics 4
- MAT 616 —Topics in Mathematics for High School Teachers IV 3

Electives

- MAT 507 —Advanced Calculus 4
- MAT 540 —Elementary Theory of Numbers ** 3
- MAT 552 — Introduction to Topology ** 3
- MAT 586 —Introduction to Linear Programming 3

It is recommended that mathematics majors elect at least one Computer Science course beyond the thirty credits in mathematics.

MATHEMATICS MAJOR: Computer Science Concentration (Thirty-one Credits)

- CSC 102 —(CL) Computer Science I 4
- CSC 203 —(CL) Computer Science II 4
- CSC 371 —(WI) Data and File Structures 4
- CSC 206 or CSC 210
 - (CL) Introduction to FORTRAN 3
 - (CL) Introduction to COBOL 3

Electives (at least 15 credits)

- CSC 441 —Introduction to Computer Systems 4
- CSC 513 —Introduction to Information Systems 4
- CSC 521 —Artificial Intelligence Programming with LISP 2
- CSC 587 —Computer Graphics 3
- CSC elective 2

SCIENCE MAJOR (Thirty-two Credits)

Thirty-two credits must be completed in a single discipline 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 requirements and sequences as defined by the specific Liberal Arts department plus additional courses if the thirty credit minimum is not attained. CHM 674 (Laboratory Safety, two credits) may be used as part of the Chemistry major or Unified Science Minor.

** Recommended electives for Secondary Mathematics Major.

SECONDARY UNIFIED SCIENCE GROUP 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 (9 credits):	
BIO 151 — (LS) Basic Biology I	4
BIO 152 — Basic Biology II	4
BIO elective	1
EARTH SCIENCE (9 credits):	
AST 201 —(PS) Descriptive Astronomy	5
GEL 101 —(PS) Geology: The Science of the Earth	4
CHEMISTRY (10 credits):	
CHM 107 —(PS) Principles of Chemistry I	4
CHM 108 —Principles of Chemistry II	5
CHM 674 —Laboratory Safety	2
PHYSICS (9 credits):	
PHY 213 —(PS) General Physics	4
PHY 214 —General Physics	4
PHY elective	1
Additional Science Electives	12

In addition to the above major courses, the following courses are required:

MAT 180 — (MC) Elementary Functions	4
TED 602 — Computer Applications in Teaching I	3
MAT and/or CSC electives	2
SCE 603 — Adv. Studies in Teaching Science in the Jr. High and Middle School	3

SOCIAL STUDIES MAJOR: Economics Concentration
(Thirty Credits)

ECO 101 —(SS) Principles of Macroeconomics	4
ECO 102 —(SS) Principles of Microeconomics	4
ECO 320 —Public Control of Business	3
ECO 380 — Environmental Economics	3
ECO 441 —Labor Institutions	4
ECO 560 — Introduction to Development Economics	4
ECO 561 —Comparative Economic Systems	3
ECO electives	5

SOCIAL STUDIES MAJOR: Geography Concentration
(Thirty Credits)

GEG 110 —(SS) World Regional Patterns	4
GEG 300 —Map Intelligence	3
GEG 301 —Thematic Cartography	4
GEG 310 — Economic Geography	4
GEG 313 —(SS) Introductory Urban Geography	4
GEG electives	11

SOCIAL STUDIES MAJOR: History Concentration
(Thirty Credits)

American History (Three Courses):

HIS 204 —American Foundations: United States to 1877	3-4
HIS 205 —Modern America: United States Since 1877	3-4

American History Electives (one course from the following):

HIS 305 —United States and the Vietnam Experience	4
HIS 314 —Black Experience in America I: 1619-1865	3-4
HIS 330 —Technology in America	3-4
HIS 513 —Foreign Relations of the United States since 1933	4
HIS 517 —Constitutional History of the United States since 1877	4
HIS 520 —Women in American Life and Thought	3
HIS 522 —Changing Shape of Ethnic America	3-4

World History (three courses from the following):

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 350 — Explorers' Age: 1400-1750	3

Michigan History (three credits):

HIS 224 —History of Michigan	3-4
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Non-Western and Third World History (one course):

HIS 160 or HIS 161	
—(HS) African Civilization to 1800	3
—(HS) African Civilization since 1800	3
HIS 335 —Revolution in the Modern World: 1750 to the Present	3
HIS 573 —History of West Africa	4
HIS 579 —Cities & Empires: European, Muslim, Chinese & Russian	3

SOCIAL STUDIES MAJOR: Political Science Concentration
(Thirty Credits)

P S 101 —(AI) American Government	4
P S 207 —State and Local Government	4
P S 224 —(SS) Introduction to Urban Politics and Policy	4
P S 281 —World Politics	4
P S 304 —The Legislative Process	4
P S 512 —Constitutional Rights and Liberties	4
Electives	6

SOCIAL STUDIES GROUP MAJOR (Thirty-six Credits)

The thirty-six credits must be distributed among at least three of the following subject areas: economics, history, geography, and political science. Additionally, the credit requirement must include three courses in U.S. history and three courses in world history. This group major must be combined with a minor of twenty credits in one of the social studies disciplines cited above.

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/Contexts	4
SPO 204 —Voice and Articulation	3
SPO 250 —Beginning Oral Interpretation	3
SPR 201 —Survey of Mass Communications	4
SPR 540 —Techniques of Film/Video Production	4
Speech Electives	6

SPEECH — RADIO/TELEVISION MAJOR (Thirty-Nine Credits)

This major must be combined with an English Minor (see below).

SPC 210 — Persuasive Speaking	3
SPC 321 — Communication: Concepts and Contexts	4
SPO 204 — Voice and Articulation	3
SPR 201 — Survey of Mass Communication	4
SPR 211 — Radio and Television Announcing	3
SPR 421 — Writing for Radio, Television and Film	3
SPR 531 — Radio Production	4
SPR 541 — Television Production	4
SPR 542 — Director's Workshop	4
IT 606 — Scriptwriting for Instructional Video	3
IT 706 — Developing Video for Education and Training	4

MINOR AREAS OF STUDY: Students seeking secondary certification for grades 7–12 must complete one of the following minors:

ART EDUCATION MINOR (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 522 —Methods and Materials: Painting	3
AED 523 — Ceramics Education I	3
AED 528 —Methods and Materials: Printmaking	3
AED 615 — Instructional Applications of Computer Graphics	3

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
BBE elective	1–3

COMPUTER SCIENCE MINOR (Twenty Credits)

CSC 102 —(CL) Computer Science I	4
CSC 203 —(CL) Computer Science II	4
CSC 206 or CSC 210	
—(CL) Introduction to FORTRAN	3
—(CL) Introduction to COBOL	3
CSC 371 —(WI) Data and File Structures	4

Electives (six credits):

CSC 441 —Introduction to Computer Systems	4
CSC 513 —Introduction to Information Systems	4
CSC 521 —Artificial Intelligence Programming with LISP	2
CSC 587 —Computer Graphics	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	3

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 first university-level course work.

HEALTH EDUCATION MINOR (Twenty-four Credits)

ANA 301 —Introduction to Human Anatomy	4
PSL 322 —Fundamentals of Physiology	4
HEA 231 —Dynamics of Personal Health	2–3
HEA 232 —Dynamics of Community and Environmental Health	2
H E 330 —Health of the School Child	3
H E 333 —School Health Education	3
H E 434 —Reproductive Health Education	2
H E 480 —Fieldwork in Health Education	1–3
Electives	3–4

MATHEMATICS MINOR (Twenty Credits)

MAT 201 —(MC) Calculus I	4
MAT 613 or MAT 202	
—Topics in Mathematics for High School Teachers I	3
—Calculus II	4
MAT 203 —Calculus III	4
MAT 225 —Elementary Linear Algebra	3
MAT 235 —Elementary Differential Equations	3

Two from the following:

MAT 614 —Topics in Mathematics for High School Teachers I	3
MAT 615 or MAT 221	
—Topics in Mathematics for High School Teachers II	3
—Elementary Probability and Statistics	4
MAT 616 or MAT 542	
—Topics in Mathematics for High School Teachers III	3
—Algebra I	4

MUSIC MINOR: Students should consult with a music education adviser in the Music Department, College of Fine, Performing and Communication Arts.

PHYSICAL EDUCATION MINOR (Twenty Credits)

Three courses from the following:

P E 191 —Professional Perspectives in Physical Education **	2
P E 340 —Life Span Motor Development	3
P E 355 —(WI) Motor Learning and Control	3
P E 357 —Physiology of Exercise	3
P E 358 —Kinesiology (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.

** 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 151 — (LS) Basic Biology I	4
CHM 107 — (PS) Principles of Chemistry I	4
GEL 101 — (PS) The Science of the Earth	4
PHY 213 — General Physics I	4
Science electives	8

In addition to the above courses, the following courses are required:

MAT 180 — (MC) Elementary Functions	4
SCE 506 — Methods & Materials of Instruction in Secondary School Science I	3

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, political science, or sociology. 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)

The social science group minor requires completion of twenty-four credits in at least two of the following areas (in which the student has NOT accrued major credits): economics, history, geography, political science, or sociology. The distribution of credits for the minor must include three courses in U.S. history and three courses in world history (if this requirement has not been satisfied by the completion of major credits). For electives, one course in anthropology is recommended, and one course in psychology beyond the introductory level may be used.

SPEECH MINOR (Twenty Credits)

credits

SPR 201 —Survey of Mass Communications	4
SPO 204 —Voice and Articulation	3
SPC 210 —Persuasive Speaking	3
SPC 211 —(CT) Argumentation and Debate	3
SPO 250 —Beginning Oral Interpretation	3
SPR 540 —Techniques of Film/Video Production	4

**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 mentally retarded. The speech impaired concentration prepares teachers to work with children who have speech disorders.

Admission Requirements: see page 86.

DEGREE REQUIREMENTS: The following requirements in various curricular areas supplement the degree requirements outlined above (see page 86). 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 endorsements regardless of selection of major study. Some of these courses may

also satisfy the University General Education Requirements (see page 21), 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 140 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
GEG 110 or SOC 200	
— (SS) World Regional Patterns	4
— (SS) Understanding Human Society	3

THE UNIVERSITY and ITS LIBRARIES: All students must complete this course 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 of either TED 578 or 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 (Twelve 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

PHASE III (Seven Credits)

TED 578 —Directed Teaching and Conference	5
BBE 500 —Multi-Cultural 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 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 Liberal Arts and are the same as the major requirements for the Bachelor of Arts degree offered by that department; see page 233.

PLANNED MINOR for SPECIAL EDUCATION: Students pursuing a bachelor's degree in education leading to an endorsement in special education must complete the following minor requirement.

<i>SPECIAL EDUCATION PLANNED MINOR (Twenty Credits)</i>	
PSY 230 —Psychology of Adjustment	4
SOC 200 —(SS) Understanding Human Society	3
ANT 210 —(SS) Introduction to Anthropology	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 96). The sequence begins in the fall semester.

Admission: see page 86. 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 86).

GENERAL EDUCATION REQUIREMENTS: see page 21.

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 101 —(CL) Introduction to Computing	3
SPB 101 —(OC) Oral Communication: Basic Speech	3
P S 101 —(AI) American Government	4
PSY 101 —(LS) Introductory Psychology	4
AH 111 — Paleolithic through Gothic Art Survey	3
AH 112 — 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
EDP 331 —Educational Psychology	3
AED 411 —Theory and Practice in Art Education	3
RDG 443 —Teaching Reading in Subject Matter Areas	3
TED 578 —Directed Teaching and Conference	5
TED 579 —Student Teaching and Conference for Special Groups	5
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 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 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
AED 615 — Instructional Applications in Computer Graphics	3
ADR 207 —Beginning Life Drawing	3
ASL 215 —Introduction to Sculpture	3

Recommended Electives:

AED 510 — Art for Special Groups	1-3
AED 513 — Visual Communication	3
AED 520 —Computer Programmed Multi-Screen, Multi-Image Presentations	3
AED 622 —Drawing and Watercolor: Field Studies	3
AED 623 —Ceramics Education II	3
AED 625 — Aspects of Ceramics	3-9

MINOR REQUIREMENTS: Students pursuing a bachelor's degree in art education must 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 93–94.

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 93–94.

PROFESSIONAL EDUCATION (Twenty-five Credits)

	Credits
AED 501—Art Teaching Laboratory	5
AED 411—Theory and Practice in Art Education	3
EDP 331—Educational Psychology	3
RDG 443—Teaching Reading in Subject Matter Areas	3
TED 578—Directed Teaching and Conference	5
TED 579—Student Teaching and Conference for Special Groups	5
EHP 360—Introduction to the Philosophy of 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 615—Instructional Applications of Computer Graphics	3

Electives: One of the following

AED 510—Art for Special Groups	1–3
AED 513—Visual Communication	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 622—Drawing and Watercolor—Field Studies	3
AED 623—Ceramics Education II	3
AED 625—Aspects of Ceramics	3

Bachelor's Degree Programs Leading to Vocational Education Endorsement

The vocational education program requirements as presented below apply only to students admitted prior to August 1990. For requirements applicable to any subsequent enrollment in vocational education programs, students should contact the Academic Services Office, 489 College of Education; 577–1600.

Vocational education programs are offered in four curricular areas: business/distributive education, family life education, health occupations education, and industrial education. With the exception of the major in industrial arts (page 99), all of the majors offered under these generic headings lead to two kinds of certification: secondary school certification and vocational endorsement. The industrial arts major leads to secondary school certification only.

All students in the program 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 majoring in consumer home economics or industrial arts are not required to have work experience.

Business and Distributive Education

The business/distributive education curricula are based on competencies necessary for the preparation and certification of teachers of business or distributive education. Coterminous programs leading to the bachelor's degree, recommendation for a provisional teaching certificate, and recommendation for vocational endorsement are offered.

There are certain competencies common to both the business education major and the distributive education major. In each field it is necessary to have forty credits in pre-professional course work, an English/Speech minor of twenty-four credits, thirty-four credits in professional education, a sequence of courses in business/distributive education, and a teaching major of thirty-six credits in business and related fields. A *Plan of Work* must be completed and approved by an adviser before registering for the second term in the business/distributive education program.

Admission Requirements: In addition to the regular admission procedures (see page 86), each applicant must have a personal interview with a business/distributive education adviser and complete a *Plan of Work*.

DEGREE REQUIREMENTS: The following requirements in various curricular areas supplement the degree requirements outlined on page 86.

PRE-PROFESSIONAL REQUIREMENTS: Students seeking a bachelor's degree leading to either business education or distributive education certification must complete twenty-four credits in the following courses:

Required Courses	credits
AED 513—Visual Communication	3
ECO 101—(SS) Principles of Macroeconomics	3
AST 201—(PS) Descriptive Astronomy	4
HEA 231 or HEA 233	
—Dynamics of Personal Health	2
—First Aid and CPR	3
P S 101—(AI) American Government	4
PSY 101—(LS) Introductory Psychology	4
HIS 130 or HIS 140	
—(HS) The World and Europe: 1500–1945	3–4
—(HS) The World since 1945	3–4

HUM 101 —(VP) Introduction to Art and Music in Western Culture	4
UGE 100 —(GE) The University and its Libraries	1

Electives

PSY 350 —Industrial/Organizational Psychology	3
AGD 225 —Advertising Design I	3
EED 612 —English Composition in Secondary Schools	3

PROFESSIONAL EDUCATION REQUIREMENTS: The students majoring in business education have several career options available to them. These options include teaching office occupation courses at the secondary level, teaching at the community college level, teaching in business, or securing supervisory/management positions in business.

All students in the business/distributive education degree program must complete a professional education sequence; however, those students who do not require a teaching certificate are directed to elect the second option in the following curricula.

NOTE: Professional education courses can be taken only after admission to the College of Education and satisfactory completion of the University English Proficiency requirement (see page 22).

Option I: Secondary Teaching Certification credits

BDE 532 —Business/Distributive Education Methods: Typewriting	3
TED 516 —Analysis of Secondary School Teaching	3
V E 541 —Vocational Education Practicum in Instruction	4
V E 693 —Special Problems in Vocational Education	3
RDG 443 —(WJ) Teaching Reading in Subject Matter Areas	3
TED 578 —Directed Teaching and Conference	10
EDP 548 —Adolescent Psychology	3
EHP 360 —Introduction to the Philosophy of Education	3

Option II: Non-Certification

BDE 532 —Business/Distributive Education Methods: Typewriting	3
TED 516 —Analysis of Secondary School Teaching	3
V E 541 —Vocational Education Practicum in Instruction	4
V E 693 —Special Problems in Vocational Education	3
EDP 548 —Adolescent Psychology	3
Instructional Technology electives	9
RDG 443 —(WJ) Teaching Reading in Subject Matter Areas	3
TED 802 —Computer Applications in Teaching I	3

MAJOR AREAS OF STUDY: All students seeking a bachelor's degree in business education or distributive education must complete one of the following majors.

Business Education credits

BDE 530 —B./D. Ed. Word Processing I: Typewriting	3
BDE 537 —B./D. Ed. Word Processing III: Principles	3
BDE 630 —B./D. Ed. Cooperative Internship	1-6
ACC 301 —Elementary Financial Accounting Theory	3
MKT 530 —Marketing Management	3
ACC 351 —Business Law I	3
MGT 550 —Organization and Management Theory	3
MAT 150 —Finite Mathematics for the Social and Management Sciences	3
MGT 566 —Managing the Small Business	3
CSC 100 —(CL) Introduction to Computer Science	3
ANT 315 —(FC) Anthropology of Business	3

Distributive Education

BDE 530 —B./D. Ed. Word Processing I: Typewriting	3
BDE 630 —B./D. Ed. Cooperative Internship	3
MGT 550 —Organization and Management Theory	3
MGT 566 —Managing the Small Business	3
ACC 301 —Elementary Financial Accounting Theory	3
ACC 351 —Business Law I	3
MKT 530 —Marketing Management	3

MKT 549 —Principles of Advertising	3
AFA 546 —Merchandising II	3
AFA 547 —Visual Merchandising: Display	3
CSC 100 —(CL) Introduction to Computer Science	3
MAT 150 —Finite Mathematics for the Social and Management Sciences	3
ANT 315 —(FC) Anthropology of Business	3

ENGLISH/SPEECH MINOR: All students seeking a bachelor's degree in business/distributive education must complete twenty-four credits in the following minor concentration:

Required Courses credits

ENG 102 —(BC) Introductory College Writing	4
ENG 301 —(IC) Intermediate Writing	3
ENG 303 —(IC) Writing the Research Paper	3
SPB 101 —(OC) Oral Communication: Basic Speech	3
SPC 325 —Introduction to Organizational Communication	3
ENG 217 —(PL) European Literature II: Renaissance to Modern	3

Electives

ENG 501 —Advanced Expository Writing	3
SPC 520 —Group Communication and Human Interaction	3
SPJ 210 —News Reporting	4
SPO 204 —Voice and Articulation	3

Family Life Education

The vocational education program requirements as presented below apply only to students admitted prior to August 1990. For requirements applicable to any subsequent enrollment in vocational education programs, students should contact the Academic Services Office, 489 College of Education; 577-1600.

Family life education is an undergraduate program preparing students for teaching both consumer home economics and home economics related occupations in middle and high school. Course work in this program reflects current emphases of the Michigan Home Economics Curriculum Guides, Michigan's Home Economics Standards Review process, and conforms to guidelines of the Annual State Plan for Vocational Education in Michigan. Programs are offered with concentrations in child care services, clothing management, consumer home economics, food management, and home furnishings. Students who plan to take most or all of their first two years of course work (particularly work in the major) may find it advantageous to consult an adviser in the program upon beginning community college work.

Consumer Home Economics: This program requires thirty-seven credits, selected from each of the following areas: a) clothing and textiles, b) foods and nutrition, c) child and human development (with actual nursery school experience), d) personal and family relationships, e) parenting, f) consumer education and management problems, g) housing, equipment, and interior design. Additionally, a twenty credit unit minor or a twenty-four credit group minor is required. Social science or natural science is usually recommended as a minor; however, students may choose any subject taught in the secondary school or one of the approved occupational programs: child care services, food management, clothing management, or home furnishings.

Home Economics Related Occupations: This program prepares students for teaching positions which emphasize the skills and competencies needed for entry-level jobs in food management, child care services, clothing management, and home furnishings. Majors will usually teach a single specialized subject to eleventh or twelfth grade students in a comprehensive high school or in an area vocational center. In many high schools the teacher of such courses also coordinates the cooperative work experience and assists with job placement for graduates. The program consists of either a thirty-credit unit concentration, or a thirty-six credit combined concentration; for

the latter option, an adviser should be consulted. Minor requirements are as stated above for consumer home economics.

Admission Requirements: see page 86.

DEGREE REQUIREMENTS: The following requirements in various curricular areas supplement the degree requirements outlined on page 86.

PRE-PROFESSIONAL REQUIREMENTS: Students seeking a bachelor's degree with certification in family life education must complete the following College pre-professional requirements:

	<i>credits</i>
AED 513—Visual Communication	3
Art Elective	3
ENG 102—(BC) Introductory College Writing	4
English Elective	3
SPB 101—(OC) Oral Communication: Basic Speech	3
PHY 102—(PS) Conceptual Physics: The Basic Science	4
CHM 100—(PS) Chemistry and Your World	4
HEA 233—First Aid and CPR	3
SOC 200—(SS) Understanding Human Society	3
SOC 202—(SS) Social Problems	3
P S 101—(AI) American Government	4
PSY 101—(LS) Introductory Psychology	4
PSY 230—Psychology of Adjustment	4
SOC 541—Marriage and Family Problems	3
UGE 100—(GE) The University and its Libraries	1

PROFESSIONAL EDUCATION REQUIREMENTS: All students pursuing a bachelor's degree with certification in family life education must complete the following sequence of professional education courses.

NOTE: Professional education courses can be taken only after admission to the College of Education and satisfactory completion of the University English Proficiency requirements (see page 22).

TED 516—Analysis of Secondary School Teaching	3
EDP 548—Adolescent Psychology	2
V E 541—Vocational Education Practicum in Instruction	4
FLE 545—Teaching Consumer Home Economics and Family Living	4
RDG 443—(WI) Teaching Reading in Subject Matter Areas	3
TED 578—Directed Teaching and Conference	10
V E 693—Special Problems in Vocational Education	4
EHP 360—Introduction to the Philosophy of Education	3
TED 602—Computer Applications in Teaching I	3

CONCENTRATION AREAS: Students pursuing a bachelor's degree with a major in family life education must complete one of the following concentrations:

CHILD CARE SERVICES CONCENTRATION	<i>credits</i>
PSY 240—Developmental Psychology	4
PSY 243—Applied Human Development: Infancy	4
PSY 244—Applied Human Development: Childhood	4
PSY 341—Day Care Administration	3
PSY 342—The Young Child in the Physical Environment	3
PSY 348—Parent-Child Interaction Across the Life Span	3
PSY 547—Developmental Assessment of the Young Child	4
PSY 548—Child Development Principles Applied to Preschool Programming	3
PSY 580—Maturation and Development of the Individual	3
SED 503—Education of Exceptional Children	3

CLOTHING MANAGEMENT CONCENTRATION

AFA 241—Textiles I	3
AFA 242—Clothing Selection and Construction	3
AFA 341—Textiles II	3
AFA 346—Introduction to Merchandising	4
AFA 347—Merchandise Information	4

AFA 542—Fashion Design: Tailoring	3
AFA 545—Fashion Design: Draping	3
AFA 642—Advanced Problems in Apparel Design and Construction	3
Elective	4-6

CONSUMER HOME ECONOMICS CONCENTRATION

NFS 203—(LS) Introductory Nutrition	3
NFS 213—Introductory Food Science	2
NFS 214—Introductory Food Science Laboratory	2
AFA 241—Textiles I	3
AFA 242—Clothing Selection and Construction	3
AIA 260—Interior Concepts	3
FLE 547—Teaching Family Financial Management	3
FLE 641—Survey of Home Economics Related Occupational Courses	3
PSY 244—Applied Human Development: Childhood	4
PSY 348—Parent-Child Interaction Across the Life Span	3
H E 434—Reproductive Health Education	2
Electives	3

FOOD MANAGEMENT CONCENTRATION

NFS 213—Introductory Food Science	2
NFS 214—Introductory Food Science Laboratory	2
NFS 221—Human Nutrition	3
NFS 535—Organization and Management of Food Service Systems	4
NFS 616—Food Standards and Quality Control	2
NFS 617—Food Standards and Quality Control Laboratory	2
Electives	12

Students who intend to fulfill requirements for the food management major by attending a community college program should consult with an adviser in Room 273, Education Building. Specific courses with transferable credit are available at some community colleges.

HOME FURNISHINGS CONCENTRATION

The program in Home Furnishings consists of an individually arranged sequence of courses. For specific information see the departmental adviser in Room 273, Education Building.

MINOR AREAS OF STUDY: Students pursuing a bachelor's degree with certification in family life education must satisfy the requirements of a minor concentration. Available minor areas of study can be found on pages 93-94.

Health Occupations Education

The vocational education program requirements as presented below apply only to students admitted prior to August 1990. For requirements applicable to any subsequent enrollment in vocational education programs, students should contact the Academic Services Office, 489 College of Education; 577-1600.

Health occupations education prepares teachers for those secondary school programs which prepare high school students for entry-level occupations in a variety of health fields. The program is designed for persons who are currently teaching in a secondary school health occupations program on an annual authorization, or persons who have a major in one of the health occupations taught in a secondary school and who wish to earn a secondary teaching certificate with vocational endorsement.

Admission Requirements: 1) completion of the teaching major; 2) possession of licensure or certification in the applicant's health field by the State of Michigan (if one is required); 3) completion of two years or 4,000 clock hours of recent and relevant work experience prior to admission. This work experience should have been in the last six years.

General Requirements: Students are expected to meet the same general requirements as majors in other educational areas. This includes a minimum of a teaching major, a unit or group minor, selected courses in a physical science (such as biology, chemistry, physiology, and anatomy), some social science, related electives selected by the student, and the professional education sequence. Majors should include work in current health care and gerontology.

DEGREE REQUIREMENTS: The following requirements in various curricular areas supplement the degree requirements outlined on page 86.

PRE-PROFESSIONAL REQUIREMENTS: Students seeking a bachelor's degree leading to certification in any of the health occupations majors must complete the following pre-professional requirements:

	<i>credits</i>
BIO 105 —(LS) An Introduction to Life	4
BIO 287 —Anatomy and Physiology	5
BIO 220 —(LS) Introductory Microbiology	4
CHM 102 —(PS) General Chemistry I	4
Natural science electives	8
ENG 102 —(BC) Introductory College Writing	4
English Elective	3
SPB 101 —(OC) Oral Communication: Basic Speech	3
SOC 200 —(SS) Understanding Human Society	3
P S 101 —(A) American Government	4
SOC 202 —(SS) Social Problems	3
PSY 101 —(LS) Introductory Psychology	4
PSY 230 —Psychology of Adjustment	4
UGE 100 —(GE) The University and its Libraries	1

PROFESSIONAL EDUCATION REQUIREMENTS: Students seeking a bachelor's degree leading to certification in any of the health occupations majors must complete the following professional education sequence:

TED 516 —Analysis of Secondary School Teaching	3
EDP 548 —Adolescent Psychology	2
V E 541 —Vocational Education Practicum in Instruction	4
FLE 501 —Methods of Teaching Health Occupations Education	4
RDG 443 —(WI) Teaching Reading in Subject Matter Areas	3
TED 578 —Directed Teaching and Conference	10
V E 693 —Special Problems in Vocational Education	4
EHP 360 —Introduction to the Philosophy of Education	3
TED 602 —Computer Applications in Teaching I	3

MAJOR AREAS OF STUDY: Students seeking a bachelor's degree with a major in any of the health occupations must be certified as a practitioner in one of the following professions: registered nurse, medical technologist, dental hygienist, dental assistant, or medical assistant. This certification is accepted in lieu of major course work done at Wayne State University and is entered in the student's record on a transfer credit basis.

MINOR AREAS OF STUDY: Students seeking a bachelor's degree leading to certification in any of the health occupations must satisfy the requirements of a minor concentration. Available minor areas of study can be found on pages 93–94.

Continuing or Five Year Professional Certificate requirements with full vocational authorization requires an eighteen credit planned program which includes a minimum of ten semester credits in vocational course work or completion of a master's degree. The program adviser can assist with either of these options. Persons who are currently teaching on an annual authorization may wish to consult the program adviser about full certification. An option exists which allows one to continue with employment while qualifying for certification. Information regarding such options will be mailed on request.

Industrial Education

The vocational education program requirements as presented below apply only to students admitted prior to August 1990. For requirements applicable to any subsequent enrollment in vocational education programs, students should contact the Academic Services Office, 489 College of Education; 577–1600.

This program is offered with concentrations in industrial arts and industrial education. The program prepares students to teach industrial arts at the junior and senior high school levels, or to teach vocational education in secondary schools or community colleges. For the vocational option, students pursue one of the vocational industrial concentrations.

Admission Requirements: see page 86.

Transfer Admission: Planned programs are available to transfer credit earned for certain technical courses from selected community colleges. These programs provide the student with a majority of the technical courses needed for a teaching major in industrial education. *The industrial education staff must be consulted regarding these programs at cooperating community colleges prior to enrollment.* Subsequently, all arrangements must be approved by the adviser.

DEGREE REQUIREMENTS: The following requirements in various curricular areas supplement the degree requirements outlined on page 86.

PRE-PROFESSIONAL REQUIREMENTS: All students seeking a bachelor's degree leading to certification in the vocational areas of industrial education must complete the following courses:

	<i>credits</i>
ENG 102 —(BC) Introductory College Writing	4
ENG 200—level course	4
HEA 231 or HEA 233	
—Dynamics of Personal Health	2
—First Aid and CPR	3
PHY 102 —(PS) Conceptual Physics: The Basic Science	4
PSY 101 —(LS) Introductory Psychology	4
SPB 101 —(OC) Oral Communication: Basic Speech	3
P S 101 or P S 103	
—(A) American Government	4
—(A) The American Governmental System	3
UGE 100 —(GE) The University and its Libraries	1
Electives	13

PROFESSIONAL EDUCATION REQUIREMENTS: All students in the industrial education degree program must complete a professional education sequence, however, those students who do not require a teaching certificate are directed to elect the second option in the following curricula.

NOTE: Professional education courses can be taken only after admission to the College of Education and satisfactory completion of the University English Proficiency Requirements (see page 22).

OPTION I: Secondary Teaching Certificate *credits*

TED 516 —Analysis of Secondary School Teaching	3
RDG 443 —(WI) Teaching Reading in Subject Matter Areas	3
EDP 548 —Adolescent Psychology	2
V E 541 —Vocational Education Practicum in Instruction	4
IED 677 —Methods and Materials of Instruction II —Industrial Education	4
TED 578 —Directed Teaching and Conference	10
V E 693 —Special Problems in Vocational Education	4

OPTION II: Non-Certificate

TED 516 —Analysis of Secondary School Teaching	3
RDG 443 —(WI) Teaching Reading in Subject Matter Areas	3
EDP 548 —Adolescent Psychology	2

VE 541—Vocational Education Practicum in Instruction	4
IED 677—Methods and Materials of Instruction II—Industrial Education	4
EHP 360—Introduction to the Philosophy of Education	3
IT 510—Using Audiovisual Methods, Materials and Equipment	2
IT 512—Instructional Materials Workshop	2
IT 513—Computer-Programmed Multi-Screen/Multi-Image Presentations	3
Electives	4-6

CONCENTRATION AREAS: Students seeking a bachelor's degree leading to certification in industrial education must complete one of the following concentrations.

INDUSTRIAL ARTS CONCENTRATION (Thirty-six Credits)

1. Must take at least two courses from each of the following groups:

- | | |
|----------------------------|-------------|
| a. Metal Machining | d. Woodshop |
| b. Drafting | e. Metals |
| c. Electricity/Electronics | |

2. Must take one course from each of the following groups:

- | | |
|-------------------|--------------------------|
| a. Auto Mechanics | c. Printing/Graphic Arts |
| b. Fluid Power | d. Welding |

INDUSTRIAL EDUCATION CONCENTRATIONS (Thirty Credits)

Vocational certification with this major requires two years of recent and relevant employment experience in the occupational area in which the candidate intends to teach; as well as thirty credits of technical courses in one of the following concentrations:

- | | |
|---------------------------|----------------------------|
| a. Architectural Drafting | g. Drafting |
| b. Auto Mechanics | h. Machine Trades |
| c. Building Trades | i. Printing (Graphic Arts) |
| d. Criminal Justice | j. Welding |
| e. Cosmetology | k. Heating-Refrigeration |
| f. Electronics | |

Trade related technical course work in an approved community college apprenticeship program may be used in establishing the concentration in the industrial-vocational education. If the total number of credits or technical trade-related course work is short of the required total for a concentration, additional technical courses in the specified field may be taken from an appropriate technology program in a community college.

MINOR AREAS OF STUDY: Students seeking a bachelor's degree leading to certification in industrial arts education must complete either an academic minor (see minors in secondary education, pages 93-94) or one of the following options related to their specific majors.

INDUSTRIAL ARTS GROUP MINOR (Twenty-four Credits)

Students with an industrial-vocational concentration may satisfy their minor requirements by completing twenty-four credits in the following technical areas in which they have not accrued concentration credit:

- Auto Mechanics: engine maintenance (minimum: one course)
- Drafting (minimum: two courses)
- Electricity/Electronics (minimum: two courses)
- Metal Machining (minimum: two courses)
- Printing
- Welding
- Woodshop or Woodworking

CREDIT BY EXAMINATION: Credit in some occupational areas may be earned through competency examinations which satisfy part or all of the above-mentioned concentration and minor requirements. Students should consult the coordinator in the individual curriculum areas for a list of available topics.

TEACHING CERTIFICATES

One of the characteristics of present day education is the specialization of teaching, particularly at the secondary level, and, to some extent, at the elementary level. This specialization is related not only to the subject-matter fields but also to the age groups of school children. The Michigan Certification Code provides for specialization in either the elementary or the secondary school areas by authorizing state certification for teaching on those two levels. Thus, a person who has kindergarten through grade eight certification is not legally qualified to teach in the secondary schools above grade eight, and a person with grades seven through twelve certification is not legally qualified to teach below grade seven. In certain fields such as art, physical education, school library education and music education, the holder of a certificate is qualified to teach his/her major subject in all grades, and, if indicated by his/her certificate, other subjects in other grades.

The certification code recognizes subject-matter specialization by requiring that the candidate for a teacher's certificate present concentrations of credits called majors and minors. The secondary school teacher must have a major and minor teaching field, and the elementary school teacher must have a major and a minor, or a three-minor, teaching field. All majors and minors must be in subject-matter fields appropriate to teaching at the level for which certification is to be recommended.

Certification Requirements

Michigan State Teacher's Certificates are granted by the Michigan State Board of Education upon the recommendation of the College of Education. Initial certificates are provisional for a six-year period and may become continuing or five year professional certificates after three years of successful teaching experience and the completion of additional college course work. Both the teaching experience and the additional credits must be completed after the issue date of the provisional certificate. Continuing and five year professional certificates lapse if the holder does not engage in teaching for a period of five consecutive years or more. Certificates will indicate in what grades and subjects the holder is eligible to teach. In certain specified nonacademic fields, however, the holder of a provisional certificate is eligible to teach his/her major subject in all grades from the kindergarten through the twelfth. The qualifications which the College requires for recommendation for the certificate are summarized below.

Provisional Certificates

Teaching certificates as listed below are granted with the bachelor's degree upon the completion of the four-year program. (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

(The candidate for the elementary provisional certificate may be recommended for nursery school approval upon completion of designated requirements including student teaching contacts at Wayne State University Nursery School and other selected sites. Please consult with an adviser.)

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 one level of certificate who wish to add another level (i.e., elementary to secondary, or vice versa) must consult a counselor in the Division of Academic Services, 489 Education Building.

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.

Continuing or 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 489 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.

Continuing certification with vocational endorsement requires a planned program. *Students should consult the appropriate area adviser* regarding certification for an approved program leading to continuing or five year professional certification with a vocational endorsement.

All candidates for an elementary continuing or 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 continuing or five year professional certificate. Consult a counselor in Room 489, Education Building, for specific requirements.

All candidates for a secondary continuing or 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 489, 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 489, Education Building.

Procedures for Student Teaching Application

1. Confer with adviser to determine eligibility for student teaching and obtain written approval which is to be submitted with application forms.

2. Complete application forms provided by the Student Teaching Office, 223 Education Building, during appropriate application period.

Application Periods: Each student must make application for student teaching *in person* during the appropriate application period. The date a completed application form is submitted to the Student Teaching Office will determine the semester during which student teaching will take place. Student teaching application periods are as follows:

Fall semester November 1 to January 31 prior to student teaching

Winter semester April 1 to July 31 prior to student teaching

Prerequisites for Student Teaching Placement

1. Full admission to the College of Education must be accomplished before application for student teaching can be accepted.

2. Completion, at Wayne State University, of not less than six credits in course work authorized by the student's curriculum area adviser.

3. Adequate work in the teaching major and minor(s) as defined by the student's curriculum area in the College of Education.

4. Satisfactory completion of appropriate pre-student teaching courses and appropriate methods courses as outlined by the student's adviser.

5. Satisfactory tuberculosis test within six months before assignment begins.

Advising Offices

Information, written descriptions of programs, and referrals to advisers may be obtained from the following advising offices: Art Education, Room 163, Community Arts Building; Physical Education, Room 260, Matthaehi Building; Recreation and Park Services, Room 259, Matthaehi Building; Speech Impaired, 563 Manoogian; Music Education, 208 Schaver Music Building; all other programs of the Division from Room 489, Education Building. Pre-Education students are advised by the University Advising Office.

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 433.

TEACHER EDUCATION DIVISION (TED)

209. Practicum for Paraprofessionals II (BBE). Cr. 1-8(Max. 8)

Prereq: sophomore standing. Offered for S and U grades only. For school paraprofessionals in a teacher education program. Supervision of school paraprofessionals in classroom settings. (I)

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. 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)

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. (Y)

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 Secondary School Teaching. Cr. 3

Overview of structure and purposes of American education. Analysis of instructional objectives. Analysis of classroom communication, both verbal and non verbal, in relation to secondary school teaching. (T)

527. Methods and Materials of Middle School Instruction. Cr. 3-9(Max. 9)

Prereq: teaching experience or consent of adviser. Physical and emotional status of middle school students; current trends of curricula; effective teaching strategies; evaluating curricula and pupil progress. (Y)

529. Directed Teaching for In-Service Teachers. Cr. 3-10

Offered for S and U grades only. Student teaching under supervision of appropriate school and Directed Teaching Office personnel. (T)

544. (DNC 544) Music and Dance in the Music Class I. (MED 554). Cr. 2

Exploration of the common basis for music and dance and the provision of a range of movement experiences for the music teacher. The philosophy of Orff Schulwerk which stresses the elemental relationship between language, music, and movement. (W)

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. 5

Prereq: TED 516 or equiv.; admission to secondary certification program. 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)

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)

603. Computer Applications in Teaching II. Cr. 3

Prereq: TED 602 or equiv. Development and evaluation of computer-based instructional systems for use with pupils in their schools. (F,W)

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)
- 411. Theory and Practice In Art Education. Cr. 3**
Prereq: AED 211 or 212; prereq. or coreq: student teaching. Required for certification in art education. Lectures, field trips, readings, research, and writing pertaining to the history, philosophies, purposes and practices of art education; philosophical influences on art education. Required teaching field experience in alternative setting. (W)
- 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)
- 513. Visual Communication. Cr. 3(Max. 9)**
Material fee as indicated in *Schedule of Classes*. Basic design, lettering, layout, aesthetic evaluation, organization, content selection, and communication skills are explored, as well as use of appropriate techniques, tools, materials and equipment. Students create a variety of two- and three-dimensional visual-verbal communications. (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 experience in planning and producing films and slides with and without a camera. Preparing a storyboard, marking on film, animation, titling, editing, splicing, producing slides without a camera, photography for color slides, recording and synchronizing sound tracks. Methods, materials and processes suitable for teaching film in schools, producing visual aids, or producing film for artistic expression. (F)
- 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: AED 118 or 522. 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)
- 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, and studio experiences covering the definition, theory, goals and ethics of art

therapy; the role and duties of the art therapist in various settings. (Y)

634. Literature of Art Therapy. Cr. 3

Prereq: AED 632; admission to art therapy program. Slide lectures, studio experiences and assigned reading in the literature of art therapy. (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)

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)

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)

533. Business/Distributive Education Methods: General. Cr. 4

Prereq: TED 516, BDE 530; coreq: V E 541. Determination and development of needed minimum skills for beginning office occupations. Methods, materials and equipment for teaching selected office occupation subjects. Students demonstrate selected course objectives in a field setting. (I)

537. Business/Distributive Education Word Processing III: Principles. Cr. 3

Prereq: BDE 535 or typewriting course. Principles and concepts in the design, utilization and evaluation of word processing systems in business, government, and education. Laboratory and field trips familiarize student with current equipment. (F)

553. Business/Distributive Education Methods: Marketing and Distributive Education. Cr. 4

Prereq: TED 516, BDE 530; coreq: V E 541. Determination and development of needed minimum skills for beginning distributive occupations. Methods, materials, and equipment for teaching selected distributive occupation subjects. Students demonstrate selected course objectives in a field setting. (W)

630. Business/Distributive Education Cooperative Internship. Cr. 1–6

Prereq: consent of instructor. Supervised work experience designed to correlate classroom theory with current word processing, secretarial, or selected distributive occupations. (I)

COUNSELOR EDUCATION (CED)

120. Social Issues and Counseling Services. Cr. 3

Prereq: CED 110, junior standing. Examination of social issues pertaining to counseling services; firsthand knowledge of counseling service agencies and resources; referral procedures. (F)

230. Helping Group Interaction. Cr. 2

Prereq: CED 110, 120. Offered for S and U grades only. Introductory course in small group participation. Students are exposed to the dynamics of small groups. (Y)

270. Career Development, Career Options, and the University Student. Cr. 2

Offered for S and U grades only. Identification of educationally and vocationally relevant self-characteristics; examination of fields of study and vocational opportunities; sources of further career development assistance. (F)

290. Introduction to Guidance and Counseling: Philosophical Perspectives. Cr. 3

Various views of human nature studied and evaluated in light of their implications for the helping professions. (F)

330. Group Procedures in Counseling Services. Cr. 3

Prereq: junior standing and CED 110, 120, 230. An overview of group techniques and strategies to help facilitate self-understanding and enhance students' capability to work in counseling services. (W)

350. Advanced Helping Skill Development. Cr. 3

Prereq: junior standing and CED 110, 120, 150. Introduction and development of advanced responding, personalizing, and initiating skills in counseling. Decision-making skills which foster behavior change applied by students in one-to-one situations; variety of intervention techniques used. (Y)

370. Introduction to Career Development. Cr. 3

Prereq: junior standing and CED 110, 120. An introduction to and overview of career development theories. (W)

380. Ethical Issues of Counseling Services. Cr. 3

Prereq: junior standing and CED 110. Introduction to and overview of the importance and necessity of ethical standards and issues within the counseling services. (W)

460. Field Work in Counseling Services. Cr. 3-6

Prereq: senior standing; completion of 16 credits. A field placement experience in counseling services. (F,W)

480. Special Project in Counseling Services. Cr. 3(Max. 9)

Prereq: senior standing; completion of 16 credits. Senior project in counseling services. (F,W)

503. Role of the Counselor in Substance Abuse. Cr. 3

Prereq: CED 360 or graduate standing. An overview of guidance methods, local substance abuse programs, referral sources, court and legal procedures. (F)

505. Counseling Strategies with Substance Abusers. Cr. 3

Prereq: CED 350, 503 or graduate standing. Use of specific counseling strategies and treatment models with substance abusers. (W)

509. Family Dynamics and Counseling: Substance Abusers. Cr. 3

Prereq: CED 350 or 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. 4

Prereq: admission to master's program in counseling. Introduction to guidance and counseling theory and practice. Survey of counseling and guidance services in various settings. Overview of the counseling process, counseling theories, and practice with basic helping skills. (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)

672. Workshop in Guidance and Counseling. Cr. 2-4(Max. 18)

For counselors, teachers, and pupil personnel workers. Consideration of counseling and guidance issues in school, agency and community settings. Counseling, consultation, and coordination dimensions of guidance and counseling. (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

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

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

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

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)

635. The Learning Process and Programmed Instruction. Cr. 2-3

Development and use of programmed instruction skills including the writing of behavioral objectives for cognitive and affective domain, task analysis performance, taxonomic sequence of objectives, pre-testing and post-testing. Demonstration of learned skills in writing and field testing instructional programs. (F)

EDUCATIONAL SOCIOLOGY (EDS)

501. Survey of Educational Systems of Major European Countries. Cr. 3

Present-day developments in education in those countries of Europe which have influenced schools in all parts of the world; notably England, France, Germany, Scandinavia, Russia; emphasis on historical, political, social and economic bases for school systems in these countries. Recent reform movements and developments stressed. (I)

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. 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: admission to teacher certification program. 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. 4

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)

604. Role of Content Areas in Early Childhood Education. Cr. 2-8

Child growth and development as related to the content areas within the early childhood years (birth to eight years). Appropriate subject matter, field experience, reference materials, audio-visual resources in the lives of young children. Topics to be announced in *Schedule of Classes*. (S)

606. Community Contacts: Working with Families in Urban Settings. Cr. 2

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)

610. Planning and Implementing Nursery School Curriculum. Cr. 2

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

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

Developing competence in school mathematics programs: objectives, procedures, materials, organizational patterns, evaluation. (T)

650. Science Curriculum: Preprimary-9. Cr. 3

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

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)

601. Language and Reading Programs for Middle Schools. Cr. 3

Analysis and development of instructional methods and programs for improving reading and language competence of early adolescents in middle schools. (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. (L S 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)

FAMILY LIFE EDUCATION (FLE)

501. Methods of Teaching Health Occupations Education. Cr. 4

Prereq: TED 355; coreq: V E 541. Basic principles, methods of instruction, and organization of material in allied health occupations. Consideration given to practical application of the Michigan minimal objectives for health occupation education programs. (W)

545. Teaching Consumer Home Economics and Family Living. Cr. 4

Prereq: TED 355; Coreq: V E 541 Open only to Family Life Education majors. Basic principles, methods of instruction and organization of material for teaching consumer home economics and family living according to the Vocational Education Act and suggested Michigan Vocational Plan. (W)

547. Teaching Family Financial Management. Cr. 3

Prereq: S S 191, S S 192 or equiv. Economic, social and cultural conditions and needs relating to personal and family finance. Emphasis on financial planning by the consumer and its relevant supporting concepts. (F)

641. Survey of Home Economics Related Occupational Courses. Cr. 3

Prereq: teaching experience. Experiences specifically related to teaching occupational training courses; exploration of various curricula patterns; identifying content and procedures; criterion referenced materials. (I)

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)

505. Technology Applications In Teaching. Cr. 3

Techniques for incorporating technology in teaching. Principles of instruction design, techniques of audio-visual aids and new technologies such as instructional video. Emphasis on the computer as a teaching tool. (T)

510. Using Audiovisual Methods, Materials and Equipment. (L S 638). Cr. 2

Survey of educational media, methods, and materials. Principles of systematic instructional design applied to the design of group-based and individualized instructional materials, operation of common audiovisual equipment, review of innovative instructional practices; computer applications and learning games. (Y)

511. Educational Technology. (L S 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. (Y)

512. Instructional Materials Workshop. (L S 637). Cr. 1-3(Max. 3)

Design and development of audiovisual materials for use in educational, industrial, and/or human services programs. Students produce an audiovisual presentation. (Y)

513. Computer-Programmed Multi-Screen/Multi-Image Presentations. (AED 520). 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. (Y)

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 experience in planning and producing films and slides, with and without a camera, for artistic expression and educational communication. Preparing a storyboard, animation in Super 8mm, marking on 16mm film, titling, recording and synchronizing sound tracks, marking on 2x2 slides, photographing 35mm slides. (Y)

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. (Y)

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. (Y)

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. (Y)

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

Relevant cultural materials and teaching techniques as a vehicle for language teaching, whether in a bilingual/bicultural school setting, English as a second language classroom, or a foreign language program. (B)

MATHEMATICS EDUCATION (MAE)

505. (MAT 516) Mathematics for Elementary School Teachers I. Cr. 3

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

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. (Y)

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

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)

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

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

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. 3

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)

607. Science Education for the Gifted, K–12. Cr. 3

Prereq: SED 602. The impact of science instruction on the development of gifted learners at the elementary and secondary school levels. Appropriate areas of scientific investigation with criteria for selection and evaluation of learning strategies, activities, and materials for the gifted. (B)

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

Foundations of social studies instruction and curriculum; methods of teaching in middle, junior, and senior high school. (F,W)

673. New Perspectives in Social Education. Cr. 1–8(Max. 8)

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. 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

Offered for undergraduate credit only. Overview of characteristics of and interventions with exceptional children in regular classrooms. (Y)

503. Education of Exceptional Children. Cr. 3

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

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 514) Introduction to Speech Science. Cr. 3

Prereq: SPD 508, SPD 509. An overview of the basic processes of speech production; presentation of the principles of psychology acoustics, phonetics, linguistics, semantics, and neurology involved in normal speech production. (F)

511. Mental Retardation and the Cognitive Process. Cr. 3

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

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

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

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 Speech Pathology. Cr. 3–4

Development of speech correction in education; classification, basic principles, methods of diagnosing and treating speech deficits; clinical observations required for majors only. (F,S)

531. (CDS 531) Clinical Methods in Speech Pathology. Cr. 3

Prereq: SED 530. Procedures and materials for clinical diagnosis of articulatory, language, rhythm, and voice deficits of organic and non-organic causation. (W)

532. (CDS 508) Phonetics. Cr. 3

Multisensory study of sounds of the English language, emphasizing acoustic, physiologic, kinesiological 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 Speech Pathology. Cr. 2

Prereq: consent of instructor. 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)

540. (SPM 540) Introduction to Audiology. (AUD 540). Cr. 3

Introduction to physics of sound, anatomy of the hearing mechanism, audiometry, hearing aids, habilitation and rehabilitation of the hearing handicapped. (S)

550. Introduction to Education of the Deaf. Cr. 2

Prereq: SED 503. History, programs and principles in the education and guidance of the hard-of-hearing and the deaf. Fundamentals of teaching speech, languages and academic subjects; development of speech and language. Observations of community services for the deaf required. (I)

551. (SPM 542) Auditory Training and Speech Reading. (AUD 542). Cr. 3

Prereq:SPM 540. Principles and methods of auditory training and speech reading for the hearing impaired. Observations required.(W)

560. Introduction to Education of Hearing- and Visually-Impaired Children. Cr. 3

Prereq: SED 503. 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)

562. Teaching Visually Impaired Children. Cr. 3

Prereq: SED 503 and 560. Program planning including pupil evaluation, teaching methods and material; curriculum adaptation and pupil guidance. Off-campus observation required. (I)

563. Braille Methods. Cr. 2

Prereq: SED 560. Credit only upon satisfactory completion of SED 564. Acquisition of competency in reading and writing braille and Nemeth Code. (I)

564. Advanced Braille and Technical Aids for Blind. Cr. 2

Prereq: SED 563. Continuation of the braille code and instruction in technical aids including Optacon. Course to be taken the semester following SED 563. (I)

570. Computer and Adaptive Technology in Special Education. Cr. 2–3

Prereq: SED 503, TED 602. 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. Cr. 1–6(Max. 8)

Prereq: teaching experience. 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 Speech Pathology. Cr. 2 (Max. 8)

Prereq: written consent of instructor. Material fee as indicated in *Schedule of Classes*. Supervised experience in application of diagnosis and treatment of clinical cases. (T)

638. (CDS 638) Diagnostic Tests in Communication Disorders. Cr. 3

Prereq: Junior standing; SPD 508, SPD 509, SPD 514, SPD 530, SPD 532. Diagnostic tests and instruments used in the appraisal of speech-language disorders. Test protocol and administration procedure. (W)

646. (CDS 646) Communication Disorders I. Cr. 4

Introduction to the clinical management of articulation and language disorders. (F)

648. (CDS 648) Communication Disorders II. Cr. 4

Introduction to the clinical management of cleft palate, voice, and stuttering disorders. (F)

662. (CDS 662) Introduction to Voice Disorders and Cleft Palate. Cr. 3

Prereq: SED 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. (CDS 664) Language Pathology: Etiology and Diagnosis. (LIN 664). Cr. 3

Prereq: SED 530 and 532. Descriptions, etiology, methods of diagnosis of language disorders in children, including remediation. (F)

665. Orientation and Mobility: Visually Impaired Children. Cr. 2

Prereq: SED 503, 560. Orientation and mobility methods for blind and partially seeing children, including a review of basic research in sensory perception relevant to orientation of the visually impaired to the physical environment. (I)

SPEECH EDUCATION (S E)

537. (SPC 504) Communication in the Black Community. (LIN 504). Cr. 3

Sociolinguistic and rhetorical analysis of speech and language behaviors among Afro-Americans, linguistic history and development of black English, related issues concerning the education of black children. (Y)

606. (SPE 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)

VOCATIONAL EDUCATION (V E)

541. Vocational Education Practicum in Instruction. Cr. 4

Coreq: BDE 532, FLE 545, FLE 501, or I E 677. Open only to vocational education majors. Strategies and materials for the teaching of vocational education subjects in a competency-based education

setting. Teaching techniques, basic assessment, and evaluation as well as community and technological influences on teaching. (W)

692. Cooperative Education - Field Study. Cr. 1-10(Max. 12)

Prereq: vocational major and curriculum area approval. Field experience to correlate with the teaching of vocational subjects. (F,W)

693. Special Problems in Vocational Education. Cr. 1-4 (Max. 6, M.Ed.; max. 8, Ed. Spec.; max. 12, Ed.D. and Ph.D.)

Prereq: vocational teaching experience, consent of adviser. Special workshops and short term seminars in vocational 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)



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 and Metallurgical Engineering, Civil Engineering, Electrical and Computer Engineering, Industrial and Manufacturing Engineering, Materials Science and 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 six departments in the Division of engineering. Four programs leading to a Bachelor of Science in Engineering Technology degree are offered in the Division of Engineering Technology.

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 the men, 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 new 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 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; metallurgical measurements; metallurgical processing; electron microscopy; optical metallography; soil mechanics; environmental and hydraulic engineering; roadway and building materials; structural modeling; communications; systems computers; control systems; analog circuits; digital systems; microcomputers and microprocessor applications; power systems; fields, microwaves and

optics; computer vision; high voltage research; networks, electronics, microwaves, holography and lasers; 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 Materials Science and 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. Application for accreditation of the new program will be made during the next review cycle.

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 117.

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
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

**MASTER OF SCIENCE in Engineering Technology*

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

COLLEGE OF ENGINEERING DIRECTORY

Dean	Room 1100, Engineering Building; 577-3775
Assistant Dean—Student Affairs and Minority Programs	Room 1100, Engineering Building; 577-3780
Associate Dean—Graduate Programs and Research	Room 1100, Engineering Building; 577-3861
Associate Dean—Academic Affairs and Undergraduate Programs	Room 1100, Engineering Building; 577-3040
Associate Dean—Alumni and Corporate Relations	Room 1100, Engineering Building; 577-4707
Director of Alumni and Corporate Relations	Room 1100, Engineering Building; 577-4707
Business Manager	Room 1100, Engineering Building; 577-3817
Director, Engineering Technology	4855 Fourth Avenue; 577-0800
Coordinator, Cooperative Education	University Placement Office, Mackenzie Hall
Chemical Engineering	Room 1100, Engineering Building; 577-3800
Civil Engineering	Room 2100, Engineering Building; 577-3789
Electrical and Computer Engineering	Room 3100, Engineering Building; 577-3920
Graduate Certificate Program in Polymer Engineering	Room 1100, Engineering Building; 577-3800
Hazardous Waste Management	Room 1100, Engineering Building; 577-3800
Materials Science and Engineering	Room 1100, Engineering Building; 577-3800
Industrial Engineering and Operations Research	Room 3100, Engineering Building; 577-3821
Mechanical Engineering	Room 2100, Engineering Building; 577-3845
Bio-Engineering Center	818 West Hancock; 577-1344
Health Systems Productivity Center	Room 3166, Engineering Building; 577-3821
Center for Automotive Research	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

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 3.0 high school h.p.a. 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 3.0, with acceptable ACT (above 20) and SAT (above 850) scores, are admitted to the *professional* program.

Freshmen with an h.p.a. of 2.75 or above but less than 3.0, and with ACT or SAT scores lower than given above, are admitted to the *pre-professional* program.

Freshmen with an h.p.a. of 2.00 or above but less than 2.75 and acceptable ACT and SAT scores are admitted to the *pre-professional* program.

Transfer Student Criteria: Transfer students with an h.p.a. of 2.00 or above, who have successfully completed the first course in college calculus but have not completed the calculus sequence MAT 201–204 with a grade 'C' or better, will be admitted to the *pre-professional* program. Transfer students with an h.p.a. of 2.00 or above who have completed the MAT 201–204 sequence with a grade 'C' or better will be admitted to a *professional* program, subject to departmental criteria. For additional information, see below under Matriculation.

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 Assistant 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 prior to applying for transfer to a professional program: MAT 201–204, PHY 217 and 218, CHM 107 or 105, ENG 102, and a minimum of sixteen credits from a list of 200- and 300-level engineering courses. Students who complete this set of courses with a minimum grade of 'C' in each course and who pass the English Proficiency Examination Requirement will be permitted to transfer to a professional program.

Students enrolled in the *pre-professional* program are not permitted to enroll in any engineering courses except those on the list of engineering courses cited above. However, such students may enroll in other non-engineering courses included in the professional program.

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 116).

— 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 095 or 180, depending upon the student's performance. 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.

Degree Requirements

The normal program of study for each of the degrees awarded in the Division of Engineering requires between 136 and 141 credits, based on the curricular plans shown in the departmental sections. Of the total credits for the degree, at least the last thirty-four credits must be completed as resident credits in the College.

Completion of the degree requirements in four years requires the election of approximately 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 nineteen 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. Specific requirements for these degrees may be found in the departmental sections for this College (pages 121-149). 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 21. The following curricular requirements of the College duplicate some General Education entries, but students are cautioned to be familiar with and to complete both sets of requirements.

— 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 114. 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 life science course which satisfies the University Requirement in General Education as well as departmental requirements. Students should consult with their advisers for a current list of acceptable courses.

— 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 the following categories: historical studies, American society and institutions, basic social science, foreign culture, visual and performing arts, and philosophy and letters. See page 21 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 the General Education Requirements. These restrictions are shown in the degree requirements for each engineering program.

— English and Mathematics Proficiency

See pages 22-22 for a complete statement regarding University proficiency 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: Engineering students will automatically satisfy this requirement by passing MAT 180 or a required course in calculus before reaching junior status.

— Engineering Science Electives

Engineering science courses have their roots in mathematics and basic science and provide a bridge between mathematics, basic science and professional engineering courses. In certain curricula, the engineering science courses are completely prescribed; in other cases, they are partially identified through the designation 'Engineering Science Elective'. Specific departmental recommendations may appear at the end of the particular curriculum listing. Students should consult their academic adviser concerning these recommendations.

— 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 Liberal Arts. 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. The 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 250 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 35 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.

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.

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 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.

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, physics or chemistry, the student will be required to repeat that course before the next course in the sequence is taken.

Any course which has been completed for audit may not be subsequently enrolled in for credit nor may credit be obtained by special examination.

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 a course is repeated the new grade will replace the previous grade unless a student exceeds the maximum number of repeats of one course for each thirty-four credits completed at Wayne State University. After this maximum number of repeats is exceeded, both grades will be included in computing the student's grade point average.

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 for his/her department chairperson and the Dean to take the course at a designated institution.

Students are directed to pages 34–36 of this bulletin for University policies related to repeating courses and credit by special examination.

Withdrawal From Courses

General rules governing withdrawal from courses and changes of program can be found on page 36. 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.

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 433.

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. 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)

250. Engineering Internship. (Ind: 1). Cr. 1(Max. 6)

Prereq: sophomore standing and consent of adviser. Offered for S and U grades only. Engineering practice under supervision in cooperative education work-study program. Report required. (T)

STUDENT ORGANIZATIONS and FINANCIAL AIDS

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 Aids

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 Aids. Grants in Aid as well as National Direct Student Loans are available through the Office of Scholarships and Financial Aids.

From time to time, scholarships and other opportunities are opened to undergraduate students on other than a continuing basis. Inquiries should be directed to the Assistant Dean of the College of Engineering.

The following scholarships are representative of those granted to engineering students in recent years:

- Murray and Helen Altman Scholarship
- American Metal Climax Foundation Scholarship
—Climax Molybdenum
- American Natural Resources Scholarship Program
- American Society for Metals Foundation Scholarship in Metallurgical Engineering
- American Society of Tool and Manufacturing Engineers Scholarship in Engineering
- Ansul Corporation Scholarship
- BASF Corporation Scholarship Program
- Board of Governors Grant
- Board of Governors Scholarship
- Burroughs Corporation Scholarship
- The Arthur Raymond Carr Memorial Scholarship in Engineering
- Chrysler Central Engineering Co-op Scholarship
- Chrysler Corporation Fund Scholarship
- Chrysler Forge Scholarship
- College of Engineering Scholarship
- College Work Study
- The L. David Cook Award in Chemical Engineering
- Detroit Edison Co-op Scholarship
- The Detroit Edison Scholarships in Engineering
- Dow Chemical Corporation Co-op Scholarship
- Dow Coming Scholarship
- Ex-Cell-O Corporation Co-op Scholarship

- The Ford Motor Company Scholarship Program
- The General Motors Scholarship Program
- Giffels Associates, Inc., Scholarship
- The Graduate Professional Scholarship
- Howard M. Hess Scholarships
- The William R. Kales Scholarship in Engineering
- Charles Lewitt Memorial Scholarship
- Michigan Bell Co-op Scholarship
- Michigan Consolidated Gas Company Co-op Scholarship
- Michigan Road Builders Association Scholarship
- Michigan Society of Professional Engineers Scholarship
- The Monsanto Scholarship in Engineering
- National Action Council for Minorities in Engineering, Inc., Scholarship
- National Direct Student Loan
- National Science Foundation Fellowships
- Ohio Edison Co-op Scholarship
- The James E. and Christine L. Orr Scholarship in Engineering
- Proctor and Gamble Co-op Scholarship
- Robert Lee Wilcox Memorial Scholarship by American Welding Society
- William T. Rettenmeier Memorial Scholarship
- Rockwell International Co-op Freshman Scholarship
- Shell Assist Scholarship
- The Society of Engineers' Wives Scholarship in Engineering
- University Unrestricted Fund Scholarship
- The Fredrick G. Weed Graduate Scholarship in Chemical Engineering
- The Robert G. Wingerter Awards for Scholastic Excellence in Engineering



CHEMICAL ENGINEERING

Office: 1100 W. Engineering Bldg.; 577-3800

Chairperson: R. H. Kummier

Associate Chairperson: J. H. McMicking

Professors

D.A. Crowl, H.G. Donnelly (Emeritus), E. Gulari, R.H. Kummier,
R. Marriott, E. W. Rothe, S.K. Stynes

Associate Professors

C.B. Leffert (Emeritus), J.H. McMicking, S. Ng, S.O. Salley,
B. Shorthouse

Adjunct Professors

G. Boicourt, H. Gandhi, M. Klein, J. Louvar, R. Powitz, P. Warner

Degree Programs

BACHELOR OF SCIENCE in Chemical Engineering

*CERTIFICATE in Hazardous Waste Control

*CERTIFICATE in Polymer Engineering

*MASTER OF SCIENCE in Chemical Engineering

*MASTER OF SCIENCE in Hazardous Waste Management

*DOCTOR OF PHILOSOPHY with a major in 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 and chemical operations and processes. Engineering courses cover material and energy balances, transport phenomena, reaction kinetics, and process and equipment design. In addition, ten credits in 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.

Bachelor of Science in Chemical Engineering

Admission Requirements: see pages 114-116.

DEGREE REQUIREMENTS: Candidates for the Bachelor of Science degree must complete 141 credits in course work, including satisfaction of the University General Education Requirements (see page 21), 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 14-39 and 114 - 119 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

First Semester	credits
UGE 100 —(GE) Introduction to the University & its Libraries	1
MAT 201 —(MC) Calculus I	4
CHM 107 —(PS) Principles of Chemistry I	4
ENG 102 —(BC) Introductory College Writing	4
HIS 195 —(HS) Society and the Economic Transition	3
Total: 16	

Second Semester

MAT 202 —Calculus II	4
CHM 108 —Principles of Chemistry II	5
ECO 101 or ECO 102	
—(SS) Principles of Macroeconomics	3
—(SS) Principles of Microeconomics	3
P S 103 —(AI) The American Governmental System	3
Total: 15	

Sophomore Year

First Semester

MAT 203 —Calculus III	4
PHY 217 —(PS) General Physics	4
MSE 130 —Science of Engineering Materials	4
CHM 224 —Organic Chemistry I	4
B E 101 — Introduction to Computers in Engineering	3
Total: 19	

Second Semester

MAT 235 —Elementary Differential Equations	3
CHE 280 —Material and Energy Balances	4
CHE 304 —Computational Methods in Engineering	3
I E 322 —Probability and Statistics in Engineering	3
CHM 226 —Organic Chemistry II	4
Total: 17	

Junior Year

First Semester

First Semester	credits
CHE 322 —Measurements Laboratory	2
CHE 330 —Thermodynamics: Chemical Equilibria	4
CHE 320 —Chemical Process Engineering I	4
CHM 544 —Physical Chemistry II	4
ENG 305 —(IC) Technical Communication I: Report Writing	3
CHE Technical Electives	3
Total: 20	

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

Second Semester

CHE 340—Kinetics and Reactor Design	3
CHE 382—Chemical Engineering Laboratory	2
CHE 380—Chemical Process Engineering II: Mass Transfer	4
CHE 386—Chemical Engineering Seminar I	0
PHY 218—General Physics	4
BIO 220—(LS) Introductory Microbiology	4
CHE Technical Electives	3
Total:	20

Senior Year

First Semester

Visual & Performing Arts (VP) elective	3
CHE 420—(WI) Chemical Process Engineering III	3
CHE 426—Chemical Engineering Seminar II	0
CHE 460—Process Dynamics and Simulation	3
CHE Design Elective	2
ENG 306—(OC) Technical Communication II: Writing & Speaking	3
Philosophy & Letters (PL) elective (300-level)	3
Total:	17

Second Semester

CHE 486—Chemical Engineering Seminar III	1
Chemical Engineering Technical Elective	4
CHE 480—Chemical Process Integration	3
Chemical Engineering Design Elective	4
ANT 315—(FC) Anthropology of Business	3
MSE 230—Introduction to Materials Engineering	3
Total:	17

TOTAL CREDITS 141

UNDERGRADUATE COURSES (CHE)

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 433.

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: B E 101. 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 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
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, CHM 544, 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 MET seminar series for the semester. Classified as CHE Design elective. (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. (W,S)

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)

435. Polymer Structure and Properties. (MSE 435). Cr. 3
Prereq: MAT 204, CHM 224, MSE 130. Introductory study of fundamental relations between chemical structures and physical properties of polymers. The special properties of polymers that make their application both desirable and undesirable. Classified as a chemistry elective. (Y)

437. Polymer Process Engineering. (MSE 437). Cr. 3
Prereq: CHE 435. Detailed analysis of polymer processing. Rheology of polymers, flow in tubes, calendaring, extrusion, injection molding, surface phenomena, and polymer crystallization. Classified as a design elective. (Y)

- 456. Chemical Engineering Senior Research. Cr. 4-6**
Prereq: CHE 386; coreq: 426. Student computer account required. Research project. Classified as CHE Design elective. (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. Classified as Design or Chemistry elective depending on selected topic. (T)
- 504. (ECE 504) Numerical Methods for Engineers. Cr. 4**
Prereq: MAT 235, CHE 304. Student computer account required. Solution of ordinary and partial differential equations of engineering by modern numerical methods, including digital computer programming. Chemical Engineering elective. (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. Chemical Engineering design elective. (F)
- 509. (MSE 509) Physical Ceramics. Cr. 3**
Prereq: MSE 230 or equiv. 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. Classified as a Chemistry elective. (B)
- 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. Chemical Engineering elective. (F)
- 524. (M E 524) Industrial Combustion Systems. Cr. 4**
Prereq: M E 420 or CHE 320. Introduction to operating principles and design features of modern boilers, furnaces, gas turbine combustors and some advanced systems. An intermediate treatment of availability analysis and radiation heat transfer is integrated with energy analysis. Computerized furnace model used for sensitivity analysis and design. (B)
- 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. Classified as a Chemistry elective. (W)
- 533. (M E 533) Applied Polymer Rheology. Cr. 3**
Prereq: CHE 320, 535. Flow properties of polymer solutions; methods of measuring fundamental rheological parameters using viscometric devices; the prediction of material properties from theoretical principles. Correlation between theoretical and experimental results. Classified as a CHE Design elective. (I)
- 535. Polymer Science. (MSE 535). Cr. 3**
Prereq. or coreq: MAT 204. Material fee as indicated in *Schedule of Classes*. An introductory study and application of fundamental relations between chemical structure and physical properties of high polymers. The preparative processes and manipulation of polymers in the related industrial fields of fibers, plastics, resins and rubbers. Classified as a Chemistry elective. (Y)
- 538. Polymer Solutions. (MSE 538). Cr. 3**
Prereq: CHE 330, CHM 544. Solubility of polymers, configuration of chain molecules, colligative properties of dilute polymer solutions, spectroscopy, optical activity, light and x-ray scattering of polymer solutions, frictional properties of dissolved polymers, solution properties of polyelectrolytes. (B)
- 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. (F)
- 552. (OEH 651) Air Sampling and Analysis. Cr. 3**
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. Classified as a Chemistry elective. (F)
- 553. Thermal Processing of Hazardous Waste. Cr. 2**
Prereq: CHE 551. Thermal processing technologies, such as combustion fundamentals, thermal incineration equipment and hardware, chemical reaction and recovery systems for hazardous waste control. (Y)
- 554. Law and Administration Issues in Hazardous Waste Management I. Cr. 2**
Prereq: senior standing. Offered for S and U grades only. No credit in engineering graduate degree programs. 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. (F)
- 555. (OEH 642) Environmental Science I: Introduction to Air Pollution. Cr. 3**
Prereq: CHE 280, MAT 235. Man's natural environment as well as nature's cleansing processes; man-made and natural contamination processes and man's control over these phenomena through both technological and legal processes. Classified as a Chemistry elective. (W)
- 556. Transportation and Emergency Spill Response. Cr. 3**
Prereq: CHE 551. Overview of maritime, rail, and tank truck transportation methodology, planning, and regulations. An analysis of procedures for spill cleanup in watercourse, plants and laboratories. (W)
- 557. Health Aspects of Hazardous Materials Management. Cr. 1**
Fundamental concepts of environmental health and safety, applied to the research and development laboratory; recognition and control of chemical, physical and biological agents. (F)
- 558. Land Disposal of Hazardous Waste. (C E 558). 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. Biological Waste Disposal. (C E 559). Cr. 2**
Prereq: CHE 551. Biological treatment of industrial wastes, including unit operations, solids handling and activated carbon processes. (I)
- 560. (MSE 560) Composite Materials. Cr. 3**
Prereq: senior standing. Principles and applications of high strength composite materials, with particular emphasis on fiber-reinforced metals and plastics. Design of reinforced materials to replace conventional metals and alloys. (B)
- 561. (MSE 561) Science of Materials. Cr. 3**
Prereq: PHY 218 or equiv. Mathematics of physical models representing solid state phenomena. Wave propagation in a lattice, including elastic, light and electron waves. Includes specific heats, optical phenomena, bond theory, dielectric properties, magnetism and

ferro-electricity; classical and quantum statistics and reciprocal lattice concepts. Classified as a Chemistry elective. (I)

577. Computer-Aided Design and Graphics Techniques in Chemical Engineering. Cr. 4

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. Chemical Engineering design elective. (Y)

580. Computer-aided Design of Separation Processes. Cr. 2

Prereq: CHE 304 and 380. Application of computer programs to design chemical process operations. Problems include stagewise and continuous operations. Classified as a CHE Design elective. (B)

585. Vacuum Technology. (MSE 585). Cr. 2

Prereq: PHY 218. Vacuum techniques, flow of gases through tubes and orifices, operation of pumps and manometers, vacuum materials, vacuum systems. Classified as a CHE Design elective. (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: CHE 380, 340. Maximum of six credits of Special Topics in any one degree program. A consideration of special subject matter in chemical engineering. Topics to be announced in *Schedule of Classes*. Classified as Design or Chemistry elective depending on selected topic. (F,W)

613. (NFS 413) Food Preservation. (NFS 713). 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. Classified as a Chemistry elective. (W)

635. Polymer Processing. (MSE 635). Cr. 2

Prereq: MAT 235. Material fee as indicated in *Schedule of Classes*. A detailed analysis of polymer processing. Rheology of polymers, flow in tubes, calendaring, extrusion, injection molding, surface phenomena and polymer crystallization. Classified as a CHE Design elective. (Y)

638. Polymer Kinetics. Cr. 3

Prereq: CHE 340; CHM 544. Polymerization kinetics of various types of reactions, including emulsion polymerization and co-polymerization; polymer reactor design; batch and continuous stirred tank reactors; classical methods for determining reaction rates; developing techniques and spectroscopic methods. Classified as a CHE design elective. (B)

645. Biochemical Engineering. Cr. 2

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. Classified as a Chemistry elective. (I)

653. Waste Minimization. Cr. 2

Prereq: CHE 420 or 697; or 558 and 559 and 553. 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. Chemical Engineering Design elective. (Y)

655. Fundamentals of Environmental Auditing. Cr. 2

Prereq: CHE 554, 651. Introduction to the fundamentals and techniques in environmental auditing with special emphasis on auditing protocols, verification of findings and interpretation. (Y)

656. Applications of Environmental Auditing. Cr. 2

Prereq: CHE 655. Application of the fundamentals of the environmental auditing process to examples such as air and water laws, solid and hazardous waste laws, hazardous materials management laws, and health and safety laws. Skills and tools necessary to audit for compliance illustrated through class studies. (Y)

657. Safety In the Chemical Process Industry. 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. Chemical Engineering Design elective. (B)

658. Principles of Environmental Sampling. Cr. 2

Prereq: I E 322, CHE 655. Introduction to environmental sampling with emphasis on statistical design, quality control and quality assurance, and interpretation of data. (Y)

659. Bioremediation of Hazardous Waste. 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)

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. (Y)

665. Electrochemical Engineering. (MSE 665). Cr. 2

Prereq: CHM 544, CHM 380 and CHE 340. Material fee as indicated in *Schedule of Classes*. Advanced study of the design and operation of industrial electrochemical processes, including the treatment of problems involving simultaneous mass-transfer, heat-transfer and chemical reaction. Classified as a Chemistry elective. (B)

670. Fundamentals of Fractals. Cr. 3

Prereq: MAT 235. Thorough introduction to fundamentals of fractal theory; application of fractal geometry to solve engineering and materials problems. (B)

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)

687. Elevated Temperature Corrosion. (MSE 687). 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)

697. Strategy of Process Engineering. Cr. 2

Coreq: CHE 420. Economic evaluation of chemical, metallurgical and petroleum processes and methods for determining the optimal conditions for their operation. Classified as a CHE Design elective. (F)

CIVIL ENGINEERING

Office: 2100 E. Engineering Bldg.; 577-3789
 Chairperson: M.A. Usmen

Professors

L.T. Cheney (Emeritus), T.K. Datta, S. Khasnabis, D.S. Ling (Emeritus),
 J. M. Paulson (Emeritus), M.A. Usmen

Associate Professors

H. M. Aktan, T. T. Arciszewski, T. M. Heidtke, T. Kagawa, C.J. Miller

Assistant Professor

R. A. Dusseau

Adjunct Faculty

M. Bhatti, A. Davanzo, D. Olowokere

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 environment. Obviously, the responsibilities of the civil engineer directly involve the health, safety and welfare of the public.

The Civil Engineering Department maintains laboratories for teaching and research in the areas of: structures/materials, expert systems, microcomputing, hydraulics, geotechnical and environmental engineering. Laboratories include facilities for testing structural components under static and dynamic loads; strain measurement; 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. Additionally, the Department is equipped with microcomputers, including IBM PCs, used for artificial intelligence, instruction and research, as well as systems developed by Texas Instruments and Hewlett-Packard for data management and instrument control.

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 114-116.

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 21), 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 14-39 and 114-119, 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 —(MC) Calculus I	4
CHM 107 —(PS) Principles of Chemistry I	4
B E 101 — Introduction to Computers in Engineering	3
C E 101 —Introduction to Civil Engineering	0
UGE 100 —(GE) The University and its Libraries	1
ENG 102 —(BC) Introduction to College Writing	4
ECO 101 or ECO 102	
—(SS) Principles of Macroeconomics	3
—(SS) Principles of Microeconomics	3
	Total: 19

Second Semester

MAT 202 —Calculus II	4
PHY 217 —(PS) General Physics	4
MET 130 —Science of Engineering Materials	4
P S 101 or P S 103	
—(AI) American Government	4
—(AI) The American Governmental System	3
HIS 195 —(HS) Society and the Economic Transition	3
	Total: 18-19

Sophomore Year

First Semester

MAT 203 —Calculus III	4
PHY 218 —General Physics	4
C E 240 —Statics	3
Life Sciences (LS) elective	3
I E 322 —Probability and Statistics in Engineering	3
	Total: 17

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

Second Semester

MAT 235—Elementary Differential Equations	3
C E 360—Elementary Mechanics of Materials	3
CHE 304—Computational Methods in Engineering	3
ENG 305—(IC) Technical Communication I: Report Writing	3
Visual and Performing Arts (VP) elective	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 445—Civil Engineering Materials	3
M E 340—Dynamics	3
Philosophy and Letters (PL) elective	3
Total: 17	

Second Semester

C E 421—Water Resources	3
C E 460—Transportation Engineering	4
C E 431—Structures II	3
C E 435—Structural Steel Design I	3
C E 451—Introduction to Geotechnical Engineering	4
Total: 17	

Senior Year

First Semester

C E 422—(WI) Environmental Engineering	3
C E 436—Reinforced Concrete I	3
C E 464—Transportation Design	4
Civil Engineering elective	3
ENG 306—(OC) Technical Communication II: Writing & Speaking	3
Total: 16	

Second Semester

Civil Engineering Design Elective	3
C E 485—Engineering Economy & Decision Theory in C E Systems	3
Technical Electives	8
ANT 315—(FC) Anthropology of Business	3
Total: 17	

TOTAL CREDITS 136-137

Humanities and Social Science Electives: See page 116 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 nine credits in technical electives.

Design Electives: Students are required to complete two courses from: C E 551, C E 528, C E 637, C E 638, and C E 641, one of which must be either C E 528 or C E 551. Students are required to complete two courses from: C E 551, C E 528, C E 637, C E 638, and C E 641, one of which must be either C E 528 or C E 551.

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 433.

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 and PHY 217. 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)

307. Surveying I. (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 and inelastic 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; unsymmetrical bending. (T)

401. Civil Engineering Analysis. Cr. 3
Prereq: MAT 204; 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. Student computer account required. Behavior and design of structural steel elements. Tension, compression and flexural members, connections. (W)

436. Reinforced Concrete I. Cr. 3

Prereq: C E 431. Student computer account required. Structural properties of reinforced concrete; ultimate strength design methods; transformed area; design of reinforced rectangular and tee beams, columns and slabs; continuity in concrete buildings. (F)

445. Civil Engineering Materials. (Lct: 2; Lab: 3). Cr. 3

Prereq. or coreq: MET 130, M E 240 or C E 240, ENG 305. Material fee as indicated in *Schedule of Classes*. Structure; composition; physical, mechanical and rheological properties of steel, concrete, asphalt, wood, plastic and soil. Manufacturing 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. 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)

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. (CHE 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. (CHE 559) Biological Waste Disposal. Cr. 2

Prereq: CHE 551. Biological treatment of industrial wastes, including unit operations, solids handling and activated carbon processes. (I)

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(Max. 4)

Prereq: consent of chairperson. Maximum four credits in Special Topics in any one degree program. 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)

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. Student computer account required. Theory and design of two-way and flat slabs, yield line theory, footings and retaining walls, composite beams, box girders. (W)

638. Prestressed and Precast Concrete. Cr. 3

Prereq: C E 436. Material fee as indicated in *Schedule of Classes*. Principles of prestressing and precasting concrete. Design and analysis of statically determinate and indeterminate prestressed 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)



ELECTRICAL and COMPUTER ENGINEERING

Office: 3100 W. Engineering Bldg.; 577-3920

Chairperson: Michael P. Polis

Associate Chairpersons: Robert D. Barnard, Franklin W. Westervelt

Professors

R. Arrathoon, R. D. Barnard, F. E. Brammer (Emeritus), A. Lewandowski, J. Meisel, A.W. Olbrot, M.P. Polis, M. B. Scherba (Emeritus), M. P. Shaw, H. Singh, Y. Wallach, F. Westervelt

Associate Professors

J. S. Bedi, R. F. Erlandson, V. Mitin, P. Siy, J. R. Woodyard

Assistant Professors

G. Auner, M.H. Hassoun, F. Lin, T.W. Lin, S.M. Mahmud, H. Mortazavian, J. Sun, L.Y. Wang, Y. Zhao

Adjunct Professors

M. A. Rahimi, A.K. Sood

Adjunct Associate Professors

T.E. Anderson, D.R. Schneider

Adjunct Assistant Professors

R.D. Brandt, P. M. Nefcy, R.A. Spitzer

Degree Programs

BACHELOR OF SCIENCE in Electrical Engineering

**MASTER OF SCIENCE in Computer Engineering*

**MASTER OF SCIENCE in Electrical Engineering*

**DOCTOR OF PHILOSOPHY with a major in computer engineering*

**DOCTOR OF PHILOSOPHY with a major in electrical engineering*

In the field of electrical and computer engineering, basic physical and mathematical principles are utilized to develop new devices, technologies, and techniques of constantly broadening application. Examples are the development, stemming from advances in solid-state and integrated circuit technology, of smaller, cheaper, and more powerful computers, microprocessors, and other data processors, and their utilization in a growing range of system applications; the growing use of data communications and sophisticated satellite communication networks; the use of lasers, and the development of fiber optic and integrated optical devices for various applications ranging from optical data processing to communication; development of sophisticated control techniques, remote sensors, and transducers for advanced automation and electric power systems; the application of electronics to health care and diagnostics (such as noninvasive measurements and ultrasound imaging); and energy conversion devices.

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

The areas of study available in the Department include: solid-state devices, microwaves, lasers, integrated optics, optical computers, information sciences, digital circuits, computer engineering, integrated and active circuits, electric power systems, bioengineering, image processing, neural networks, and modern control theory. Programs of both experimental and theoretical study are available in all these areas, as well as other interdisciplinary programs through the Electrical and Computer Engineering Department.

A more detailed exposition of the research activities of the Department is provided in a descriptive brochure available from the Departmental office. Senior students are encouraged to participate in research activities by means of independent study projects and student assistantships. Graduate students normally participate in the research program as graduate teaching assistants and research assistants.

The recently renovated College of Engineering laboratory building contains seven instructional laboratories for experimental work in control systems, analog circuits, digital systems, microcomputers, power systems, fields-microwaves-and-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, and machine intelligence. 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 114-116.

DEGREE REQUIREMENTS: Candidates for the Bachelor of Science degree must complete 138-139 credits in course work, including satisfaction of the University General Education Requirements (see page 21), 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 14-39 and 114-119, 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

<i>First Semester</i>	<i>credits</i>
CHM 107—(PS) Principles of Chemistry I	4
B E 101 — Introduction to Computers in Engineering	3
MAT 201 —Calculus I	4
ENG 102 —(BC) Introductory College Writing	4
UGE 100 —(GE) The University and its Libraries	1
Total:	16

Second Semester

MAT 202 —Calculus II	4
PHY 217 —(PS) General Physics (with lab)	5
ECE 262 —Introduction to Microcomputers	4
HIS 195 —(HS) Society and the Economic Transition	3
Total:	16

Sophomore Year

First Semester

MAT 203 —Calculus III	4
PHY 218 —General Physics (with lab)	5
Visual and Performing Arts elective	3
MSE 130 —Science of Engineering Materials	4
ECO 101 or ECO 102	
—(SS) Principles of Macroeconomics	3
—(SS) Principles of Macroeconomics	3
Total:	19

Second Semester

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
ENG 305 —(IC) Technical Communication I: Report Writing	3
MAT 235 —Elementary Differential Equations	3
Total:	16

Junior Year

First Semester

ECE 333 —Electrical Circuits II	4
ECE 357 —Electronics I	4
ECE 358 —Electronics Laboratory	2
I E 322 —Probability and Statistics in Engineering	3
CHE 304 —Computational Methods in Engineering	3
ENG 306 —(OC) Technical Communication II: Writing and Speaking	3
Total:	19

Second Semester

ECE 433 —Linear Network and System Analysis	4
ECE 434 —Microcomputer Based Instrumentation: Laboratory	2
ECE 457 —Electronics II	4
ECE 460 —(WI) Microcomputer Interfacing Design	4
ECE 470 —Introduction to Communication Theory	4
Total:	18

Senior Year

First Semester

ECE 447 —Control Systems I	4
ECE 480 —Electromagnetic Fields and Waves	4
Life Science course	3
ANT 315 —(FC) Anthropology of Business	3
P S 101 or P S 103	
—(AI) American Government	4
—(AI) The American Governmental System	3
Total:	17-18

Second Semester

Electrical and Computer Engineering Electives	12
ECE Design Laboratory Elective	2
Philosophy and Letters (PL) 300-level elective	3
Total:	17
 TOTAL CREDITS	 138-139

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 two credits in ECE Design Laboratory courses (including, but not limited to, ECE 448, 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, 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 114-116

DEGREE REQUIREMENTS: The undergraduate curriculum for the Computer Option is the same as the Bachelor of Science in Electrical Engineering curriculum given above, with the following exceptions:

Junior Year

Second Semester

Substitute the following for ECE 470:

ECE 461—Introduction to Logical Design of Computers	4
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Senior Year

First Semester

Substitute the following for ECE 447:

ECE 468—Computer Organization	4
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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 433.

262. Introduction to Microcomputers. (Lct: 3; Lab: 3). Cr. 4
Prereq: CSC 105 or CSC 206, or equivalent programming course. 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 204. 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)

- 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. (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)
- 458. Electronics II: Laboratory. (Lct: 1; Lab: 3). Cr. 2**
Prereq: ECE 434; prereq. or coreq: 457. Material fee as indicated in *Schedule of Classes*. Laboratory investigations and design of multistage amplifiers, active filters, modulators, and other special-purpose circuits. (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 VSLI 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: CHE 304. Student computer account required. 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 204 and CHE 304. Student computer account required. Solution of ordinary and partial differential equations of engineering by modern numerical methods, including digital computation aspects. (I)
- 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)
- 516. (M E 516) Biomechanics I. (I E 516). (Lct: 4). Cr. 4**
Prereq: M E 510 or ECE 510 or I E 510. 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)
- 532. Network Synthesis. (Lct: 4). Cr. 4**
Prereq: ECE 433. Introduction to realizability theory. Review of positive real functions. Contemporary techniques for synthesis of prescribed transfer functions. Scattering matrices, reciprocal and nonreciprocal n-ports. (I)
- 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)
- 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)
- 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)

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)

557. Electronic Digital Circuit Analysis and Design. (Lct: 4). Cr. 4

Prereq: ECE 361 and 457. Introduction to electronic digital devices and circuits including analysis of various logic gates using several techniques of implementation such as transistor-transistor logic (TTL), emitter-coupled logic (ECL), encoding/decoding circuits, diode matrices, counters, clocks, pulse distributors. Logic and storage circuits, switching speeds and other considerations involved in the design of digital circuits. (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)

562. Mini- and Microcomputers. (CSC 537). (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 442) Computer Operating Systems. (Lct: 4). Cr. 4

Prereq: CSC 370 and CSC 441 or ECE 468. Student computer account required. Hardware architecture for operating systems; privileged instructions, protection, interrupts, input and output via channel programming, buffering, services provided by operating systems; batch, multiprogramming, and time-sharing systems; memory management including virtual memory; concurrent processing; deadlocks, mutual exclusion and synchronization; job and processor scheduling; device control and virtual devices. (Y)

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)

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 MSEE 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)

INDUSTRIAL and MANUFACTURING ENGINEERING

Office: 3100 W. Engineering Bldg.; 577-3822
Chairperson: Donald R. Falkenburg

Professors

Kenneth R. Chelst, Donald R. Falkenburg, H. Allan Knappenberger,
Vinod K. Sahney

Associate Professor

Herbert G. Ludwig (Emeritus)

Assistant Professors

Heng Chang, Olugbenga Mejabi, Hyun-Myung Shin, Gary Wasserman,
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*

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. 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 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.

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 114-116.

DEGREE REQUIREMENTS: Candidates for the Bachelor of Science degree must complete 138 credits in course work, including satisfaction of the University General Education Requirements (see page 21), 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 14-39 and 114-119, 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 management systems degree. These options are described below.

Freshman Year

First Semester	credits
MAT 201 —(MC) 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
HIS 195 —(HS) Society and the Economic Transition	3
	Total: 16

Second Semester

MAT 202 —Calculus II	4
PHY 217 —(PS) General Physics	4
MET 130 —Science of Engineering Materials	4
B E 101 — Introduction to Computers in Engineering	3
P S 101 or P S 103	
—(AI) American Government	4
—(AI) The American Governmental System	3
	Total: 18-19

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
I E software elective	4
	Total: 18

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

Second Semester

MAT 235 —Elementary Differential Equations	3
ENG 305 —(IC) Technical Communication I: Report Writing	3
M E 220 —Thermodynamics I	3
M E 205 —Introduction to Computer-Aided Design	3
ECE 262 —Introduction to Microcomputers	4
Total:	16

Industrial Engineering Degree

Junior Year

First Semester

IE 556 —Operations Research I	4
IE 487 —Engineering Economy	3
IE 312 — Work Environment	4
ECE 330 —Introduction to Electrical Circuits	3
Visual and Performing Arts (VP) elective	3
Total:	17

Second Semester

IE 525 — Engineering Data Analysis	4
IE 341 — Systems Simulation	4
CHE 304 —Computational Methods in Engineering	3
ENG 306 —(OC) Technical Communication II: Writing & Speaking	3
ECO 101 or ECO 102	
—(SS) Principles of Macroeconomics	3
—(SS) Principles of Microeconomics	3
ECE 331 —Electrical Circuits Laboratory	1
Total:	18

Senior Year

First Semester

C E 360 —Elementary Mechanics of Materials	3
IE 431 —(W) Production Control	4
IE 480 — Engineering Design Project	4
IE 526 — Principles of Quality Control	4
ANT 315 — (FC) Anthropology of Business	3
Total:	18

Second Semester

IE 451 — Information and Organization	4
Life Sciences (LS) course	3
IE Elective	4
IE Elective	3
Philosophy and Letters (PL) elective (300-level)	3
Total:	17

TOTAL CREDITS 138-139

Manufacturing Engineering Degree

Junior Year

First Semester

IE 556 —Operations Research I	4
IE 487 —Engineering Economy	3
IE 335 — Manufacturing Processes I	3
ECE 330 —Introduction to Electrical Circuits	3
Visual and Performing Arts (VP) elective	3
Total:	16

Second Semester

IE 445 — Concurrent Design	4
IE 341 —Systems Simulation	4
CHE 304 —Computational Methods in Engineering	3
ENG 306 — (OC) Technical Communication II: Writing & Speaking	3
ECO 101 or ECO 102	
—(SS) Principles of Macroeconomics	3
—(SS) Principles of Microeconomics	3
ECE 331 —Electrical Circuits Laboratory	1
Total:	18

Senior Year

First Semester

C E 360 —Elementary Mechanics of Materials	3
IE 431 —(W) Production Control	4
IE 480 — Engineering Design Project	4
IE 526 — Principles of Quality Control	4
ANT 315 — (FC) Anthropology of Business	3
Total:	18

Second Semester

IE 441 — Computer Aided Manufacturing I	4
IE 525 — Engineering Data Analysis	4
IE 547 — Industrial Automation	3
Life Sciences (LS) course	3
Philosophy and Letters (PL) elective (300-level)	3
Total:	17

TOTAL CREDITS 138-139

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 433.

205. (M E 205) Introduction to Computer-Aided Mechanical Drafting and Design. Cr. 3

Prereq: E T 114. Introduction to CAD systems, hardware and software configurations, and available software systems at the Computer Graphics and Design Laboratory, including MEDUSA, PDGS, DOGS, (TEMPLATE), (ANSYS), and ENPORT. (Y)

311. Human Factors in Design. Cr. 4

Prereq: IE 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: IE 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, CSC 105. 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)

335. (M E 345) Manufacturing Processes I. Cr. 3

Prereq: M E 360, MET 130. 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)

341. Systems Simulation. Cr. 4

Prereq: I E 322 and 556, CSC 102. Student computer account required. Design and analysis of production and service systems using computer simulation. Computer assignments and a project are required. (Y)

431. (WI) Production Control. Cr. 4

Prereq: I E 341, 556, ENG 305. Student computer account required. 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 311, 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 Manufacturing I. Cr. 4

Prereq: CSC 105, ECE 330, senior standing. 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)

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: senior standing; consent of instructor; development of preliminary proposal for project. 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. 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)

518. (CSC 518) Introduction to Modelling and Simulation. Cr. 3

Prereq: CSC 203 or equiv. and MAT 202. Student computer account required. Introduction to main concepts: modelling objectives, system boundaries, model formalism, experimentation with models, simulation. Concentration on finite state, cellular space and simple continuous and discrete event models. (I)

525. Engineering Data Analysis. Cr. 4

Prereq: I E 322. Student computer account required. 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)

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 I. Cr. 4

Prereq: I E 322, MAT 204. 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)

626. Reliability and Quality Control. Cr. 4

Prereq: I E 322. Student computer account required. 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 525 or 621. Student computer account required. 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)

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: M E 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 M E 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 525 or 621; 577 or 771 and computer programming experience. Student computer account required. 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: 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)

MATERIALS SCIENCE and ENGINEERING

Office: 1100 W. Engineering Bldg.; 577-3800

Chairperson: R. H. Kummeler

Professors

L. Himmel, M. Semchyshen

Associate Professors

W. Madden, C. Manke, S. Putatunda

Adjunct Professor

S. Newman

Degree Programs

BACHELOR OF SCIENCE in Materials Science and Engineering

**MASTER OF SCIENCE in Materials Science and Engineering*

**DOCTOR OF PHILOSOPHY with a major in materials science and engineering*

**CERTIFICATE in Polymer Engineering*

Materials problems constitute an important area of research and development in the complex technology of our industrial society. Power generation by nuclear reactors or solar cells, lighter and more crash-resistant 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 this relationship between the structure and properties of materials with the engineering aspect of materials production, fabrication and use. Elective courses offered during the senior year enable students to follow their particular interests in detail, and a senior research and seminar sequence provides the opportunity for independent work with appropriate faculty guidance.

Bachelor of Science in Materials Science and Engineering

Admission Requirements: see pages 114-116. 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 140 credits in course work, including satisfaction of the University General Education Requirements (see page 21), as outlined in the following curriculum. All course work must be completed in accordance with the academic procedures of the

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

University and the College governing undergraduate scholarship and degrees; see pages 14–39 and 114–119 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
MAT 201 —(MC) Calculus I	4
CHM 107 —(PS) Principles of Chemistry I	4
ENG 102 —(BC) Introductory College Writing	4
P S 103 —(AI) The American Governmental System	3
Total:	16

Second Semester

MAT 202 —Calculus II	4
CHM 108 —Principles of Chemistry II	5
B E 101 — Introduction to Computers in Engineering	3
ECO 101 or ECO 102	
—(SS) Principles of Macroeconomics	3
—(SS) Principles of Microeconomics	3
Visual and Performing Arts (VP) elective	3
Total:	18

Sophomore Year

First Semester

MAT 203 —Calculus III	4
PHY 217 —(PS) General Physics	5
MSE 130 —Science of Engineering Materials I	4
I E 322 —Probability and Statistics in Engineering	3
H S 195 —(HS) Society and the Economic Transition	3
Total:	19

Second Semester

MAT 235 —Elementary Differential Equations	3
CHE 280 —Material and Energy Balances	4
MSE 230 —Science of Materials II	3
PHY 218 —General Physics	5
M E 240 or PHY 520	
— Statics (C E 240)	3
— Applied Mechanics	3
Total:	18

Junior Year

First Semester

CHM 542 or MSE 330	
— Physical Chemistry	3
— Metallurgical Thermodynamics	4
MSE 340 —Physical Metallurgy I	3
MSE 342 —Physical Metallurgy Laboratory I	1
CHE 304 —Computational Methods in Engineering	3
PHY 330 or PHY 680	
— Introductory Modern Physics	3
— Modern Physics	3
ECE 330 — Introduction to Electrical Circuits	3
Total:	16–17

Second Semester

MSE 370 —Strength and Mechanical Behavior of Metals	4
MSE 409 — Physical Ceramics I	3
MSE 435 —Polymer Structure and Properties	3
CHM 544 or CHM 224	
— Physical Chemistry II	4
— Organic Chemistry I	4
ANT 315 — (FC) Anthropology of Business	3
Total:	17

Senior Year

First Semester

CHE 560 — Composite Materials	3
MSE-approved Electronic Materials elective	3
MSE 430 — Processing and Fabrication of Metals	3
ENG 305 —(IC) Technical Communication I: Report Writing	3
Life Sciences (LS) Elective	3
MSE Technical Elective	3
Total:	18

Second Semester

MSE 450 —(WI) Materials Selection and Design	3
MSE 426 —Senior Project	3
ENG 306 —(OC) Technical Communication II: Writing and Speaking	3
MSE Technical Elective	3
Philosophy and Letters (PL) elective (300 level)	3
CHE 520 or CHE 320	
— Transport Phenomena	3
— Chemical Process Engineering I: Fluid Flow and Heat Transfer	4
Total:	18–19

TOTAL CREDITS: 140–142

Technical Electives: Consult with the departmental adviser; at least half of the technical elective credits must be in Materials Science and Engineering courses.



UNDERGRADUATE COURSES (MSE)

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 433.

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. An overview of metallurgical engineering with emphasis on physical metallurgy: structure and properties of metallic materials, phase diagrams, microstructure, deformation, recrystallization, transformations and surface treatment. (F,W)

330. Metallurgical Thermodynamics. Cr. 4

Prereq: CHE 230, MSE 230. The applications of thermodynamics to metallurgical systems; emphasis on phase equilibria in one-component systems, the thermodynamics of solutions, and the relationships between free energy–composition diagrams and phase diagrams in binary and multi-component systems. (F)

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. Physical Metallurgy Laboratory I. Cr. 1

Prereq. or coreq: MSE 340 and ENG 305. Material fee as indicated in *Schedule of Classes*. Laboratory investigations of topics covered in MSE 340 and related areas. (F)

360. Physical Metallurgy II. Cr. 4

Prereq: MSE 340. Continuation of MSE 340, with applications to phase transformations and related phenomena in physical metallurgy. Solidification, recovery and recrystallization, precipitation from solid solutions, diffusion-controlled and martensitic phase transformations. (W)

362. Physical Metallurgy Laboratory II. Cr. 1

Prereq: ENG 305; prereq. or coreq: MSE 360 and MSE 370. Material fee as indicated in *Schedule of Classes*. Laboratory investigations of topics covered in MSE 360 and MSE 370 and related areas. (W)

370. Strength and Mechanical Behavior of Metals. 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)

371. Mechanical Behavior of Metals. Cr. 3

Prereq: MET 260. 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 360. 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. (F)

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. (Y)

411. Ceramic Processing and Fabrication. Cr. 3

Prereq: MSE 409. Principles and practices of the processing and fabrication of ceramic materials as well as the characterization of the properties of such materials. (Y)

426. Senior Project. Cr. 3

Prereq: MSE 360, 370. Organization of a research project: literature survey; equipment specification; presentation of a written proposal; and initiation of the laboratory investigation. (F,W)

430. Processing and Fabrication of Materials. Cr. 3

Prereq: MSE 360 and 370. Analysis of forming and joining from the metallurgical point of view. Deformation processing, powder metallurgy, brazing and welding. Materials properties and behavior during and after processing. (F)

435. (CHE 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. The special properties of polymers that make their application both desirable and undesirable. Classified as a chemistry elective. (Y)

437. (CHE 437) Polymer Process Engineering. Cr. 3

Prereq: MSE 435. Detailed analysis of polymer processing. Rheology of polymers, flow in tubes, calendaring, extrusion, injection molding, surface phenomena, and polymer crystallization. Classified as a design elective. (Y)

450. (WI) Materials Selection and Design. Cr. 3

Prereq: MSE 360, 370, and 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)

460. Principles of Extractive Metallurgy. Cr. 3

Prereq: MSE 330. Basic scientific and engineering principles involved in the extraction of metals from their ores, with particular emphasis on pyrometallurgical methods used in the manufacture of iron and steel. (W)

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. (Y)

509. Physical Ceramics. (CHE 509). Cr. 3

Prereq: MSE 230 or equiv. 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. (B)

535. (CHE 535) Polymer Engineering. Cr. 3

Prereq. or coreq: MAT 204. An introductory study and application of fundamental relations between chemical structure and physical properties of high polymers in the related industrial fields of fibers, plastics, resins and rubbers. (W)

538. (CHE 538) Polymer Solutions. Cr. 3

Prereq: CHE 330, CHM 544. Solubility of polymers, configuration of chain molecules, colligative properties of dilute polymer solutions, spectroscopy, optical activity, light and x-ray scattering of polymer solutions, frictional properties of dissolved polymers, solution properties of polyelectrolytes. (B)

550. Diffusion in Solids. Cr. 3

Prereq: MSE 360, MAT 204. 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. (Y)

553. Fatigue of Engineering Materials. Cr. 3

Prereq: MSE 130, C E 240 or MSE 370. 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. (Y)

560. Composite Materials. (CHE 560). Cr. 3

Prereq: MSE 370. Principles and applications of high-strength composite materials, with particular emphasis on fiber-reinforced metals and plastics. Design of reinforced materials to replace conventional metals and alloys. (B)

561. Science of Materials. (CHE 561). Cr. 3

Prereq: PHY 218 or equiv. Introduction to physical models representing solid state phenomena. Wave propagation in a lattice, including elastic, light and electron waves. Includes specific heats, optical phenomena, band theory, dielectric properties, magnetism and ferro-electricity; classical and quantum statistics and reciprocal lattice concepts. (I)

562. Electron Microscopy. Cr. 4

Prereq: MSE 360 or consent of instructor. Theory and practice of electron image formation, sample preparation, diffraction principles and interpretation of effects. (B)

563. Cast Ferrous Alloys. Cr. 3

Prereq: MSE 360. Advanced study of the properties of ferrous castings and solidification mechanisms. (B)

565. Metal Surfaces. Cr. 3

Prereq: MSE 230, 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 360. 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 360. 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: MSC 360, MSC 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)

635. (CHE 635) Polymer Processing. Cr. 2

Prereq: MAT 235. Material fee as indicated in *Schedule of Classes*. A detailed analysis of polymer processing. Rheology of polymers, flow in tubes, calendaring, extrusion, injection molding, surface phenomena and polymer crystallization. (F)

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)

665. (CHE 665) Electrochemical Engineering. Cr. 2

Prereq: CHM 544, CHE 380 and CHE 340. Advanced study of the design and operation of industrial electrochemical processes, including the treatment of problems involving simultaneous mass transfer, heat transfer and chemical reaction. (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)

MECHANICAL ENGINEERING

Office: 2100 W. Engineering Bldg.; 5773845
 Chairperson: K. A. Kline
 Associate Chairperson: T. Singh

Professors

A. Akay, C. N. DeSilva, R. Gibson, N. A. Henein, R. A. Ibrahim, R. M. Jamison (Emeritus), A. I. King, K. A. Kline, D. P. Lalas, L. M. Patrick (Emeritus), R. A. Piccirelli, G. E. Rivers (Emeritus), E. Rivin, T. Singh, A. B. Whitman

Associate Professors

H.P. Hale (Emeritus), M. Haykin, P.B. Karlic, M. G. Koenig (Emeritus), G. P. Loweke (Emeritus), L.P. Nolte, E. C. Zobel (Emeritus)

Assistant Professors

N. Chalhoub, J. C. Ku, M. C. Lai, C.A. Tan, H. M. Uras, X. F. Wu, K.H. Yang

Adjunct Professors

D.D. Ardayfio, R. Barry, W. Bryzik, B. Gans, R. S. Levine, K.N. Momman, P.R. Perumalswami, D. Viano, J. Wolf

Adjunct Associate Professors

G.L. Casey, T. Khalil, D.M. Lawson, J.W. Melvin, D.G. Penney, J.A. Sedensky, P. Subbarao

Adjunct Assistant Professors

P. DeSmet, J. Cavanaugh, D.P. Fyhrie

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, vehicle dynamics, 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.

Bachelor of Science in Mechanical Engineering

The Bachelor of Science in Mechanical Engineering is accredited by the Engineering Council for Professional Development.

Admission Requirements: see pages 114–116. 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 of the 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, computer graphics, biomechanics, engine combustion, vehicle design, atmospheric fluid dynamics 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 140 credits in course work, including the University General Education Requirements (see page 21), 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 14–39 and 114–119, respectively.

Part-time study (with most courses offered in the evening) 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 —(MC) 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
B E 101 — Introduction to Computers in Engineering	3
	Total: 16

Second Semester

HIS 195 —(HS) Society and the Economic Transition	3
MAT 202 —Calculus II	4
PHY 217 —(PS) General Physics	4
MET 130 —Science of Engineering Materials	4
M E 205 —Intro. to Computer-Aided Mechanical Drafting & Design	3
	Total: 18

Sophomore Year

First Semester

MAT 203 —Calculus III	4
PHY 218 —General Physics	4
M E 240 —Statics	3
M E 220 —Thermodynamics I	3

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

ECO 101 or ECO 102	
—(SS) Principles of Macroeconomics	3
—(SS) Principles of Microeconomics	3
	Total: 17

Second Semester

M E 221 — Analysis of Thermodynamic Cycles	1
M E 360 —Elementary Mechanics of Materials	3
M E 340 —Dynamics	3
I E 322 —Probability and Statistics in Engineering	3
MAT 235 —Elementary Differential Equations	3
ECE 330 —Introduction to Electrical Circuits	3
ENG 305 — (IC) Technical Communication I: Report Writing	3
	Total: 19

Junior Year

First Semester

ECE 331 —Electrical Circuits: Laboratory	1
M E 345 —Manufacturing Processes	3
M E 330 —Fluid Mechanics	4
M E 341 —Vibrations I	3
M E 348 —Design of Machine Elements	3
CHE 304 — Computational Methods in Engineering	3
	Total: 17

Second Semester

M E 349 — Introduction to Machine Design	3
M E 440 —Analysis and Control of Dynamic Systems	3
M E 491 —Measurements, Instrumentation & Data Analysis Lab	2
M E 420 —Heat Transfer	3
P S 101 or P S 102	
—(AI) American Government	4
—(AI) The American Governmental System	3
ENG 306 —(OC) Technical Communication II: Writing & Speaking	3
	Total: 17–18

Senior Year

First Semester

M E 445 —Mechanical Engineering Design I	4
M E 493 —Mechanical Systems and Test Planning Laboratory	2
M E 430 — Thermal Fluid Design	4
Visual and Performing Arts (VP) elective	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
BIO 151 —(LS) Basic Biology I	4
Technical Elective	4
ANT 315 —(FC) Anthropology of Business	3
	Total: 19

TOTAL CREDITS 140–141

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 433.

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. (T)

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. (T)

205. Introduction to Computer-Aided Mechanical Drafting and Design. (I E 205). Cr. 3

Prereq: E T 114. Introduction to CAD systems, hardware and software configurations, and available software systems at the Computer Graphics and Design Laboratory, including MEDUSA, PDGS, DOGS, (TEMPLATE), (ANSYS), and ENPORT. (Y)

220. Thermodynamics I. Cr. 3

Prereq: MAT 202 and PHY 217. 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 and PHY 217. 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)

320. Thermodynamics II. Cr. 3

Prereq: M E 220. Applications of thermodynamics to flow and non-flow situations. Maxwell's relations. Composite properties of state. Irreversibility and availability in the analysis of systems. Combustion calculations. Chemical and phase equilibrium. Properties of mixtures. Energy transfer modes in real systems. Thermodynamic criteria for efficiency. (T)

330. Fluid Mechanics. Cr. 4

Prereq: M E 220, 240, MAT 204. 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. (T)

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. (T)

341. Vibrations I. Cr. 3

Prereq: 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)

345. Manufacturing Processes I. (I E 335). Cr. 3

Prereq: M E 360, MET 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 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. 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; unsymmetrical bending. (T)

420. Heat Transfer. Cr. 3

Prereq: M E 220 and 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 220, 330, 420. 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)

440. Analysis and Control of Dynamic Systems. Cr. 3

Prereq: MAT 235, M E 341. Material fee as indicated in *Schedule of Classes*. 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)

445. Mechanical Engineering Design I. Cr. 4

Prereq: M E 330, 341, 345, 348, ECE 330; coreq: M E 440. 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. (WI) Mechanical Engineering Design II. Cr. 5

Prereq: M E 445, 420, ENG 306. 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. Measurements, Instrumentation and Data Analysis Laboratory. Cr. 2

Prereq: ENG 305, ECE 330, ECE 331, M E 320, M E 330, M E 340, M E 360, and consent of instructor. Student computer account required. Material fee as indicated in *Schedule of Classes*. A laboratory experience in measuring the physical phenomena frequently encountered in the mechanical engineering field using modern instrumentation, transducers, recording methods and information signal processing data. Data analysis techniques and statistical data treatment applied to a variety of tests selected to illustrate mechanical engineering theory and practice. (F,W)

493. Mechanical Systems and Test Planning Laboratory. Cr. 2

Prereq: M E 491, ENG 306, M E 341, 440 and consent of instructor. Student computer account required. Material fee as indicated in *Schedule of Classes*. A laboratory experience in planning and conducting tests on a complete mechanical engineering system. Separate system experiments conducted by the students in the fields of fluids, thermodynamics, dynamics and controls. Classic, analog and parametric test plans used to collect and analyze data and report test results. (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 or variations. 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)

503. Finite Difference Methods in Mechanical Engineering. Cr. 4

Prereq: CHE 304. Student computer account required. Finite difference techniques for the solution of ordinary and partial differential equations in mechanical engineering. Study of problems in steady and transient heat conduction, beam bending and vibrations, elastic stress analysis, plate bending and fluid mechanics. (F)

504. Finite Element Methods I. Cr. 4

Prereq: MAT 204. 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)

510. Engineering Physiology. (ECE 510)(I E 510). Cr. 4

Prereq: ECE 433 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. (F)

516. Biomechanics I. (ECE 516)(I E 516). Cr. 4

Prereq: ME 510 or ECE 510 or I E 510. 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. (B:F)

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)

521. Convective and Radiative Heat Transfer. Cr. 4

Prereq: M E 420. Analysis of heat transfer in forced and free convection, including laminar and turbulent flows. Application of dimensional analysis heat transfer correlation, and numerical methods in convection. Radiation properties of solids. Analysis of radiative transport among surfaces. (F)

524. Industrial Combustion Systems. (CHE 524). Cr. 4

Prereq: M E 420 or CHE 320. Introduction to operating principles and design features of modern boilers, furnaces, gas turbine combustors, and some advanced systems. An intermediate treatment of availability analysis and radiation heat transfer is integrated with energy analysis. Computerized furnace model used for sensitivity analysis and design. (B: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)

531. Topics in Fluid Mechanics. Cr. 4

Prereq: M E 330. Student computer account required. Review of fundamental concepts. Measurements and experimentation techniques. Drag calculations and vehicle aerodynamics, turbomachinery, airfoil theory and fluidics. (W)

533. Applied Polymer Rheology. (CHE 533). Cr. 3

Prereq: M E 330, 360. Flow properties of polymer solutions; methods of measuring fundamental rheological parameters using viscometric devices; the prediction of material properties from theoretical principles. Correlation between theoretical and experimental results. (I)

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)

542. Computer Applications In Mechanical Design. Cr. 4

Prereq: M E 360, 347. Computer-based systems in implementation of engineering design and manufacturing. Use of MEDUSA designer and other comprehensive software systems, locally-developed programs, and those originated by students in the course. (I)

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. Noise measurement techniques and noise reduction methods. (F)

545. Fundamentals of Vehicle Design. Cr. 4

Prereq: senior or graduate standing. Material fee as indicated in *Schedule of Classes*. Design, analysis and synthesis of passenger vehicles and their major subsystems. (I)

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. Fundamentals of Robot and Manipulator Design. Cr. 4

Prereq: senior standing; M E 440. Classification, design and analysis of robots and manipulators and their principal subsystems (structures and drives). Basic kinematics and dynamics of robots/manipulators. Advanced machine elements for robotic applications. (F)

550. Microprocessors for Measurement and Control. Cr. 4

Prereq: M E 440, 491, and CHE 304. Material fee as indicated in *Schedule of Classes*. Introduction to principles of microprocessors and high level languages for programming microprocessors for measurement and control. Typical systems include: DC motor speed, stepping motors, temperature control of mixing process, automatic weighing, etc. (W)

553. Mechanism Design. Cr. 4

Prereq: senior standing. Student computer account required. Kinematics and dynamics of mechanisms including linkages, cams, universal joints, etc. Balancing, synthesis of mechanical systems. Introduction to computer-aided design and computer graphics facilities. (B:W)

555. Modeling and Control of Dynamic Systems. Cr. 4

Prereq: M E 440 or consent of instructor. 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. (F)

557. Analytical Methods in Robots. Cr. 4

Prereq: M E 440. Kinematics of robot manipulators using homogeneous transformations for direct and inverse kinematics. Differential kinematics and manipulator Jacobian determination. Trajectory calculation and static forces. Lagrangian dynamics for manipulator control modeling. Computer manipulation of kinematic and dynamic equations and simulation. (I)

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. (B:F)

566. Introduction to Plates and Shells. Cr. 4

Prereq: M E 360 and senior standing. Material fee as indicated in *Schedule of Classes*. Symmetrical and unsymmetrical bending of circular plates. Bending of rectangular plates. Various approximate methods. Membrane theory of shells of revolution. Bending of cylindrical and spherical shells. Applications to pressure vessels. (B:W)

570. Introduction to Continuum Mechanics I. 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)

571. Introduction to Continuum Mechanics II. Cr. 4

Prereq: M E 570. Material fee as indicated in *Schedule of Classes*. Constitutive equations for nonlinear elastic solids and Newtonian fluids; invariance requirements, objectively equivalent motions, polynomial approximations. Continuum thermodynamics: energy, entropy, heat flux. Clausius–Duhem inequality, equation of state, heat conduction equations. General theorems. (B:W)

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. (B:F)

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. (Y)

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)

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. (Y)

DIVISION of ENGINEERING TECHNOLOGY

Office: 4855 Fourth Street; 577-0800

Director: Mulchand S. Rathod

Professors

Howard M. Hess (Emeritus), Mulchand S. Rathod, Donald V. Stocker (Emeritus)

Associate Professors

Karl O. Anderson, Seymour Cuker (Emeritus), Harry P. Hale (Emeritus), Vladimir Sheyman

Assistant Professors

Gopi R. Jindal, Victor Korolov, Josef Sypniewski, Chih-Ping Yeh

Part-Time Faculty

Magid Amirjalali, John Boyle, Semyon Brayman, Phillip Chams, Kenneth Christensen, Hadi Ershadi, Roger Gay, Leopold Gendelman, Ramatollah Golshan, Charles Loehner, Ahmed Mustafa, Charles Neff, Sandra Overway, J. Jeffrey Pasquinelli, Anthony Slominis, Edward Sturgeon, Mark Zachos

Degree Program

BACHELOR OF SCIENCE in Engineering Technology with majors in Electrical/Electronic Engineering Technology, Electromechanical Engineering Technology, Manufacturing/Industrial Engineering Technology, and Mechanical 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. It stresses the applications of current technology to typical industrial problems. Entering students 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

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

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.

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 129 credits, as outlined in one of the following major programs and including the University General Education requirements (see page 21). 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 at 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 14-39 and 114-119, 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 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.

— With a Major in Electrical/Electronic Engineering Technology

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 145. 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 129 credits as outlined in the following curriculum.

BASIC SCIENCE AND MATHEMATICS credits

CSC 206—(CL) Introduction to FORTRAN	3
MAT 180—(MC) Elementary Functions	4
MAT 343—(ET 343) Applied Calculus I	4
MAT 345—(ET 345) Applied Calculus II	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: 30	

EET TECHNICAL CORE credits

ET 303—Statics	3
ET 385—Reliability and Engineering Statistics	2
ET 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	2
EET 415 —Advanced Network Analysis	2
EET 418 —Analog Electronics II	3
EET 420 —Control Systems	4
E T 499 —(W) Senior Project	3
Total:	32

EET UPPER DIVISION TECHNICAL SPECIALTY ELECTIVES

(W.S.U. resident credit)	9
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LOWER DIVISION TECHNICAL TRANSFER

E T 114 —Engineering Graphics I	2
EET 210 —Principles of Digital Design	3
EET 215 —Introduction to Network Analysis	3
EET 272 —Microprocessor Fundamentals	3
Other	19
Total:	30

COMMUNICATION COURSES

ENG 102 —(BC) Introductory College Writing	4
ENG 301 or ENG 305	
— (IC) Intermediate Writing	3
— (IC) Technical Communication I: Report Writing	3
SPB 101 —(OC) Oral Communication: Basic Speech	2
Total:	9

OTHER GENERAL EDUCATION COURSES

UGE 100 — (GE) The University and its Libraries	1
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
Total:	19

Total minimum semester credits for the EET program	129
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— With a Major in Electromechanical Engineering Technology

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 129 credits as outlined in the following curriculum.

BASIC SCIENCE AND MATHEMATICS credits

CSC 206 —(CL) Introduction to FORTRAN	3
MAT 180 —(MC) Elementary Functions	4
MAT 343 —(E T 343) Applied Calculus I	4
MAT 345 —(E T 345) Applied Calculus II	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:	30

EMT TECHNICAL CORE

E T 214 —Computer Graphics	2
E T 303 —Statics	3
E T 385 —Reliability and Engineering Statistics	2
E T 387 —Engineering Economic Analysis	3
EET 301 —Instrumentation	2
EET 372 —Microprocessor Programming	2
MCT 310 —Mechanics of Materials	4
MIT 351 —Manufacturing Processes	3
E T 499 —(W) Senior Project	3
Total:	24

EMT UPPER DIVISION TECHNICAL SPECIALTY ELECTIVES

(W.S.U. resident credit)	17
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LOWER DIVISION TECHNICAL TRANSFER

E T 114 —Engineering Graphics I	2
E T 220 —Engineering Materials	2
EET 200 —Introduction to Electrical Principles	3
EET 272 —Microprocessor Fundamentals	3
Other	20
Total:	30

COMMUNICATION COURSES

ENG 102 —(BC) Introductory College Writing	4
ENG 301 or ENG 305	
— (IC) Intermediate Writing	3
— (IC) Technical Communication I: Report Writing	3
SPB 101 —(OC) Oral Communication: Basic Speech	2
Total:	9

OTHER GENERAL EDUCATION COURSES

UGE 100 — (GE) The University and its Libraries	1
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
Total:	19

Total minimum semester credits for the EMT program 129

— With a Major in Manufacturing/Industrial Engineering Technology

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 145. 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 129 credits as outlined in the following curriculum.

BASIC SCIENCE AND MATHEMATICS credits

CSC 206 —(CL) Introduction to FORTRAN	3
MAT 180 —(MC) Elementary Functions	4

MAT 343 —(ET 343) Applied Calculus I	4
MAT 345 —(ET 345) Applied Calculus II	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:	30

MIT TECHNICAL CORE

ET 214 —Computer Graphics	2
ET 303 —Statics	3
ET 305 —Dynamics	3
ET 385 —Reliability and Engineering Statistics	2
ET 387 —Engineering Economic Analysis	3
EET 301 —Electrical Instrumentation	2
MCT 310 —Mechanics of Materials	4
MCT 341 —Applied Kinematics	3
MCT 318 or MCT 421	
—Fluid Mechanics	4
—Heat Transfer	4
MIT 360 —Process Engineering	3
MIT 470 —Computer-Aided Design and Manufacturing	3
ET 499 —(WI) Senior Project	3
Total:	35

MIT TECHNICAL SPECIALTY ELECTIVES

(W.S.U. resident credit)	6
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LOWER DIVISION TECHNICAL TRANSFER

ET 114 —Engineering Graphics I	2
ET 220 —Engineering Materials	2
EET 200 —Introduction to Electrical Principles	3
Machining Laboratory	2
Welding Laboratory	2
Other	19
Total:	30

COMMUNICATION COURSES

ENG 102 —(BC) Introductory College Writing	4
ENG 301 or ENG 305	
— (IC) Intermediate Writing	3
— (IC) Technical Communication I: Report Writing	3
SPB 101 —(OC) Oral Communication: Basic Speech	2
Total:	9

OTHER GENERAL EDUCATION COURSES

UGE 100 — (GE) The University and its Libraries	1
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
Total:	19

Total minimum semester credits for the MIT program 129

— With a Major in Mechanical Engineering Technology

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, emissions, experimental and thermal power.

Admission Requirements: see page 145.

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	Mechanical Design
Climate Control	Mechanical Technology
Drafting	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 129 credits as outlined in the following curriculum.

BASIC SCIENCE AND MATHEMATICS

CSC 206—(CL) Introduction to FORTRAN	3
MAT 180—(MC) Elementary Functions	4
MAT 343—(E T 343) Applied Calculus I	4
MAT 345—(E T 345) Applied Calculus II	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:	30

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	2
E T 387—Engineering Economic Analysis	3
EET 301—Electrical Instrumentation	2
MIT 351—Manufacturing Processes	3
MCT 310—Mechanics of Materials	4
MCT 315—Applied Thermodynamics	4
MCT 341—Applied Kinematics	3
E T 499—(W) Senior Project	3
Total:	32

MCT TECHNICAL SPECIALTY ELECTIVES

(W.S.U. resident credit)	6
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LOWER DIVISION TECHNICAL TRANSFER

ET 114—Engineering Graphics I	2
E T 220—Engineering Materials	2
EET 200—Introduction to Electrical Principles	3
Other	23
Total:	30

COMMUNICATION COURSES

ENG 102—(BC) Introductory College Writing	4
ENG 301 or ENG 305	
— (IC) Intermediate Writing	3
— (IC) Technical Communication I: Report Writing	3
SPB 101—(OC) Oral Communication: Basic Speech	2
Total:	9

OTHER GENERAL EDUCATION COURSES

UGE 100—(GE) The University and its Libraries	1
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
Total:	19

Total minimum semester credits for the MCT program 129



ACADEMIC REGULATIONS

For complete information regarding academic rules and regulations of the University, students should consult the General Information section, pages 14–39. 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.

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 Director 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 Director 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 36. 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 years, 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 Director. 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 433.

ENGINEERING TECHNOLOGY (E T)

114. Engineering Graphics I. (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, CSC 206. 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. (T)

220. Engineering Materials. (Lct: 2). Cr. 2

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. (F)

303. Statics. (Lct: 3). Cr. 3

Prereq: MAT 180 and PHY 213. 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. (F,W)

343. (MAT 343) Applied Calculus I. (Lct: 4). Cr. 4

Prereq: MAT 180. No degree credit in College of Liberal Arts. Limits, derivatives, applications of derivatives, definite integrals and their applications, and trigonometric functions. (F,W)

345. (MAT 345) Applied Calculus II. (Lct: 4). Cr. 4

Prereq: E T 343. No degree credit in College of 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: 2). Cr. 2

Prereq: MAT 180. 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)

499. (WI) Senior Project. (Lab: 3; Dsc: 2). Cr. 3

Prereq: passing of English Proficiency Exam, 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. Introduction to Electrical Principles. (Lct: 2; Dsc: 1). Cr. 3

Prereq: MAT 180; prereq. or coreq: PHY 214. For non-electrical majors. 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: 2; Lab: 2). Cr. 3

Applied Boolean algebra and number systems. Logic families, K-mapping; combinational logic, multiplexers and demultiplexers, readouts and displays, flip flops. (T)

215. Introduction to Network Analysis. (Lct: 3). Cr. 3

Prereq. or coreq: MAT 180, PHY 214. Kirchhoff's laws, mesh and nodal analysis, network reduction, voltage and current division, superposition. Thevenin's, Norton's, and Millman's theorems, dependent sources, electric power transmission and efficiency. (F,W)

272. Microprocessor Fundamentals. (Lct: 2; Lab: 2). Cr. 3

Prereq: CSC 206. 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. (F)

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. (W)

315. Network Analysis. (Lct: 3; Lab: 2). Cr. 4

Prereq: EET 215, PHY 214; prereq. or 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. or coreq: EET 315, 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)

372. Microprocessor Programming. (Lct: 1; Lab: 2). Cr. 2

Prereq: EET 272. Material fee as indicated in *Schedule of Classes*. Continuation of EET 272: hardware and software aspects of microprocessor systems; assembly language programming; hardware skills in interfacing and debugging; current application programs. (F)

380. Programmable Controllers. (Lct: 2; Lab: 2). Cr. 3

Prereq: EET 270 or background in robotics. Material fee as indicated in *Schedule of Classes*. Ladder diagrams, relays, programming and interfacing the Modicom, Allen-Bradley controllers for robotics. Intercommunications systems between networks of controllers and machines and/or processes. (B)

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 or coreq: 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. (W)

420. Control Systems. (Lct: 3; Lab: 2). Cr. 4

Prereq: E T 303, EET 200 or EET 315, E T 345. 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. or coreq: 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. Transmission and Propagation of Energy and Signals. (Lct: 3). Cr. 3-4

Prereq: MAT 345; prereq. or coreq: EET 415. 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: 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 415. 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. (I)

472. Microprocessor Interfacing. (Lct: 2; Lab: 2). Cr. 3

Prereq: EET 372. Material fee as indicated in *Schedule of Classes*. A continuation of EET 372 with emphasis on interfacing. Introduction to 16-bit microprocessors. Laboratory and computer programming design projects. (I)

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)

322. Methods Analysis and Time Study. (Lct: 3). Cr. 3

Development of the fundamental concepts and approaches of time and motion study; application of the principles of motion economy. (I)

332. Production and Inventory Management. (Lct: 3). Cr. 3

Prereq: E T 385. Basic production scheduling and inventory management. Production planning, project management, inventory functions, and inventory costs. (B;W)

335. Applied Human Factors. (Lct: 3). Cr. 3

Prereq: PSY 101. Introduction to the physiological and psychological capabilities of man; sensory information processing and motor abilities of man as these factors affect job design. (I)

351. Manufacturing Processes. (Lct: 3). Cr. 3

No credit for MIT students. Comprehensive study of manufacturing processes including casting, forming, machining, welding and fabrication of common materials. (F)

360. Process Engineering. (Lct: 3). Cr. 3

Prereq: CHM 102, E T 220, and machining lab experience. Processing functions. Methods of manufacturing analysis. Manufacturing sequence, mechanization. Selection of tooling and equipment. Planning the process of manufacture. (W)

370. Numerical Control. (Lct: 2; Lab: 2). Cr. 3

Prereq: E T 214, MIT 351. Material fee as indicated in *Schedule of Classes*. Fundamental concept of numerical control as it relates to the machine, the control, the part program. Positioning systems; contouring systems; NC machine design; servo-mechanisms; axis and motion nomenclature; set-up procedures; tape coding and formatting; coordinate coding; feedrate and spindle speed coding; ancillary control system features. (I)

380. 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)

470. Computer-Aided Design and Manufacturing. (Lct: 2; Lab: 2). Cr. 3

Prereq: E T 214, CSC 206, machining lab. 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. (F)

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)

MECHANICAL ENGINEERING TECHNOLOGY (MCT)

310. Mechanics of Materials. (Lct: 3; Lab: 3). Cr. 4

Prereq: E T 303. 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 305. 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. Applied Kinematics. (Lct: 2; Lab: 2). Cr. 3

Prereq: E T 214, E T 305. Velocity and acceleration determination of moving parts in machine elements and mechanisms; graphical and analytical techniques. Cam, gear and gear train design and analysis. (Y)

421. Heat Transfer. (Lct: 3; Lab: 2). Cr. 4

Prereq: MAT 345 and PHY 213. 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)

441. Dynamics of Machinery. (Lct: 3). Cr. 3

Prereq: MCT 341. Static forces in machines; equations of motion; inertia forces and torques; dynamically equivalent systems; flywheels; balancing of rotating and reciprocating machinery; gyroscopic effects; critical speeds. (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)

**COLLEGE OF FINE, PERFORMING
and COMMUNICATION ARTS**

INTERIM DEAN: Richard J. Bilaitis

Foreword

The College of Fine, Performing and Communication Arts conducts instruction, research, performances and presentations in the arts and in the field of communication. It serves the creative and academic interests of a wide range of disciplines and a diverse population of students. Courses and degree programs are offered in studio arts, design and merchandising, and art history; music performance, theory, and music education; dance performance and dance education; technical theatre and theatre performance; and in speech communication, radio-tv-film, journalism and public relations.

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 of Fine, Performing and Communication Arts. A more comprehensive listing can be found under each of the specific departments.

The proximity of the Wayne campus to institutions of the Detroit Cultural Center (i.e., the Detroit Institute of Arts, the Center for Creative Studies, Orchestra Hall, etc.) provides further unique and enriching benefits for students; professional staff members of these institutions often serve as adjunct faculty in the 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.

The undergraduate program of the College is strengthened by the presence of strong graduate programs. Since the professors teaching undergraduate courses are also involved in graduate instruction, the undergraduate student has opportunity to associate and work with more advanced students, which enriches the experience of the undergraduate. Advanced upper level and graduate performance ensembles are an important aspect of practical application available not only to the College of Fine, Performing and Communication Arts students, but to the students of the entire University.

The goals of the College of Fine, Performing and Communication Arts are to provide its students with the skills, knowledge, and understanding necessary for personal and professional artistic success, as well as the willingness to experiment, and the flexibility to change as these students personally and professionally contribute to the quality of life in this society.

DEGREE PROGRAMS

BACHELOR OF ARTS—with majors in

art	music
art history	public relations
design and merchandising	radio-television
film studies	speech communication
journalism	

BACHELOR OF FINE ARTS—with majors in

art	theatre
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BACHELOR OF MUSIC—with majors in

church music	music industry management
composition	music therapy
jazz studies and	performance
contemporary media	theory
music education	

BACHELOR OF SCIENCE—with majors in

dance	design and merchandising
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**MASTER OF ARTS—with majors in*

art	music
art history	radio-television-film
design and	speech communication
merchandising	theatre

**MASTER OF MUSIC—with majors in*

composition	performance
choral conducting	music education
theory	

**MASTER OF SCIENCE—with a major in dance*

**MASTER OF FINE ARTS—with majors in*

art	theatre
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**DOCTOR OF PHILOSOPHY—with majors in*

speech communication	theatre
radio-television-film	

* 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 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 Fine, Performing and Communication Arts and all students who transfer twelve or fewer credits into the College are required to satisfy both the University General Education Requirements and the College of Fine, Performing and Communication Arts Group Requirements.

All students in the College of Fine, Performing and Communication Arts to whom these requirements apply must successfully complete the following:

— Competency Requirements

These requirements for the College are the same as those specified in the University General Education Program, a complete description of which may be found beginning on page 21. Competencies are required in the areas of Written Communication, Mathematics, Oral Communication, Computer Literacy, and Critical Thinking.

— Group Requirements

Group Requirements of the College consist of the group requirements of the University General Education Program, a complete description of which may be found on page 23, modified by the additions and limitations listed below.

NATURAL SCIENCE

Physical Science as specified in the University General Education Program (see page 24). Approved courses include: AST 201; CHM 100, 102, 105, 107, 131; GEL 101; GST 242; HON 423; PHY 101, 102, 104, 213, 217, and 310.

Life Science as specified in the University General Education Program (see page 24). Approved courses include: ANT 211; BIO 103, 105, 151, 161, 220; GST 202; HON 422; NFS 203; PSY 101, 102.

HISTORICAL STUDIES as specified in the University General Education Program (see page 24). Approved courses include: ANT 320; GIS 316; HIS 110, 120, 130, 140, 160, 161, 171, 195, 287, 304, 335, 350, 368, 369; HON 425; HUM 310; N E 368, 369; P S 353.

SOCIAL SCIENCE

American Society and Institutions as specified in the University General Education Program, see page 24. Approved courses include: GSS 151; HIS 103, 105; HON 427; P S 101, 103.

Social Science as specified in the University General Education Program, see page 24. Approved courses include: AFS 221; ANT 210; ECO 100, 101, 102, 180; GEG 110, 313, 320; GSS 271; P S 100, 224; SOC 200, 202, 204, 250, 330, 410; U S 200.

FOREIGN CULTURE as specified in the University General Education Program (see page 24). Approved courses include: ANT 315, 352, 354, 355; ARM 475; CBS 241, 242; FRE 271, 272; GER 271, 272; GIS 341, 343; GRK 371; HIS 244; HON 426; N E 200, 355; NUR 480; P S 271; RUS 351; SOC 355; or completion of any foreign language sequence through 201 or 211.

Foreign Language Requirement: All students pursuing the Bachelor of Arts degree in the College of Fine, Performing and Communication Arts must successfully complete a three-course sequence (with a minimum of four credits in each of the three courses) in a single foreign language. Those continuing the study of a foreign language begun in high school or at another college will be placed at an appropriate level by means of placement examinations administered by the various language departments of the University. The College Foreign Language Requirement will be considered satisfied by those students whose test scores place them beyond the intermediate (third course) level. Approved course sequences include those courses numbered 101, 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 212.

Bilingual Students: The Foreign Language 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 Requirement in this manner will NOT simultaneously fulfill the University General Education Requirement in Foreign Culture.

HUMANITIES

Visual and Performing Arts as specified in the University General Education Program; see page 24. Approved courses include: A H 100, 101, 111, 112; DNC 231; ENG 245, 246; FLM 201, 202; GUH 273; HON 424; HUM 101, 102, 103, 303; MUH 130, 132, 133, 137, 138; THR 101, 103.

Philosophy and Letters as specified in the University General Education Program; see page 25. Approved courses include: CLA 101, 210, 220; ENG 216, 219, 220, 250, 272, 311, 312, 314; FRE 270 (or GER 270; ITA 270; RUS 270; or SPA 270); GUH 271; HON 210, 410; HUM 210, 211, 220, 222; PHI 101, 102, 103, 104, 210, 211, 232, 350, 355, 370; P S 351, 352; RUS 365, 465; SPC 216.

THE UNIVERSITY AND ITS LIBRARIES: election of UGE 100, The University and its Libraries, is a requirement of the University General Education Program (see page 25).

UNIVERSITY REQUIREMENT IN AMERICAN GOVERNMENT for students enrolled prior to Fall Term 1987: See General University Information, page 25.

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 22 and 25.

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 beginning on page 160 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 an overall honor point average of 2.0 ('C').

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.

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.

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: 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'). 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: Advertising Design, Ceramics, Design, Drawing, Fibers, Industrial Design, Interior Design, Metalsmithing, Painting, Photography, Print-making, Sculpture (Bachelor of Fine Arts Degree)

Art: Design and Merchandising—Interior Design, 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 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 Manoogian Hall, if they feel that they have defects which might impair their effectiveness as teachers. A health re-check is required at the time of admission to the College of Education.

Students preparing to teach in dance or music will register in the College of Fine, Performing and Communication Arts for their freshman and sophomore years and enroll in the combined curriculum with the College of Education at the beginning of their junior year. During the first two years, they will see the departmental advisers for general counseling. Application for entrance to the College of Education should be submitted after the completion of fifty-three credits in course work.

— Combined Curriculum for Music, Dance and Communication Majors

This curriculum leads to a bachelor's degree and a Michigan Secondary Provisional Certificate.

The Combined Curriculum for Secondary Teaching is offered in cooperation with the College of Education and prepares the student for a teaching major in grades K–12 (music, dance) and 7–12 (speech) and a teaching minor in grades 7–12. In this curriculum the student takes the first two years of work in the College of Fine, Performing and Communication Arts. Courses in the third and fourth years are taken concurrently in Education and Fine, Performing and Communication Arts. Students interested in this program should consult a departmental academic adviser who will supply a curriculum outline.

Degree in the College of Fine, Performing and Communication Arts: The student will remain registered in the College of Fine, Performing and Communication Arts and officially elects a departmental major at the beginning of the junior year. The student

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 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

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 156.)

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 38.

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.



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 14.

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 274.

Students enrolled in the College of Fine, Performing and Communication Arts who are interested in pursuing a University Honors degree should refer to page 32 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 38.)

Academic Probation

Low Honor Point Average: If a student's work averages below 2.0 the student will be placed on academic probation. If a serious honor point deficiency is incurred, the student may 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 is able to give some assurance that the previous causes of failure will not be operative on the proposed program.

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 University Advising Center and with a departmental adviser in order to register. Students on 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 Probation: Academic probation will be removed at the end of any term in which the student achieves an over-all average of 'C' or better for all degree work taken at the University.

Exclusion

Low Honor Point Average: A student on academic probation who incurs a serious deficiency or fails to raise an honor point average within a reasonable length of time, may be excluded from the College. Such an exclusion will be reviewed by the Probation Committee of the University Advising Center and the Dean upon the request of the student.

Lack of Progress: After having conferred with the University Advising Center, non-progressing students who continue to fail to make progress towards a degree may be excluded from the College.

Readmission: After one year of exclusion, the student may apply for readmission to the College. The decision to readmit 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, 3 West, 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.

DIRECTORY OF THE COLLEGE

Interim Dean

Richard J. Bilaitis 5104 Gullen Mall; 577-5342

Acting Assistant Dean

Larry D. Miller 5104 Gullen Mall; 577-5747

Assistant Dean

Joan M. Ferguson 5104 Gullen Mall; 577-5362

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

Departmental Offices

Art and Art History

Jeffrey Abt 150 Art Building; 577-2980

Communication

Jack Kay 585 Manoogian Hall; 577-2943

Dance

Georgia Reid 125 Matthaei Building; 577-4273

Music

Peter J. Schoenbach 105 Schaver Music Building; 577-1795

Theatre

Robert T. Hazzard 95 W. Hancock; 577-3508

Mailing address for all offices:

(Department Name),
College of Fine, Performing and Communication Arts,
Wayne State University,
5980 Cass Avenue,
Detroit, MI 48202

ART and ART HISTORY

Office: 150 Art Building, 450 Reuther Mall; 577-2980

Chairperson: Jeffrey Abt

Associate Chairperson: Carolyn J. Hooper

Academic Services Officers: Agnes Aoki, John Slick

Professors

William A. Allen (Emeritus), Mary Jane Bigler (Emerita), Richard J. Bilaitis, Robert Broner (Emeritus), Olga Constantine, Phillip G. Fike, Peter J. Gilleran (Emeritus), Bernard M. Goldman (Emeritus), Joseph Gutmann (Emeritus), John G. Hegarty, David A. Mitchell (Emeritus), James Nawara, Louise J. Nobili (Emerita), Thomas C. Parish, William E. Pitney (Emeritus), Patricia A. Quinlan, G. Alden Smith (Emeritus), Horst Uhr, Robert J. Wilbert, William T. Woodward (Emeritus)

Associate Professors

Jeffrey Abt, Phyllis A. Ashinger, Thomas P. Fitzgerald, Urban Jupena, Robert J. Martin, John C. Mills, James M. Raymo, Melvin Rosas, Stanley L. Rosenthal, Jeanne Galloway Stiller, Joseph B. Zajac, Marilyn Zimmerman

Assistant Professors

Pamela DeLaura, Carolyn J. Hooper, Brian Madigan, Janice Mann (Visiting), Mary Jo McNamara, Judith Moldenhauer (Visiting), Peter Williams

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: advertising design, ceramics, design, drawing, fibers, 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: advertising design, ceramics, design, drawing, fibers, 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 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

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 14.

DEGREE REQUIREMENTS: Candidates for the Bachelor of Arts in Art must complete 120 credits including satisfaction of the University General Education Requirements (see page 21), as well as the Group Requirements of the College (see page 155), and forty-eight credits in art courses, including the Core Requirements and Departmental Requirements cited below. Students pursuing a bachelor of arts degree must also fulfill the foreign language requirement (see page 155). 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 14.

DEGREE REQUIREMENTS: Candidates must complete 120 credits, including satisfaction of the University General Education Requirements (see page 21), as well as the Group Requirements of the College (see page 155) and the major requirements listed below. Students pursuing a bachelor of arts degree must also fulfill the foreign language requirement (see page 155). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 14-39 and 155-159, 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 202-207.

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

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

509. 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 and French are 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 14.

DEGREE REQUIREMENTS: Candidates for the Bachelor of Arts degree must complete 120 credits including satisfaction of the University General Education requirements (see page 21), as well as the Group Requirements of the College (see page 155) and all departmental and area requirements as indicated below. Students pursuing a bachelor of arts degree must also fulfill the foreign language requirement (see page 155). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 14–39 and 155–159, 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	4
AFA 543 — History of Costume	3
AFA 685 — (WI) Seminar	2

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 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 14.

DEGREE REQUIREMENTS: Candidates for the Bachelor of Science degree must complete 120 credits including satisfaction of the University General Education requirements (see page 21), as well as the Group Requirements of the College (see page 155) and all departmental and area requirements as indicated below. 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 14–39 and 155–159, 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	credits
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 685 — (WI) Seminar	2

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 14.

DEGREE REQUIREMENTS: Candidates for the Bachelor of Fine Arts degree must complete 120 credits including satisfaction of the University General Education Requirements (see page 21), as well as the Group Requirements of the College (see page 155). 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 14–39 and 155–159, 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. Curriculum outlines with suggested scheduling patterns for the following fields of concentration are available in the Department of Art and Art History office:

- | | |
|-----------------------|--------------------|
| a. Advertising Design | g. Interior Design |
| b. Ceramics | h. Metal Arts |
| c. Design | i. Painting |
| d. Drawing | j. Photography |
| e. Fibers | k. Printmaking |
| f. Industrial Design | l. Sculpture |

Required courses in each B.F.A. concentration are given below; exceptions may be made with consent of adviser.

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; and a minimum of twelve resident credits with an art history major.

ADVERTISING DESIGN

credits

AGD 225—Advertising Design I	3
AGD 325—Intermediate Advertising Design	3
AGD 525—Advanced Advertising Design	12
AGD 589—Directed Projects: Advertising Design	6

CERAMICS

ACR 255—Ceramics and Pottery Design I*	3
ACR 256—Ceramics and Pottery Design II*	3
ACR 355—Beginning Ceramics	3
ACR 455—Intermediate Ceramics	3
ACR 555—Advanced Ceramics	12

DESIGN

ADE 220—Design III: Three-Dimensional	3
ADE 522—Art Processes: Computer Art	3
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—Still Life and Landscape Drawing	3
Drawing Electives	12

FIBERS

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

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	3
AIA 161—Drafting and Perspective	3
AIA 260—Interior Concepts	3
AIA 261—Beginning Interiors Studio	3
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

* Students who have completed first year core program may start with ACR 355/455, and repeat ACR 555.

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

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

The following scholarship funds are available for undergraduate students: Talent Award Scholarships, for entering students, renewable for up to four years of full-time study by students in good standing; Mary Kirk Haggerty Memorial Scholarship, for students in art history; Marji Kunz Fashion Scholarship, for students in the fashion field; John and Irene Sowinski Scholarships, for students in all areas of the studio arts; Albert I. and Alice W. Steinbach Scholarships, for students in art history. In addition, alumni and other private donors make scholarship funds available to the Department for undergraduate student support on an annual basis. Detailed information on all Department scholarships and awards is available in the Art and Art History office.

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 433.

Only courses passed with a minimum grade of 'C' will satisfy prerequisite requirements for subsequent courses in the Department of Art and Art History.

ADVERTISING DESIGN (AGD)

225. Advertising Design I. Cr. 3

Prereq: ADR 106, ADE 121. Material fee as indicated in *Schedule of Classes*. Introduction to lettering, type and commercial graphic processes. Development of layout concepts, drawing, design, photostat and proof press usage. (F,W)

325. Intermediate Advertising Design. (AGD 525)(AGD 725). Cr. 3

Prereq: AGD 225. Material fee as indicated in *Schedule of Classes*. Layout development and introduction to camera-ready design procedures. Essential concepts of commercial graphic design techniques. (F,W)

525. (AGD 325) Advanced Advertising Design. (AGD 725). Cr. 3-6(Max. 18)

Prereq: AGD 325. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Advanced projects, layout practice, introduction to view camera used in layout, commercial graphic films. Term project development. Commercial illustration. (F,W)

589. Directed Projects: Advertising Design. Cr. 3-6(Undergrad. max. 15; grad. max. 30)

Prereq: written consent of instructor. Individual problems. (F,W)

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)

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)

221. Applied Design Concepts. Cr. 3

Prereq: ADE 121, ADR 106. Material fee as indicated in *Schedule of Classes*. Concepts and projects pertinent to industrial design, graphic design, and interior architecture; course is in three equal units in

applied design specialty areas, each taught by a specialist in the discipline. (Y)

522. Art Processes: Computer Art. Cr. 3-6(Max. 9)

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)

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. (ADR 307). 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. (ADR 207) 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. (ADR 707). 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. Still Life and Landscape Drawing. Cr. 3-6(Max. 12)

Prereq: ADR 106. Election of more than 3 credits per semester requires consent of instructor. Exploration of still life and landscape subject matter through observation and imagination using various media. Emphasis on work done out-of-doors at various locations. (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. 4

Psychological, economic considerations. Terminology and structure of apparel trades and career opportunities. Field trips. (F,W)

347. Merchandise Information. Cr. 4

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)

491. Workshop. Cr. 2-4(Max. 8)

Application of theoretical principles to selected area of family and consumer resources. Topics and prerequisites to be announced in *Schedule of Classes*. (Y)

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: eight credits in marketing. 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)

642. Advanced Problems in Apparel Design and Construction. Cr. 3

Prereq: AFA 542, 544 and 545. Individual problems in advanced design and construction. (I)

643. History of Textiles. Cr. 3

Prereq: AFA 241. Material fee as indicated in *Schedule of Classes*. Study of major historical, decorative textiles and their construction techniques. (I)

685. Seminar. Cr. 2
Topics to be announced in *Schedule of Classes*. (F,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. (AFI 365)(AFI 565)(AFI 765). 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. (AFI 366)(AFI 566)(AFI 766). 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. (AFI 265) 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. (AFI 266) 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 265) Weaving: Senior Project. (AFI 365)(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 266) Fibers: Senior Project. (AFI 366)(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)

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. Material fee as indicated in *Schedule of Classes*. 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)

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. Material fee as indicated in *Schedule of Classes*. Professional techniques in wet and dry media. Full size tape drawings and renderings. Sketch techniques in black and white and color. (F,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 106 and former ART 231 or equiv. Material fee as indicated in *Schedule of Classes*. Introduction to the basic studio tools and techniques of the architectural profession. Basic architectural drafting and dimensioning, linework and lettering. Mechanical construction of one- and two-point perspective chart and other sketch methods. (F,W)

260. Interior Concepts. Cr. 3

Functional, aesthetic, and psychological aspects of residential interiors. Problems involving space planning and furniture layout. (F)

261. Beginning Interiors Studio. 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. (F)

361. Small Scale Design Studio. Cr. 3

Prereq: AIA 261 and ADE 121. 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. Theories in Environmental Design. Cr. 3

Prereq: AIA 261. Theories of proxemics and anthropometrics, human factors, thermal conditions, color and light as they effect human comfort and performance. (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. Survey of Construction Technology. Cr. 3

Prereq: junior standing in interior design concentration. Material fee as indicated in *Schedule of Classes*. Introduction to modern structural, air conditioning, plumbing, electrical and acoustical engineering principles as applied to architectural interiors. Designer-engineer relationships. (Y)

563. Interior Lighting Design. Cr. 3

Prereq: junior standing in interior design concentration. Light sources, fixtures, selection and application in architectural interiors; energy efficiency, comfort, basic calculations. (F)

564. Interiors Construction Drawing. Cr. 3

Prereq: junior standing in interior design concentration. Material fee as indicated in *Schedule of Classes*. Preparation of detailed architectural working drawings for interior spaces. (W)

566. Supervised Field Experience. Cr. 2-4

Prereq: written consent of instructor. Supervised field experience designed to correlate classroom theory with practical work. (F,W)

591. Directed Projects: Interior Architecture. Cr. 3-6(Max. 9)

Prereq: written consent of instructor. Individual problems. (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. Interiors: Business Principles and Practices. Cr. 2

Prereq: senior or graduate standing. Examination of different types of business formations and their characteristics; professional practices and procedures; ethical behavior, legal and insurance aspects. (W)

685. Senior Seminar: Contemporary Designers. Cr. 2

Prereq: consent of instructor. Topics to be announced in *Schedule of Classes*. (F,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)

251. Relief and Collograph Printmaking. (APR 351). Cr. 3

Prereq: ADR 106 and ADE 121. Material fee as indicated in *Schedule of Classes*. Traditional relief methods: woodcut, wood engraving, linocut and basic techniques of collage printmaking. (T)

269. Papermaking. (APR 569). Cr. 3

Prereq: ADR 106 and ADE 121. Material fee as indicated in *Schedule of Classes*. Introduction to hand-made paper. Basic techniques of both sheet and free-formed paper. (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. (APR 251) Advanced Relief/Collograph Printmaking.
Cr. 3-6(Max. 15)

Prereq: APR 251. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Advanced problems in relief or collograph. Media and course content offered on alternating schedule by terms. (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. Advanced Relief Printmaking. 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)

553. The Handmade Book. (APR 753). Cr. 3 (Max. 12)

Material fee as indicated in *Schedule of Classes*. Introduction to the fundamentals of the handmade book: binding, paper selection, typesetting, construction. Designing and producing handmade books incorporating original artwork. Exploring various types of book design. (Y)

569. (APR 269) Advanced Papermaking. Cr. 3-6(Max. 9)

Prereq: APR 269. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Advanced problems involving coloring, sheet making, sizing and sculptural use of the medium. (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. (ASL 316)(ASL 516)
(ASL 616)(ASL 716). 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. (ASL 215) 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 215) Advanced Sculpture: Non-Figurative.
(ASL 316)(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 215) Non-Figurative Sculpture. (ASL 316)
(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 COURSE (ACS)

593. (W) Writing Intensive Course in Art. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: AFA 685, and upper division courses in Art and Art History. 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)

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. (VP) 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)

203. The Sculptural Tradition. Cr. 3

A historical survey of sculptural form from paleolithic times to the present. (I)

301. Art in the United States. Cr. 3

Works by major American artists, architects and artisans from colonial times to the present. Works are examined both as reflections of the aesthetic interests of their times and as cultural-historical documents. (Y)

310. Biblical Archaeology. Cr. 3

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)

343. Greek and Roman Art. Cr. 3

Prereq: A H 111, 112. Major developments in form and meaning of painting, sculpture and architecture from the beginning of Greek

culture (c. 900 B.C.) through the end of pagan Rome (c. 330 A.D.); how these works function within religious, social and historical contexts. (I)

370. Modern Art: Nineteenth and Twentieth Centuries. Cr. 3
Prereq: A H 112; or coreq: 112 with consent of instructor. 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.

507. Art and Archeology of Ancient Egypt. Cr. 3
An introduction to the history and development of Egyptian artistic style in architecture, sculpture, painting and the applied arts; historical, social and religious background. (I)

509. (WI) Art Historical Theory and Methods. Cr. 3
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
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
Sculpture and painting in the Hellenistic kingdom and in Republic and Imperial Rome. (I)

522. Ancient Greek and Roman Architecture. Cr. 3
Development of structural and ornamental traditions for various building types. Design and landscaping of cities and sanctuaries. (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
The evolution of Christian imagery. (B)

531. The Ancient City of Athens. Cr. 3
The history of Athens as an urban center in antiquity. Public monuments, buildings and landscape as reflecting the city's aspirations and fortunes. (I)

532. The Classical Tradition In Architecture. Cr. 3
Architecture inspired by classical antiquity in renaissance Italy, baroque England, and colonial and federal America. (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
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)

548. The Illuminated Book. Cr. 3
The pivotal role of the illustrated Christian manuscript from antiquity to the printed book. (B)

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
Major styles, developments and masters. (B)

571. Trends in Nineteenth Century Art. Cr. 3
Topics to be announced in *Schedule of Classes*. (B)

572. Twentieth Century Art. Cr. 3
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 112 or consent of instructor. American painting, sculpture and architecture from its earliest appearance in Colonial times to the Armory Show of 1913. (Y)

574. Surrealism. Cr. 3
Literary and artistic history of these movements; their development in Germany, France and America. (B)

575. Contemporary American Art. Cr. 3
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)

582. Precolumbian Art of South and Central America. Cr. 3
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. History of Museums. Cr. 3
Prereq: A H 111 and 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

Open only to art history majors. Supervised advanced reading and research in the history of art. (F,W)

593. (WI) Writing Intensive Course in Art. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; writing sample, A H 111, 112, and one other A H 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)

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)

670. Nineteenth Century German Painting. Cr. 3

Winkelmann, Goethe, Mengs; Novalis and Schelling; Friedrich and Runge; the Nazarenes and the revival of panel and fresco painting; the 'German Romantics,' Feuerbach, Bocklin, von Mares; Liebermann, Slevogt and Corinth. (B)

693. Studies in Museum Theory and Criticism. Cr. 3-6

Prereq: minimum nine credits in A H 500-level or above courses; A H 589. 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: written consent of director of museology program. Open only to art history majors. History of public collections in Europe and the United States; introduction to museum administration and management. (Y)



COMMUNICATION

Office: 585 Manoogian Hall; 577-2943

Chairman: Jack Kay

Academic Services Officer: Victoria Dallas

Professors

Bernard I. Brock, Jack Kay, Edward J. Pappas, Raymond S. Ross (Emeritus), George W. Ziegelmueller

Associate Professors

William A. Boyce, J. Daniel Logan (Emeritus), James S. Measell, Larry D. Miller, Matthew W. Seeger, Lawrence Silverman (Emeritus), John W. Spalding, Jack W. Warfield (Emeritus)

Assistant Professors

Mark McPhail, Murali Nair, Robert Steele, Richard A. Wright

Lecturers

John Buckstaff, Sue Carter, Anita Lienert, Shawn McGee, Ruth Seymour

Degree Programs

BACHELOR OF ARTS with a major in speech communication

BACHELOR OF ARTS with a major in journalism

BACHELOR OF ARTS with a major in public relations

BACHELOR OF ARTS with a major in radio-television

**MASTER OF ARTS with a major in communication and emphases in: public relations and organizational communication; radio-television-film; oral interpretation; speech communication education; or general speech communication.*

**DOCTOR OF PHILOSOPHY with a major in speech communication and emphases in: speech communication; or radio-television.*

The primary aim of this department is to assist students in developing the ability to communicate effectively. 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, contest reading and speaking, group reading programs, and the University Readers' Bureau. 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—Oral Communication: Basic Speech—is designed for those who wish to improve their general communicative ability. 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.

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

Bachelor of Arts Degrees

Admission Requirements are satisfied by the general requirements for undergraduate admission to the University; see page 14.

DEGREE REQUIREMENTS: Candidates for the Bachelor's degree must complete 120 credits of course work including satisfaction of the College Group Requirements (see page 155) and the University General Education Requirements (see page 21), 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 14–39 and 155–159, 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.

— With a Major in Speech Communication

The following specializations lead to the degree of Bachelor of Arts with a Major in Speech Communication.

1. General Speech Communication: Advisers in this specialization will develop programs for students in various areas related to speech communication, such as pre-law, pre-theology, and other special interests. Undergraduate majors in this specialization must elect: SPB 101, SPC 210 or SPC 211, SPO 204 and SPO 250.

A minimum of thirty credits is required for the major in addition to the twelve required credits above. Additional credits should be elected in consultation with an adviser to reflect a broad general knowledge in all areas of the discipline. Direct inquiries to 585 Manoogian Hall (577–2943).

2. Speech Communication Education: Undergraduate majors in this specialization must elect: SPB 101, SPC 210, SPC 211, SPC 321, SPO 204, SPO 250, SPR 201 and SPR 540.

A minimum of fifteen credits, in addition to the twenty-seven credits outlined above, is required for the major. It is recommended that course work be elected from among the following in consultation with an adviser in the area: CDS 530; SPC 216, 219, 220, 504, 520; SPE 606, SPE 607; THR 101 or THR 104.

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. Direct inquiries to 585 Manoogian Hall (577–2943).

3. Oral Interpretation (SPO): Undergraduate majors in this specialization must elect: SPB 101, SPC 210 or SPC 211, SPO 204, SPO 250 plus one additional course in another area of the department.

A minimum of thirty credits is required for this major. In addition to the 15–16 credits outlined above, courses should be elected from the following in consultation with an adviser: SPO 505, SPO 555, SPO 556, SPO 558, SPO 559 and SPO 656.

Majors combining oral interpretation and theatre should consult early with an adviser to assure that a balanced program in both disciplines is achieved. Theatre courses may be elected, in consultation with an adviser, in performance (acting and directing), production (scene and costume design), and/or dramatic literature. Other oral interpretation combinations are possible in communication theory, rhetoric, broadcasting or film studies. Direct inquiries to 585 Manoogian Hall (577–2943).

— 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 210, SPJ 321, SPJ 400, SPJ 446, SPJ 500, and SPJ 502. Students must take an additional five 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 Manoogian, Detroit, MI 48202; telephone: (313) 577–2627.

Journalism Undergraduate Scholarship and Loan Fund: Journalism majors are eligible for scholarships, including the W. Sprague Holden Memorial Scholarship and the George M. and Mable Slocum Foundation Scholarship. An interest-free fund, established in memory of Arthur Dorazio (1965), former executive news editor of the *Detroit Free Press* and Associate Professor of journalism at Wayne State University, is available. Applicants should apply at the Journalism Office, 199 Manoogian.

— 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: In addition to the Public Relations core courses—SPC 317, Fundamentals of Public Relations and SPC 516, Communication and Public Relations—the following courses are required: SPJ 210, 321, 521; SPC 210, 216, 321, 325; SPR 201, 421.

Recommended electives include an internship (SPJ 400 or SPC 619), as well as courses in Journalism (SPJ 200, 228, and 446) and Speech Communication (SPC 220, 520, 521). An adviser should be consulted early in the student's program. Direct inquiries to 531 Manoogian Hall (577–2946).

— With a Major in Radio and Television

Undergraduate majors in this program must elect SPR 201, 211, 301, 421, 531, 540, 541 and 551. 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 the Film Studies entry in this Bulletin.

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 491, SPB 590, SPR 551, 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 551 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 274). 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 Oral Interpretation: A minor in this area requires: SPO 204, 250, and an additional 9–12 credits in electives in oral interpretation.

Minor in Journalism: A minor in this area requires: SPJ 210, 321, 500, 502 and an additional 6–8 credits elected from among the following courses: SPJ 228, 322, 341, 400, 446, 470, 521 or 525.

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, 531, 540, 541 or 551.

Minor in Public Relations: A minor in this area requires: SPC 216, 317 and 325; SPJ 210 and 321; SPR 201.

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 433.

BASIC SPEECH (SPB)

101. (OC) Oral Communication: Basic Speech. Cr. 2–3

No student will be admitted after the third meeting of class. 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)

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)

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)

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)

593. (WI) Writing Intensive Course in Communication. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: SPC 321, SPJ 446, or 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)

COMMUNICATION, RHETORIC and PUBLIC ADDRESS (SPC)

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. (PL) Contemporary Persuasive Campaigns and Movements. Cr. 4 (Max. 8)

Rhetorical analysis of techniques utilized in specific campaigns and movements. Political campaigns and/or social movements offered in fall semester; advertising and consumerism offered in winter semester. (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)

310. Business and Professional Speaking. 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 and parliamentary procedure. (Y)

317. (CL) Fundamentals of Public Relations. Cr. 4

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. Communication: Concepts and Contexts. Cr. 4

Survey of theory and research in communication with attention to a variety of communication 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)

503. Communication Ethics. Cr. 3

Issues of responsible communication in a variety of contexts including mass, organizational, and interpersonal communication. (B)

504. Communication in the Black Community. (S E 537) (LIN 504). Cr. 3

Sociolinguistic and rhetorical analysis of speech and language behavior among Afro-Americans; linguistic history and development of black English. Related issues concerning the education of black children. (Y)

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)

516. Communication and Public Relations. Cr. 3

Prereq: SPC 317 or graduate standing. Overview of selected topics in communication as applicable to current practices and 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. (Y)

520. Group Communication and Human Interaction. Cr. 3

No Ph.D. credit in communication and rhetorical processes. 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)

611. Argument and Controversy. Cr. 3

Prereq: SPC 210 or 211 or graduate standing. Advanced studies in argumentation, including the structure of reasoning, the organization of arguments, strategies of argument, and the nature of proof. (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)

SPEECH EDUCATION (SPE)

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)

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 221 and 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: FLM 201, FLM 202. 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. 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. Material fee as indicated in *Schedule of Classes*. Theory and application of various forms and styles of film animation. (B)

JOURNALISM (SPJ)

200. Contemporary American Press. Cr. 3

Survey of issues facing newspapers and magazines today. (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

Prereq: access to 35mm camera. A grade of C or better is required to elect additional coursework in journalism. Theories and problems of news photography. Camera and darkroom techniques, news event coverage, picture stories and photo essays for newspapers and magazines. Students must have their own cameras and must develop and print their own photos. 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)

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)

446. Magazine and Feature Writing. Cr. 4

Prereq: SPJ 210. Preparation of feature material and non-fiction articles for magazines and newspapers; the market for the free-lance writer. Journalism skills course. (Y)

470. Public Affairs Reporting. Cr. 4

Prereq: SPJ 210. Writing complex news stories. Coverage of legislative, judicial, and executive branches of government at city, county, state and federal levels. Journalism skills course. (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)

500. History of American Journalism. Cr. 3

Prereq: one course in American history. Development of the American press from colonial times to the present. (T)

502. Law of the Press. Cr. 3

Prereq: junior or senior standing. Libel, invasion of privacy, contempt of court, copyright, pornography and obscenity. Laws affecting newspapers and other mass media as businesses. (T)

505. Computer Graphics and Typography. Cr. 3

Prereq: SPJ 210, 321. Newspaper and other print media graphics using computers; use of various popular PC programs on Macintosh computers; type selection and preparation for publishing. (T)

521. Newsletters and Corporate Publications. Cr. 3

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. News Management. Cr. 4

Prereq: SPJ 210, 321. Theory and practice of newsroom management; how to supervise; how to hire and direct news staffs. (Y)

530. Publishing. Cr. 3

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 310 with grade of C or better. Advanced reporting techniques involving extensive use of public records and development of news sources; reporting in an adversarial situation; use of investigative techniques. (I)

ORAL INTERPRETATION (SPO)

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)

250. Beginning Oral Interpretation. 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)

505. Advanced Voice and Articulation. Cr. 3

Prereq: SPO 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)

550. Advanced Oral Interpretation. Cr. 3

Prereq: SPO 250 or equiv. Study of prosody systems and analysis of forms of poetry; study of scene, role and gesture as elements of point of view in prose fiction. Application of oral performance techniques through consideration of theories of oral interpretation and literature. (I)

555. Performance Workshop. Cr. 1-2 (Max. 4)

Prereq: SPO 250 or equiv. Workshop in conjunction with oral interpretation activities: festivals, contests, public performances such as Interpreters Theatre productions and Readers' Bureau programs. (B)

556. Oral Interpretation of Shakespeare. Cr. 3 (Max. 6)

Prereq: SPO 250 or equiv. Analysis and performance of Shakespeare's plays and poetry. (B)

558. Interpreters Theatre. Cr. 3

Prereq: SPO 250 or equiv. Theory and practice of theatres of oral interpretation: readers theatre, chamber theatre, choral reading, and multiple interpretation. Directing experience and participation for beginning and advanced students in theatre of the mind. (B)

559. The Art of Storytelling. Cr. 3

Prereq: SPO 250 or equiv. Analysis and performance of types of oral literature, with study of interrelationships between storyteller and audience. (B)

656. Oral Interpretation in the Social Context. Cr. 3
Prereq: SPO 250 or equiv. Oral interpretation in the social context. Sociological, psychological, educational and aesthetic considerations of program planning in the community using oral history and literature. Problems in audience analysis, collection and choice of materials, adaptation, rehearsal and presentation of materials. (B)

RADIO and TELEVISION (SPR)

201. Survey of Mass Communications. Cr. 4
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)
Practical experience in workshop projects. (T)

301. Mass Media Analysis and Criticism. Cr. 4
Prereq: sophomore standing or above. 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 201 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)

521. Advanced Radio-Television-Film Writing. Cr. 3(Max. 6)
Prereq: SPR 221; junior standing or above. Principles and practice in creating the full-length dramatic or documentary script for broadcast or film production. (Y)

531. Radio Production. Cr. 4
Prereq: SPR 211 and 421. Material fee as indicated in *Schedule of Classes*. Theory and practice in broadcast production techniques and experimentation with creative audio production. (T)

540. Techniques of Film/Video Production. (SPF 540). Cr. 4
Prereq: SPR 421. Material fee as indicated in *Schedule of Classes*. Experience with the preparation, shooting and editing of video projects in film-style production. (T)

541. Television Production. Cr. 4
Prereq: SPR 211 and 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)

542. Director's Workshop. Cr. 4
Prereq: SPR 540; production-ready script; written 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)

551. Mass Communications and Society. Cr. 3
Prereq: junior standing or above. Theoretical and practical research on the social functions and effects of the mass media. (T)

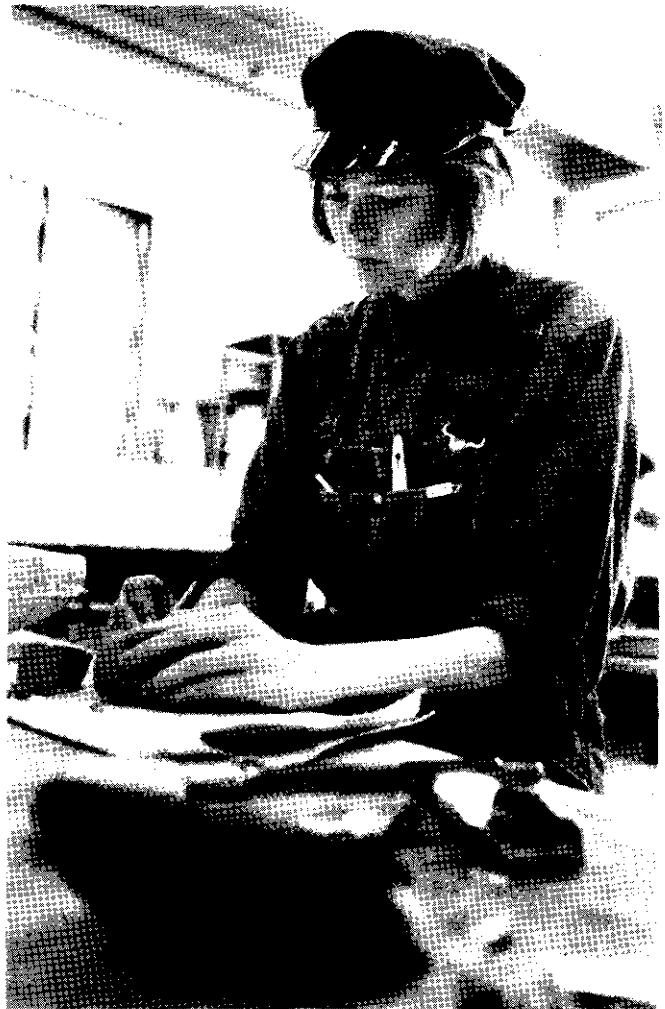
553. Audience Measurement and Survey Techniques. Cr. 3
Prereq: SPR 201; junior standing or above. Theory and application of quantitative research techniques in surveying audiences for electronic media. (B)

555. Electronic Media Management. Cr. 3
Prereq: SPR 201; 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)

667. Internships in Radio-Television-Film. Cr. 1-4(Max. 8)
Prereq: senior or graduate standing and written consent of instructor. (T)

668. Individual Projects in Radio-Television-Film. Cr. 3 (Max. 6)
Prereq: senior or graduate standing and written consent of instructor. (T)



DANCE

Office: 125 Matthaei Building; 577-4273

Chairperson: Georgia Reid

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

**MASTER 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, and movement analysis and dance education.

Admissions Requirements include the general requirements for undergraduate admission to the University (see page 14) 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 and the Group Requirements of the College of Fine, Performing and Communication Arts (see page 155); as well as the University General Education Requirements (see page 21) 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 14-39 and 155-159, respectively. Company members are required to take a technique class five days per week. Fifty-three 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 —Historical Perspectives of Dance	3
DNC 241 —Music and Dance Relationships	2
DNC 311 —Ethnic Dance Forms	2
DNC 331 —Dance Production	2
DNC 398 —Assisting in Dance	1
DNC 401 —Technique Laboratory II	8
DNC 455 —Choreography I	3
DNC 460 —Improvisation	2
DNC 481 —Methods in Modern Dance & Ballet	3
DNC 541 —Dance Notation I	2
DNC 555 —Choreography II	3
DNC 556 —Choreography III	3
DNC 561 —Dance Company I **	1
DNC 571 —Workshop in Modern Dance	2
DNC 580 —Repertory	2
DNC 581 —Creative Dance for Children	3
DNC 582 —Creative Dance Movement for the Pre-School Child	3
DNC 593 —(W) Writing Intensive Course in Dance	0

Cognate Requirements

BIO 287 —Anatomy and Physiology	5
P E 358 —Kinesiology	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 II	4
DNC 221 —Intermediate Ballet	2
DNC 231 —(VP) Historical Perspectives of Dance	3
DNC 311 —Ethnic Dance Forms	2
DNC 401 —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 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.

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

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 433.

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)
- 111. International Folk Dances I. Cr. 1(Max. 4)**
Introduction to the style and form of folk dances. (F)
- 121. Fundamentals of Classic Ballet I. Cr. 1(Max. 4)**
Fundamental techniques of classic ballet; emphasis on analysis, proper execution. (T)
- 122. Fundamentals of Classic Ballet II. Cr. 1-2(Max. 6)**
Prereq: DNC 121 or equiv. Continuation of DNC 121. (T)
- 131. Jazz I. Cr. 1 (Max. 4)**
Beginning jazz dance technique with emphasis on alignment, movement isolation, rhythmic awareness, and basic dance vocabulary. (F)
- 132. Jazz II. Cr. 2 (Max. 4)**
Prereq: DNC 131, consent of instructor. Continuation of DNC 131 on a more advanced level. (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)
- 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. Ethnic Dance Forms. Cr. 2**
Folk and ethnic dance, and dance styles of selected historical periods; their development from the ritual matrix into recreational forms. Continued investigation of folk dances of increasing complexity. (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 repatterning, 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. 2**
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. (B)
- 382. (P E 341) Physical Education for Elementary School Children I. (DNE 382). Cr. 3**
Prereq: admission to senior college. A movement education approach which focuses on beginning movement concepts and skills utilized in teaching games, gymnastics and 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 more advanced movement and aesthetic concepts and skills. Investigation of individualized approaches which use movement themes, traditional dances, sport forms, and creative work in games, gymnastics and dance. (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 II. 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)
- 460. Improvisation. Cr. 2**
Prereq: DNC 102. Spontaneous movement exploration in response to a variety of stimuli: literal, visual, kinesthetic, auditory, verbal or tactile. (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)
- 542. Dance Notation II. Cr. 2**
Prereq: DNC 541 or equiv. Continuation of DNC 541. (B:W)
- 544. Music and Dance in the Music Class I. (TED 544) (MED 554). Cr. 2**
Exploration of the common basis for music and dance and the provision of a range of movement experiences for the music teacher. The philosophy is Orff Schulwerk which stresses the elemental relationships among language, music and movement. (W)

546. Music and Dance in the Music Class II. (TED 546) (MED 558). Cr. 1-2

Prereq: DNC 544. 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)

556. Choreography III. Cr. 3 (Max. 6)

Prereq: DNC 555. Process of creating an entire dance from one singular concept to a finished work; includes small group studies. (W)

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. (S)

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)

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. (W) 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)

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 graduate 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. A movement education approach which focuses on beginning movement concepts and skills utilized in teaching games, gymnastics and 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 more advanced movement and aesthetic concepts and skills. Investigation of individualized approaches which use movement themes, traditional dances, sport forms, and creative work in games, gymnastics and dance. (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, 577-2978; 585 Manoogian, 577-4173

Co-Directors: Robert Burgoyne, John Spalding

Advisory Committee

ENGLISH: Lesley Brill, Robert Burgoyne

ROMANCE LANGUAGES: Andrea diTommaso

COMMUNICATION: John Spalding, Robert Steele

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 (English, Romance Languages, and Communication) 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 three 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 14.

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 202) and the University General Education Requirements (see page 21), 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 14-39 and 202-207, 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

ELECTIVE COURSES (Twenty Credits)

ENG 505 —Literature into Film	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
ITA 515 —Advanced Study of Italian Cinema	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 II	4
SPF 546 —Motion Picture Animation Techniques	3
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 433.

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)

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)

MUSIC

Office: 105 Schaver Music Building; 577-1795

Chairperson: Peter J. Schoenbach

Associate Chairperson: Doris L. Richards

Academic Services Officer: Margot Demerais

Professors

Darwyn Apple (Visiting), Harold Arnoldi, Angelo M. Cucci (Emeritus), Mark F. DeLeonard (Emeritus), Ray P. Ferguson, James J. Hartway, Morris Hochberg (Emeritus), Malcolm M. Johns (Emeritus), Joseph A. Labuta, Robert F. Lawson (Emeritus), Graham Overgard (Emeritus), Wilbur J. Peterson (Emeritus), Peter J. Schoenbach, Dennis Tini, C. William Young (Emeritus)

Associate Professors

Lillian J. Cassie (Emerita), Carol J. Collins (Emerita), Bohdan J. Kushnir (Emeritus), Doris Richards

Assistant Professors

Janice Fulbright, James Lentini, Frank Murch (Emeritus), Deborah Smith, Mary Wischusen, Michael Zelenak

Lecturers

Sammi Liebman, Matthew Michaels

Adjunct Professor

David DiChiera

Divisional Directors

Harold Arnoldi (brass), Joseph Fava (guitar), Ray Ferguson (organ), Janice Fulbright (voice), James Hartway (theory and composition), Mischa Kotler (piano), Joseph Labuta (music education), Matthew Michaels (jazz studies), Richard Pippo (strings), Peter Schoenbach (woodwinds), Dennis Tini (choral), Michael Zelenak (percussion)

Affiliated Performance Faculty

Geoffrey Applegate (violin), Emily Austin (violin), Italo Babini (violoncello), Clement Barone (flute), Frances Brockington (voice), Keith Claeys (percussion), Jeanette Dagger-Haviasas (voice), Earl DeForest (saxophone), Lee Dyament (guitar), Joseph Fava (guitar), Paul Ganson (bassoon), Robert Gladstone (string bass), Marjorie Gordon (voice), Nathan Gordon (viola), Lana Gore (bayan), Oliver Green (clarinet), Carolyn Grimes (voice), Morris Hochberg (violin), William Homer (trumpet), Elsie Inselman (voice), Maxim Janowsky (string bass), Mischa Kotler (piano), Vladislav Kovalsky (piano), Gale Kramer (organ), Oscar LaGasse (tuba), Lawrence Liberson (clarinet), William Lucas (trumpet), Glen Mellow (viola), Ervin Monroe (flute), Susan Mutter (horn), Ronald Odmark (oboe), Theodore Oien (clarinet), Geraldine Powers (voice), Salvatore Rabbio (percussion), Toma Schwartz (piano), Joseph Skrzynski (trombone and baritone), Anna Speck (voice), Michael Stockdale (guitar), Gordon Stump (trumpet), Darwin Swartz (piano), Patricia Terry-Ross (harp), George Troia (trombone), Samuel Tundo (percussion), Brian Ventura (oboe), Eugene Wade (French horn), Robert Williams (bassoon)

Affiliated Faculty

for Jazz Studies and Contemporary Media

George Benson (woodwinds), Buddy Budson (piano), Maurice Davis (trumpet), Earl DeForest (woodwinds), Kendon Everts (percussion), Davis Gloff (voice), Edward Gooch (trombone), Mike Grace (bass), Leo Harrison (trombone), Billy Horner (trumpet), David Jones (history), Jerry Jones (percussion), Gary Leach (bass), Don Lewandowski (bass), Jerry McKenzie (percussion), Matt Michaels (piano), Bruce Nazarian (guitar), Larry Nozero (woodwinds), Dan Pliskow (bass), Richard Rattner (business/law), Ernie Rogers (woodwinds), Eddie Russ (piano), James Ryan (percussion),

Gordon Stump (trumpet), George Troia, Jr. (trombone), Robert Troy (guitar), John Trudell (trumpet)

Degree Programs

BACHELOR OF ARTS with a major in music

BACHELOR OF MUSIC with a major in church music, composition, jazz studies and contemporary media, music education, music management, music therapy, performance, and theory

***MASTER OF ARTS** with a major in music

***MASTER OF MUSIC** with a major 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 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, therapy, religion, business, jazz and commercial music.

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 14-39 and 155-159, 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 the grade of 'D' is received by a music major in any required course in a music curriculum, the course may be repeated *once* 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, 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. Openings are most likely to occur in the horn sections. Jazz Lab Band I is the Division's most advanced ensemble.

ORCHESTRA: There are usually a number of openings for string players in the Orchestra. Brass and woodwind players face stiff competition for orchestral seats.

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

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 14.

Matriculation: All incoming freshmen and transfer students are required to elect MUH 100 and 101, Orientation to Concert Music I and II. This sequence is intended to orient new students to the discipline of music and the resources of this Department.

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 21) and the College Group Requirements (see page 155), 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 155). Only fifty-six credits in music are applicable to this degree.

General Education: The Department requires election of PSY 101 (Introductory Psychology) and PHY 310 (Sounds of Music) which may be used to satisfy the University General Education Requirements for a life science and physical science, respectively.

MUSIC CORE REQUIREMENTS

1. MUT 114, 115, 116, 117, 214, 215, 216, 217, 406
2. MUH 100, 101, 332, 333
3. MUA 179, 279, 379

PERFORMANCE ENSEMBLE REQUIREMENTS

All undergraduate music majors must fulfill a minimum of eight sequential semesters of a Performance Ensemble. Performance Ensembles for the Bachelor of Arts program are defined as MUA 280, 281, 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 and 334
3. MUA 267

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 majors 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 industry management; 7) music therapy; 8) church music; 9) jazz studies and contemporary media.

Admission to this program is contingent upon satisfaction of the general requirements for undergraduate admission to the University (see page 14) 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.

Matriculation: All incoming freshmen and transfer students are required to elect MUH 100 and 101, Orientation to Concert Music I and II. This sequence is intended to orient new students to the discipline of music and the Department.

DEGREE REQUIREMENTS: Candidates for the Bachelor of Music must complete 120 to 129 credits (combined Music and Music Education programs require 137 to 147 credits; see below) including satisfaction of the University General Education Requirements (see below and page 21) and the College Group Requirements (see page 155), as well as the Music Core (see above, under Bachelor of Arts), a Performance Ensemble, and one of the major concentrations cited below.

General Education: The Department requires election of PSY 101 (Introductory Psychology) and PHY 310 (Sounds of Music) which may be used to satisfy the University General Education Requirements for a life science and physical science, respectively.

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:

- (a) Bachelor of Music with a Major in Composition—Performance Ensemble of the principal instrument;
- (b) Bachelor of Music with a Major in Instrumental Music Education—
 1. Winds or percussion—MUA 280
 2. Strings—MUA 281;
- (c) Bachelor of Music with a Major in Vocal Music Education—eight semesters of MUA 284 or 285;
- (d) Bachelor of Music with a Major in Music Therapy—Performance Ensemble of the principal instrument;
- (e) Bachelor of Music with a Major in Performance—
 1. Organ—any Performance Ensemble
 2. Piano—any Performance Ensemble
 3. Voice—eight semesters of either MUA 284 or 285
 4. Winds or percussion—minimum of two semesters of MUA 281 (except saxophone) and four semesters of MUA 280
 5. Strings—MUA 281
 6. Classic Guitar—any Performance Ensemble
- (f) Bachelor of Music with a Major in Church Music—any vocal Performance Ensemble with a minimum of eight semesters of MUA 284 or 285;
- (g) Bachelor of Music with a Major in Theory—Performance Ensemble of the principal instrument;
- (h) Bachelor of Music with a Major in Music Industry Management—Performance Ensemble of the principal instrument.
- (i) Jazz Studies and Contemporary Media majors must fulfill the following specific ensemble requirements:
 1. Eight semesters of MUA 282;
 2. 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)

1. Bachelor of Music with a Major in Performance—
 - (a) Organ (one semester);
 - (b) Piano (four semesters);
 - (c) Winds, percussion, strings (four semesters);
 - (d) Classic Guitar (four semesters);

2. Bachelor of Music with a Major in Church Music (one semester);
3. Bachelor of Music with a Major in Jazz Studies and Contemporary Media (two semesters).

— Major Programs

Church Music (123 Credits)

- (a) MUT 204, 210;
- (b) MUA 260, 261, 267;
- (c) MUH 331, 334, 535;
- (d) Two semesters of MUA 573;
- (e) Two semesters of MUP 221;
- (f) Twenty-four credits of MUP 220;
- (g) Performance of a half recital in the junior year; and a full recital in the senior year.

Composition or Theory (120 Credits)

- (a) MUT 204, 210, 212, 300, 310, 311, 506 or 507; MUH 334, 336 or 337 and
 1. For Composition majors—MUT 410, 411; MUA 173, 174, 175, 176; PHI 370
 2. For Theory majors—Foreign Language Group Requirement (French or German recommended);
- (b) Senior projects—
 1. For Composition majors—presentation of an original composition approved by the Director of the Theory and Composition Division
 2. For Theory majors—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 all orchestra instruments as prescribed by the Music Education Division;
- (c) MUH 334;
- (d) MUA 267, 268;
- (e) MED 350, 454, 455;
- (f) MUT 507 (for winds and percussion majors);
- (g) MUT 300 (for string majors).

Vocal Music Education (126 Credits)

- (a) MUP 221—four semesters at one credit per semester;
- (b) MUP 222—four semesters at one credit per semester;
- (c) Four additional semesters of MUP 221 and/or 222 at one credit per semester, as directed by the adviser;
- (d) MUH 334;
- (e) MUA 267;
- (f) MED 350, 451, 453, 555;
- (g) Six credits selected from MUA 170, 173, 174, 175 or 176.

Music Therapy (120 Credits)

- (a) Eight semesters of the principal instrument selected from MUP 220–229 at one credit per semester;
- (b) MUH 334;
- (c) MUA 170, 172, 267, 375, 475, 568, 571, 572, 574;
- (d) PSY 331;
- (e) BIO 105 or 151, BIO 287;
- (f) SED 503;
- (g) CDS 530;
- (h) Additional music and general electives selected with assistance of the Divisional Director.

Note: An equivalency program is available to students who have earned a bachelor's degree in music. These programs require an internship by direction of the Divisional Director for completion of the prerequisites for certification as a Registered Music Therapist.

Performance (120 credits)

- (a) MUT 210;
- (b) MUH 334, 535;
- (c) Twenty-four credits of MUP 220–228 in the principal instrument (thirty credits maximum); students must study continuously until senior recital is completed;
- (d) Two credits of one secondary instrument (violinists elect viola or complete by examination);
- (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;
 2. Organ—MUT 204; two semesters of MUA 573;
 3. Strings, winds or percussion—MUT 300;
 4. Voice—proficiency in two foreign languages other than the native tongue at the discretion of the adviser.

Jazz Studies and Contemporary Media (128 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 (129 Credits)

Students may not elect more than twenty-nine credits in the School of Business Administration for this degree.

- (a) Eight semesters of the principal instrument selected from MUP 220–229 at one credit per semester;
- (b) MUT 300;
- (c) MUA 560, 561, 563;
- (d) ENG 301;
- (e) PHI 105;
- (f) ECO 101, 102, 410, 510;
- (g) CSC 100;
- (h) MAT 150;
- (i) ACC 301, 302, 351;
- (j) MGT 550, 552, 560;
- (k) MKT 530;
- (l) FBE 529;
- (m) MUH 334;
- (n) Additional music electives selected with assistance of the Divisional Director.

COMBINED MUSIC and MUSIC EDUCATION PROGRAMS

Candidates in combined music/education degree programs must complete the professional education requirements of the College of Education for secondary certification; see page 90.

Special Music Education (137–139 Credits)

- (a) All courses required for the Vocal Music Education curriculum or the Instrumental Music Education curriculum.
- (b) MUA 170, 475;
- (c) MED 557;
- (d) SED 503

Vocal Music Education (145 Credits)

—with Vocal Performance, or Piano Performance, or Organ Performance

- (a) Performance major approved by the adviser;
- (b) All courses required for the Vocal Music Education curriculum except that the principal instrument (i.e., voice, piano or organ) must be elected for three credits per semester for eight semesters for a total of twenty-four credits (thirty credits maximum);
- (c) All specific course and recital requirements for the Bachelor of Music with a major in Voice, Piano or Organ Performance.

Instrumental Music Education (147 Credits)

—with Orchestral Instrument Performance

- (a) Instrumental major approved by the adviser;
- (b) All courses required for the Instrumental Music Education Curriculum except that the principal instrument (see (a) above) must be elected for three credits per semester for eight semesters for a total of twenty-four credits (thirty credits maximum);
- (c) All specific course and recital requirements for a Bachelor of Music with a major in Strings, Woodwinds, Brasswinds or Percussion Performance.
- (d) Eight semesters of MUA 280 for Woodwinds, Brasswinds and Percussion.

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 334;
- (c) Four semesters of a performance ensemble selected from: MUA 280, 281, 282, 284, and 285.

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 433.

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)

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)

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)

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)

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 I. 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. (F)

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)

406. Analytic Technique. Cr. 2–4

Prereq: MUT 216. Structural analysis of tonal music. (F,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)
- 507. Band Arranging. Cr. 3**
Prereq: MUT 216. Open only to music majors. (W)
- 508. Choral Arranging. Cr. 3**
Prereq: MUT 216. Open only to music majors. (B)
- 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)

MUSIC HISTORY (MUH)

- 100. Orientation to Concert Music I. Cr. 1**
Open to first term music majors. Orientation for new music majors; introduction to areas of concentration in the department as related to *career options*; guided listening to live and recorded music; overview of music history. (F)
- 101. Orientation to Concert Music II. Cr. 1**
Open to second term music majors. Continuation of MUH 100. (W)
- 130. (VP) Music Literature: Appreciation through Performance Attendance—Keyboard and Song. Cr. 3**
Not open to music majors. Developing musical understanding and critical listening skills through live and videotaped performances of music in a variety of styles and performance media. Historical and cultural continuity provided by lectures and assigned reading. Folk songs, art songs, all keyboard literature (harpsichord, piano, organ). (I)
- 132. (VP) Music Literature: Appreciation through Performance Attendance—Opera, Oratorio, Mass. Cr. 3**
Not open to music majors. Developing musical understanding and critical listening skills through live and videotaped performances of music in a variety of styles and performance media. Historical and cultural continuity provided by lectures and assigned reading. Opera, mass, and oratorio. (I)
- 133. (VP) Music Literature: Appreciation through Performance Attendance—Symphonic and Chamber. Cr. 3**
Not open to music majors. Developing musical understanding and critical listening skills through live and videotaped performances of music in a variety of styles and performance media. Historical and cultural continuity provided by lectures and assigned reading. Symphonic and chamber music. (F,W)
- 137. (VP) Music History Survey: Appreciation through Performance Attendance—Roots to 1750. Cr. 3**
Not open to music majors. Developing listening skills through an historical survey of musical styles, major composers, social, political and cultural influences. (I)
- 138. (VP) Music History Survey: Appreciation through Performance Attendance—Haydn to 1950. Cr. 3**
Not open to music majors. Continuation of MUH 137; from 1750 to 1950. (Y)

- 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. (Y)
- 331. Music History and Literature I. Cr. 3**
Prereq: sophomore standing and MUT 116 or equiv.; music major. Primitive music through the Renaissance. (F,W)
- 332. Music History and Literature II. Cr. 3**
Prereq: sophomore standing and MUT 116 or equiv.; music major. Baroque through pre-Classical (1600 – 1750). (F,W)
- 333. (W) Music History and Literature III. Cr. 3**
Prereq: sophomore standing and MUT 116 or equiv.; music major. Classic Era and Romanticism (1750 – 1875). (F,W)
- 334. Music History and Literature IV. Cr. 3**
Prereq: sophomore standing and MUT 116 or equiv.; music major. Late Romantic to present time (1875 – 1970). (F,W)
- 336. History of Jazz to 1950. Cr. 3**
Development of jazz from its inception to 1950. (F)
- 337. History of Jazz: 1950 to the Present. Cr. 3**
Continuation of MUH 336. (W)
- 530. Music Research. Cr. 3**
Prereq: graduate standing in music or consent of instructor. Music bibliography and research techniques. (F)
- 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)
- 630. Music Criticism. Cr. 3**
Prereq: upper division or graduate standing. Basics of music criticism and practical experience in writing criticism for publication. (Y)
- 631. Studies in Afro-American Music. Cr. 3**
Contributions of Afro-Americans to the development of music in the United States. (Y)

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, of theory, or composition, or music therapy, 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 are arranged 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., M.M., 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 APPLIED (MUA)

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 I. Cr. 2

Not open to music majors. Rudiments: scales, study of simple compositions. (I)

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)

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. (Y)

261. Church Music and Materials II. Cr. 2

Prereq: MUA 260. Continuation of MUA 260. (Y)

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)

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)

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)

375. Recreational Music. Cr. 2
Leadership skills, group-management techniques, playing social instruments, collecting materials for music activities for all age groups. (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)

445. Intern Training in Operatic Literature and Performance. Cr. 9
Concentrated professional internship with the Michigan Opera Theater. (Y)

475. Music Therapy Practicum. Cr. 2 (Max. 8)
Prereq: MUA 375, 568. Observation and participation in music therapy programs in area agencies employing a Registered Music Therapist. (T)

560. Business of Music. Cr. 2
A discussion of copyright law, performing rights organizations, contractual agreements, publishing and recording considerations, and other business concerns. (W)

561. Recording and Electronic Techniques I. Cr. 3
Prereq: consent of instructor. Offered for undergraduate credit only. Material fee as indicated in *Schedule of Classes*. Technical knowledge of studio facilities, styles of recording procedures, overdubbing, and stylistic considerations. Adaptation of electronic music concepts to jazz and pop music including the use of synthesizers, phasers, echoplex, and other sound modification equipment. (F)

562. Voice Class II. Cr. 2 (Max. 4)
Prereq: MUA 172 or equiv. Voice building and repertoire; simple art songs. (F,W)

563. Recording and Electronic Techniques II. Cr. 3
Prereq: MUA 561. Continuation of MUA 561, presenting advanced topics in recording and electronic synthesizer techniques. (W)

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. (F)

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)

571. Influence of Music on Human Behavior. Cr. 3
Prereq: MUA 568; major in music therapy. Study of the function of music in ethnic groups, society in the United States, and specific handicapped populations. (F)

572. Music Therapy Techniques. Cr. 3
Prereq: MUA 571. Structuring music activities toward specific goals with mentally and physically impaired clients. Role of music therapy in various types of agencies. (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. 6)
Prereq: MUA 379 or equiv. Fundamental instruction in pianism up to the intermediate level. (T)

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. (F)

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. Student Teaching and Seminar I. Cr. 1-5
Prereq: 2.5 h.p.a. in major; admission to student teaching. Offered for S and U grades only. Directed teaching in elementary school music. (F,W)

457. Student Teaching and Seminar II. Cr. 1-5
Prereq: 2.5 h.p.a. in major; admission to student teaching. Offered for S and U grades only. Directed teaching in secondary 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)

554. (DNC 544) Music and Dance In the Music Class I. (TED 544). Cr. 2
Exploration of the common basis for music and dance and the provision of a range of movement experiences for the music teacher. The philosophy of Orff Schulwerk which stresses the elemental relationships among language, music and movement provides a major focus of the course. (I)

555. Choral Conducting and Rehearsal Techniques. Cr. 3
Prereq: MUA 267 or equiv. Conducting and rehearsal methods and materials for secondary schools. (F)

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)

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. (I)

THEATRE

Office: 95 W. Hancock; 577-3508

Chairperson and Director, University Theatres: Robert T. Hazzard

Professors

N. Joseph Calarco, Robert T. Hazzard, Leonard Leone (Distinguished Professor Emeritus), Robert E. McGill, Nira Pullin, Anthony B. Schmitt, Russell E. Smith

Associate Professor

Thomas H. Schraeder

Assistant Professors

Addell Austin, John Woodland

Lecturers

Blair Anderson, Mary Copenhagen, M. Reid Downey, Stephen Hurley

Theatre Support Staff

Philip Fox II, Wendela Jones, Margaret Spear

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 14.

* 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 21), the College Group Requirements (see page 155), 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 14–39 and 155–159, respectively.

A minimum of seventy-nine credits must be elected in theatre course work. It is recommended that the student complete the Group 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 515
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
Technical Laboratory	THR 214 (Min. 4 credits)

COSTUME/SCENE DESIGN: 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
Costume History	AFA 543
Shakespeare	ENG 515
Acting I	THR 104
Movement I	THR 201
Directing I	THR 505
Technical Theatre	THR 213, 305, 501, 503, 508, 507, 514, 608
Technical Theatre Problems	THR 216 (Min. 12 credits)
Textiles I	AFA 241
Clothing Selection and Construction	AFA 242

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

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 433.

- 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)
- 209. Stage Combatives - Elementary. Cr. 1**
Prereq: good physical condition. Introduction to theory and practice of elementary special combat skills for the theatre. (I)
- 210. Introduction to Mime. Cr. 1**
Introduction to theory and practice of ancient and modern mime and pantomime. (I)
- 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)
- 215. Advanced Stage Combat. Cr. 1**
Prereq: PEA 171 or THR 209 or any stage combat course; adequate physical condition. Advanced instruction and experience in a variety of combat techniques and weapons designed for theatrical use. (I)
- 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)
- 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)

403. Acting VIII. Cr. 3

Prereq: THR 401. Required of all B.F.A. acting majors. Personalization: theory and practice of techniques by which actors invest their interpretative work with their own creative vision. Scene work selected from the modern realistic theatre. (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 306. 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)

511. Black Theatre: Literature and Criticism. Cr. 2

Prereq: THR 103 recommended. Plays by black American playwrights; examination of essays by black critics; existing black theatre in America; the aesthetics of twentieth-century black drama. (I)

512. (WI) 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)

516. Techniques of Musical Comedy. Cr. 3

Analysis of musical comedy styles and techniques; exploration of key directorial and choreographic issues; performance projects emphasizing movement and composition. (S)

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. 3(Max. 6)

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. 3

Prereq: senior B.F.A. standing or M.F.A. Not open to M.A. students. 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. 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)

526. Playwriting II. Cr. 3

Prereq: THR 525. Continuation of the study and practice 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)

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)

610. Classical Acting Styles and Theories. Cr. 3

Prereq: three undergraduate acting courses or equivalent experience. A lecture and performance course at an advanced level to develop the actor's process of analyzing, creating, and performing characters from the classical drama for today's film, television and theatrical media. (S)

611. Special Projects In Design and Technical Theatre. Cr. 1-3

Independent research and practical application of research to specific projects. (I)

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: John W. Reed

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 served as a source of lawyers for Michigan and the nation for more than fifty 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 a new law school in 1927 as part of the higher education system known as the Colleges of the City of Detroit. The Law School grew along with the University, which was 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 universities, and was renamed Wayne State University.

Dean Arthur Neef succeeded Judge Campbell as Dean in 1936, serving until 1967. He was succeeded in 1968 by Charles Joiner. Under Dean Joiner the School expanded its faculty and gained a national reputation for its urban programs. After his appointment to the Federal District bench, Dean Joiner was succeeded in 1975 by Donald Gordon, under whose leadership the School's growth in size and quality continued. John C. Roberts became dean in 1980, after serving as Associate Dean of the Yale Law School and as counsel to the Senate Armed Services Committee. During his tenure the Law School flourished, winning national recognition by establishing an Order of the Coif chapter. The current dean, John W. Reed, came to Wayne in 1987, after serving as dean of the University of Colorado Law School and as the Thomas M. Cooley Professor of Law at the University of Michigan. Currently the student body numbers about 700 and the full-time faculty about thirty.

Like all quality law schools, Wayne State pursues the two major goals of education and research. The primary educational purpose of the J.D. program is to prepare lawyers for the wide variety of roles they are now called on to fill with private law firms, corporations, public interest firms, prosecutors' and defenders' offices, and in many law-related fields. Its rich and varied educational program is designed not just to teach the legal rules by which our business and personal affairs are governed in a complex society, but also to instill an appreciation of the larger role of the legal profession as a mold of society's values and institutions. In addition to basic instruction in all major fields of law, Wayne offers many elective courses allowing students to explore new fields of knowledge, to engage in interdisciplinary study, and to delve deeply into areas of special interest. Its program also stresses writing experiences designed to develop skills of written self-expression, and oral advocacy training both in trial and appellate settings. In addition to the classroom component, Wayne State offers the opportunity to enrich legal education with real-life legal experience. The School's location, in a major urban center, provides ample opportunities for semester-time internships with judges, prosecutors' and defenders' offices, and public interest law offices, as well as with private law firms. Wayne clinical programs allow students to represent real clients as part of their training, and at the same time provide a vital service to the Detroit community.

The program leading to the Master of Laws (LL.M.) degree is designed for lawyers in practice or employed in legal areas. It is a part-time evening program, intended to foster specialization in complex areas

requiring education beyond the usual basic professional law degree. The program combines courses taught by practicing specialists with seminars and courses taught by members of the full-time law faculty.

The School's second major goal is scholarly research by its faculty. Teachers at Wayne make significant contributions to our understanding of issues in environmental law, taxation, criminal procedure, constitutional law, urban law and many other fields. Their books and articles also contribute significantly to the depth and quality of classroom teaching. It is the interaction of these two activities which creates an especially stimulating environment for the law student.

The Law School faculty prides itself on its diversity. The more than thirty men and women who make up the full-time faculty include lawyers with experience in local, state and federal government, others who have served as clerks for federal judges, a number who are experienced as private practitioners, and others who are well known public interest advocates. They combine excellent academic backgrounds with practical experience. The Wayne faculty is committed to classroom teaching excellence, and also to advancing the state of professional knowledge through scholarship. The School's location also permits the recruitment of excellent part-time faculty, including federal judges and practitioners whose professional perspective is particularly valuable in certain kinds of courses and seminars.

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; the School is also accredited by the Michigan State Board of Bar Examiners.

Wayne State Law School has recently established a 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.

Detroit Cultural Center

One of Wayne's distinct advantages lies in its location, which is in midtown Detroit, four miles north of the main downtown area. Within a few blocks of the Law School buildings are the Detroit Public Library, a major research facility; the Detroit Historical Museum; the Detroit Institute of Arts; and the Detroit Science Center. The Law School is located near the central University library complex and the University's Hilberry Theatre, which houses one of the most distinguished graduate theatre repertory companies in the United States. To the south lies a major medical center which includes the Wayne State University Medical School.

Law School Facilities

The Law School is a vital part of a major urban university complex with a total enrollment of about 27,000 students. Near the Law School buildings are the Schools of Social Work and Business Administration, the College of Education, and the McGregor Memorial Conference Center. The McGregor Center, which provides an especially gracious setting for Law School meetings and alumni events, was designed by Minoru Yamasaki, and is one of a number of architecturally distinguished buildings on the Wayne State campus. The Law School is located at the northern end of the main campus, at the end of the Gullen Mall which forms the center of the University.

The Law School provides up-to-date quarters for classrooms, faculty and student officers, and the law library. One building has five large classrooms with terraced seats designed to provide comfortable auditory-visual relationships among students and between students and the instructor; floors are carpeted for comfort and excellent

acoustics. This building also has lounge alcoves. The second building in the complex, which is connected to the classroom building by an arcade, contains the Arthur Neef Law Library, seminar rooms, a large appellate court room, a trial court room, faculty and administrative offices, and a faculty library and lounge. The offices of student organizations, including the *Wayne Law Review*, Moot Court Board, Free Legal Aid Clinic, the Student Board of Governors, and the student lounge are also located in this building. A third building, opened in 1971, houses the offices of the Student Trial Advocacy Program and the legal research and writing instructors, some faculty offices, the Law School Placement Service, and additional study carrels.

Arthur Neef Law Library

Wayne State's law library is the second largest in the state of Michigan, comprising some 330,000 volumes. 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, alumni and students of other law schools. About 1,500 periodicals and over 1000 looseleaf services are received regularly. In 1971 Wayne State University Law Library was designated as an official depository for U.S. Government publications and now contains over 100,000 of these documents.

In addition to a virtually complete collection of all Michigan legal materials, the Library contains the reported cases of the highest courts and most of the lower court reports of all of the states and territories of the United States as well as all available current statutory compilations. It also contains such other state materials as legislative reports, session laws, attorney general reports, court rules and jury instructions. There are sets of all federal cases, statutes, treaties, and court rules available in numbers adequate for active research by faculty and students. In addition, the Library has such research aids as digests, citators, legal encyclopedias, dictionaries, form books, looseleaf services, indexes, and reference works. All American and some foreign law reviews and similar legal publications are available. There are over 600,000 microforms and tapes, including the complete collection of United States Supreme Court records and briefs, and most congressional publications from 1970. There are also special library collections for the faculty and for those engaged in special Law School work such as Law Review, Moot Court, and Legal Aid.

The students and faculty of the Law School have available the use of LEXIS and WESTLAW, computerized research for institutional purposes, as well as computer laboratory facilities for supportive services.

The Library has benefited greatly from the generosity of several donors who have made major contributions in recent years. Dr. Alwyn Freeman made a very substantial gift of international and comparative legal materials, a great part of which now forms the Alwyn V. Freeman International Law Collection. A further gift consisting of 3,000 volumes of basic legal materials to be used primarily by the *Wayne Law Review*, was made in honor of Judge Robert S. Marx by his testamentary trustees. Detroit lawyer Donald Barris, Class of 1940, has made possible major renovations of the library's working areas.

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 Admission Committee will take into account the nature of college work completed as well as the grades achieved. In general, an undergraduate liberal arts education is preferred to one which is narrowly specialized, but a professional or specialist degree does not preclude admission. Proficiency in the English language, both written and spoken, and in analytical skills are essential to both the study and practice of law.

The suggestions for pre-law preparation in the *Prelaw Handbook*, published by the Law School Admission Council, are valuable. 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, Box 2000, Newtown, PA 18940, and is also available in most university bookstores and libraries. Students and others who are in Detroit are invited to come to the Wayne Law School Admissions Office, in the Law Library Building, during regular office hours to consult the *Prelaw Handbook* and other Law School reference material.

Requirements for Admission

Admission to the Law School requires a bachelor's degree from a regionally accredited college or university. Applicants must have or expect to receive the degree by the summer preceding admission to the Law School. An official transcript showing the bachelor's degree must be sent to the Law School by the degree-granting school prior to registration.

The goals of the admission standards of the Law School are first, to assure that a substantial majority of the entering class is composed of persons who are the most highly qualified applicants, according to the best available measures of academic achievement and potential; second, to continue the Law School's commitment to a diverse student body which includes substantial representation of minority persons and persons from a disadvantaged background in each entering class; and third, to guarantee that all applicants admitted have indicated a capacity to do satisfactory work in the Law School.

In furtherance of these goals, the larger portion of the entering class will be admitted strictly on the basis of superior undergraduate grade point average and LSAT score. The remainder will be admitted in accordance with the following discretionary criteria:

1. an applicant's academic achievement and potential, as shown by his or her LSAT score and grade point average;
2. an applicant's minority status — black, Latin American or American Indian.
3. an applicant's demonstrated capacity to overcome a significant educational disability, such as attending for several years a *de jure* segregated school or a public high school in a low-income demographic area;
4. special features of an applicant's academic record that reduce the reliability of the grade point average as an index of academic achievement and promise, such as the age of undergraduate grades and any marked improvement in grades shown in the later years of college.

Please note the following items when making application:

APPLICATION: Applications should be typed, written neatly, or printed; if not typed, they should be done in ink. Applications should be signed and dated where indicated; all questions should be answered. Use extra sheets if more space is needed. Applications should be sent to: Director of Admissions, Law School, Wayne State University, Detroit, Michigan 48202.

APPLICATION DEADLINE: All applications must be on file with the Law School on or before March 15. Applications received later than March 15 will be considered after applications timely received or may be refused. It is the applicant's responsibility to ascertain that all

credentials are received. Notices on incomplete applications are not sent by the Law School.

APPLICATION FEE: A fee of \$20.00 (\$30.00 for foreign students) must accompany the application for admission. The fee is to defray, in part, the cost of processing the application and is not refundable. Checks should be made payable to Wayne State University. Those drawn on Canadian and other foreign banks must carry the notation 'payable in U.S. funds, plus service charge.'

LAW SCHOOL ADMISSION TEST: Each applicant must take the Law School Admission Test (LSAT). LSAT scores are considered valid for four years. The tests are given by the Law School Admission Services four times each year in centers located throughout the United States, including Detroit, and in some foreign countries. It is recommended that the LSAT be taken by the December of the year for which admission is sought. The LSDAS/LSAT Bulletin, containing registration forms, a sample test and other pertinent information about the LSAT, may be obtained at any university or law school or by writing to the Law School Admission Services, Box 2000, Newtown, PA 18940.

REPEATING THE LSAT: Applicants who have good reason, such as extreme anxiety or poor health at the time of the initial test, to think that they would increase their score if they took it again, may repeat the LSAT. In such cases, the Law School generally averages the scores.

TRANSCRIPTS: Each applicant who has attended undergraduate schools in the United States must register with the Law School Data Assembly Service (LSDAS). Registration forms are in the LSDAS/LSAT Bulletin. Applicants who have completed undergraduate work in foreign institutions are not required to register with LSDAS.

RECOMMENDATIONS AND INTERVIEWS: Applicants are urged to submit at least one letter of recommendation. Except in unusual circumstances, personal interviews are not granted. Those interested in discussing their application or in seeing the Law School are encouraged to make an appointment with an Admissions Counselor; call the Admissions Office: (313) 577-3937.

MINORITY STATUS: An applicant who wishes to be considered as Latin American or American Indian should explain briefly his or her status within such a category. For example, Latin Americans should indicate the country of origin. American Indians should submit with the application a tribal certificate or similar document.

PERSONAL STATEMENT: Although a personal statement is not required, applicants are invited to submit one. A statement should be written when there are unusual characteristics in an academic record or if any other aspect of an application needs explanation or amplification.

ADMISSION FACTOR: In determining admissions ratings, the Law School considers an applicant's LSAT score and undergraduate grade point average to be of equal weight.

ADMISSIONS DECISIONS: The Admissions Committee is composed of law professors, students, the Associate Dean, an Assistant Dean, and the Director of Admissions. The Admissions Office evaluates individual applications, ranks them and makes admissions decisions in keeping with Law School policies. Applications of those who are not admitted by the Admissions Office are reviewed on the basis of discretionary criteria by the faculty members of the Committee.

RECONSIDERATION: An applicant may request reconsideration of an adverse admission decision. To do so, a letter stating the specific reasons why reconsideration is thought to be merited should be sent to the Director of Admissions. Upon receipt of the request, the application will be reviewed by the faculty members of the Admissions Committee.

DEFERRED ADMISSIONS: The Law School does not have a deferred admissions policy. An admittee who withdraws from the class must file a new application and fee for another year. All credentials are kept for four years, so it often is not necessary to re-register with the LSDAS.

REDUCED PROGRAM: The first-year course load is mandatory. Day students who have substantial child care responsibilities may be permitted to take a slightly reduced course load during the first-year. To be considered for admission on this basis an applicant must request a reduced load in a separate statement which provides detailed personal circumstances supporting the request.

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.

TRANSFER STUDENTS: Students from other accredited law schools, who have completed at least a full year of law study, but not more than two, may apply for admission with advanced standing. Law school grades, along with the candidate's general application information and original admissions credentials, are evaluated. For serious consideration, a transfer applicant should have a law school average of at least a 'B'. If admitted, no credit will be transferred for courses with a grade of 'C-minus' or below.

Applicants must submit official undergraduate transcripts showing receipt of the bachelor's degree, LSAT scores and official law school grades, together with a certification of good standing from the Dean of the law school previously attended. Registration with LSDAS is not required. No action will be taken on transfer applications until the final grades in all law classes are received.

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 submit an LSAT score. An evaluation of what credits, if any, may be transferred from the foreign institution may be made, but only after the completion of one year of course work at Wayne State Law School. However, the American Bar Association Standards and Rules of Procedure for Approval of Law Schools provide:

Advanced standing and credit allowed for foreign study shall not exceed one-third of the total required by the Standards for the first professional degree unless the foreign study related chiefly to a system of law basically followed in the jurisdiction in which the admitting school is located; and in no event shall the maximum advanced standing and credit allowed exceed two-thirds of the total required by the Standards for the first professional degree.

GUESTS: Students from other accredited law schools may be permitted to take one or two classes provided the Dean of the home school has given permission and the student is in good academic standing. A law student who wishes to take one or two full semesters for the purpose of transferring credit must apply in the same manner as a transfer applicant, meeting the same law school average and submitting the same credentials.

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 simultaneous 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, English, and American backgrounds on the law. They may also take courses in 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.

First Year Summer Institute

The Summer Institute program is designed to assist first-year students who are accepted for admission to the Law School for the fall semester but who may benefit from the opportunity to spread the first academic year of law study over an entire calendar year. For those students with lower entering credentials, participation in the summer program may be required.

The Summer Institute, which begins in June, offers the five-credit Torts course. Students who attend Summer Institute then take the remaining five courses in the fall and winter semesters, thereby allowing them to devote more time to their studies.

Enrollment in the Summer Institute is limited. Although admittees with lower admission factors will be given preference for admission to this program, all who apply will be considered.

Supportive Services

The Supportive Services Program, under the direction of an assistant dean, offers tutoring, counseling and other academic assistance to both day and evening law students.

Tutorial assistance is available to any student experiencing academic difficulty. Upperclass law students and practicing attorneys act as tutors for small groups of students. Each group meets weekly to discuss the cases and concepts that have been covered in classes during the preceding week. While emphasis is placed on class preparation and case analysis, the tutors also assist students with problems in case briefing, effective note-taking, organizing course materials (outlining) and techniques of exam writing. Practice exams are administered throughout the year in order to strengthen students' understanding of legal principles and acclimate students to the exam taking process.

The Supportive Services Program also offers audiotaped lectures by nationally respected authorities in subject areas covered by the first-year courses. The lectures offer another perspective to assist

students in organizing and understanding the course material. In addition, the Program maintains a resource library consisting of hornbooks and other supplementary materials.

LAW SCHOOL DIRECTORY

Admissions

J.D. Program	195 Law Annex; 577-3937
LL.M. Program	335 Law Library; 577-3955
Financial Aids	317 Law Library; 577-5142
Records and Registration, Law School .	311 Law Library; 577-3931
Supportive Services	169 Law 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: Dalmas A. Taylor

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 mathematics and the sciences, the social sciences, humanistic studies, and foreign languages.

The bachelor's degree programs include instruction in the basic areas of learning as well as the 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 provides curricular flexibility to those students whose academic interests extend over several departments. Structural combinations, such as those between psychology and sociology, biology and psychology, economics and mathematics and the like, are offered, as are interdisciplinary programs such as American Studies, Linguistics, and Women's Studies. The Honors Program, available to selected superior students in the College, offers interdisciplinary and individualized curricula.

The undergraduate programs of the College of Liberal Arts are strengthened by the graduate programs which lead to the master's and doctor's degrees in various disciplines. Professors in the College teach both graduates and undergraduates; research projects may involve both graduates and undergraduates; some specialized classes are available to both graduate students and those undergraduates enrolled in the upper division. This opportunity for association with graduate students and research personnel enriches the experience of many undergraduate students.

In the College of Liberal Arts, students are provided with the skills, knowledge, and understanding on which to build professional and personal development in today's rapidly changing world.

DEGREE PROGRAMS

BACHELOR OF APPLIED STUDIES with majors in:

Psychology	Sociology
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BACHELOR OF ARTS with majors in:

<ul style="list-style-type: none"> American Studies Anthropology Anthropology and Sociology Art History Biological Sciences Chemistry Classical Civilization Classics Communications Disorders and Sciences Computer Science Economics English Film Studies French Geography Geology German Greek Hebrew 	<ul style="list-style-type: none"> History Humanities Information Systems Italian Latin Linguistics Mathematics Near Eastern Languages Near Eastern Studies Nutrition and Food Science Philosophy Physics Polish Political Science Psychology Russian Slavic Sociology Spanish
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BACHELOR OF ARTS HONORS with majors in:

<ul style="list-style-type: none"> Anthropology Honors Biological Sciences Honors Chemistry Honors Classical Civilization Honors Classics Honors Economics Honors English Honors French Honors Geography Honors Geology Honors German Honors Greek Honors Hebrew Honors History Honors Humanities Honors 	<ul style="list-style-type: none"> Italian Honors Latin Honors Near Eastern Languages Honors Near Eastern Studies Honors Nutrition and Food Science Honors Philosophy Honors Polish Honors Political Science Honors Russian Honors Slavic Honors Sociology Honors Spanish Honors
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BACHELOR OF SCIENCE with majors in:

- Computer Science (as a second major)
- Geology
- Mathematics
- Nutrition and Food Science
- Psychology

BACHELOR OF SCIENCE HONORS with majors in:

- Geology Honors
- Mathematics Honors
- Nutrition and Food Science Honors
- Psychology Honors

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)
- Criminal Justice (Bachelor of Science in Criminal Justice)
- Medical Dietetics (Bachelor of Science in Medical Dietetics)
- Physics (Bachelor of Science in Physics)
- Public Affairs (Bachelor of Public Affairs)

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
- Bachelor of Science in Criminal Justice Honors
- Bachelor of Public Affairs Honors

***MASTER OF ARTS with majors in**

- | | |
|------------------------|----------------------------|
| Anthropology | Latin |
| Applied Mathematics | Linguistics |
| Art History | Mathematics |
| Chemistry | Mathematical Statistics |
| Classics | Near Eastern Languages |
| Comparative Literature | Nutrition and Food Science |
| Computer Science | Philosophy |
| East European Studies | Physics |
| Economics | Political Science |
| English | Psychology |
| French | Russian |
| German | Sociology |
| History | Spanish |
| Italian | |

***MASTER OF ARTS IN TEACHING COLLEGE ENGLISH**

***MASTER OF ARTS IN TEACHING COLLEGE MATHEMATICS**

***MASTER OF PUBLIC ADMINISTRATION with majors in**

- | | |
|------------------|-----------------------|
| Criminal Justice | Public Administration |
|------------------|-----------------------|

***MASTER OF SCIENCE with majors in**

- | | |
|---------------------|----------------------------|
| Biological Sciences | Geology |
| Chemistry | Nutrition and Food Science |
| Computer Science | Physics |
| Criminal Justice | |

***DOCTOR OF PHILOSOPHY with majors in**

- | | |
|---------------------|-------------------|
| Anthropology | Mathematics |
| Biological Sciences | Modern Languages |
| Chemistry | Philosophy |
| Computer Science | Physics |
| Economics | Political Science |
| English | Psychology |
| History | Sociology |

COLLEGE DIRECTORY

Dean:

Dalmas A. Taylor . . . 2226 Faculty Administration Bldg.; 577-2514

Associate Deans:

Barbara Couture . . . 2226 Faculty Administration Bldg.; 577-2517
 John P. Oliver 2226 Faculty Administration Bldg.; 577-2516
 Claude Schochet . . . 2226 Faculty Administration Bldg.; 577-2522

Assistant to the Dean – Administration

Susan Hutton 2226 Faculty Administration Bldg.; 577-2514

Director of Development

Fred Mercieca 2226 Faculty Administration Bldg.; 577-0196

Assistant to the Dean:

Sherwin Collins . . . 2226 Faculty Administration Bldg.; 577-2520

Administrative Assistant:

Mary A. Serowik . . . 2226 Faculty Administration Bldg.; 577-2513

Administrative Officer:

Wafia Matta 2226 Faculty Administration Bldg.; 577-8007

Service Areas

- Bulletin–Scheduling 2155 Faculty Administration Bldg.; 577-2542
- 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
- Personnel Records 2167 Faculty Administration Bldg.; 577-2466

Departmental Offices

- Africana Studies Fourth Floor, 51 W. Warren; 577-2321
- American Studies 51 W. Warren; 577-3062
- Anthropology 137 Manoogian; 577-2935
- Biological Sciences 319 Natural Science; 577-2873
- Chemistry 123 Chemistry; 577-2595
- Communication Disorders and Sciences
585 Manoogian; 577-2943
- Computer Science 431 State Hall; 577-2477
- Criminal Justice 2228 Faculty Administration Bldg.; 577-2705
- Economics 2074 Faculty Administration Bldg.; 577-3345
- English 51 W. Warren; 577-2450
- Geography 225 State Hall; 577-2701
- Geology 201 Old Main; 577-2506
- German and Slavic Languages 443 Manoogian; 577-3024
- Greek and Latin 431 Manoogian; 577-3032
- History 3094 Faculty Administration Bldg.; 577-2525
- Honors Program 2305 Faculty Administration Bldg.; 577-3030
- Humanities Room 423, 51 W. Warren; 577-3035
- Linguistics 71 W. Warren; 577-3254
- Mathematics 1150 Faculty Administration Bldg.; 577-2479
- Near Eastern and Asian Studies 437 Manoogian; 577-3015
- Nutrition and Food Science 160 Old Main; 577-2500
- Peace and Conflict Studies, Center for
2319 Faculty Administration Bldg.; 577-3453
- Philosophy Room 353, 51 W. Warren; 577-2474
- Physics and Astronomy 135 Physics; 577-2721
- Political Science 2040 Faculty Administration Bldg.; 577-2630
- Psychology 71 W. Warren; 577-2800
- Romance Languages 487 Manoogian; 577-3002
- Sociology 2228 Faculty Administration Bldg.; 577-2930
- Women's Studies 71 W. Warren; 577-2802

Mailing address for all offices:

(Department Name), College of Liberal Arts, 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 Applied Studies, Bachelor of Arts, 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 38.

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.

Beginning with the Fall semester of 1987, all first-semester freshmen entering the College of Liberal Arts and all Liberal Arts students who transfer twelve or fewer credits into the College are required to satisfy both University General Education Requirements and College of Liberal Arts 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

With the exception of the Intermediate Composition component of the Written Communication competency, competency requirements for students in the College of Liberal Arts are identical to those specified in the University General Education Program, a complete description of which may be found beginning on page 21. ENG 301, 303, and 305 will NOT satisfy the College Intermediate Composition requirements; however, all other courses cited in the University General Education Intermediate Composition Requirements will apply. Competencies are required in Written Communication, Mathematics, Oral Communication, Computer Literacy, and Critical Thinking.

All undergraduate students who registered for the first time at Wayne State University in Fall Semester 1983 or thereafter are 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 requirements prior to and subsequent to Fall 1983, see the General Information section of this Bulletin, page 25.

Group Requirements

Group Requirements for students in the College of Liberal Arts consist of the group requirements of the University General Education Program (see page 23) modified by the additions and limitations indicated below. College Group Requirements exceed University General Education Requirements by: 1) one additional course in the natural sciences (Natural Science III), 2) one additional course in the social sciences (Social Science II), 3) one additional course in the Humanities (Cultural Studies), and 4) three courses in a foreign

language, which also may be used to satisfy the University General Education Requirement in Foreign Culture.

The College has designated specific courses within those approved for University General Education Requirements to meet College Group Requirements. University General Education courses which meet Liberal Arts Group requirements are listed below. Please consult University Advising for an updated list of approved courses.

NATURAL SCIENCE (PS,LS)

Physical Science (PS): All students in the College of Liberal Arts must successfully complete one course in the fields of chemistry, physics, or physical science (a combination of chemistry and physics) from the following list of approved courses: CHM 100, 102, 105, 107, 131; PHY 102, 104, 213, 217, 310.

Life Science (LS): Students must elect one course from the following list of approved courses: ANT 211; BIO 103, 105, 151, 161; PSY 101, 102.

Natural Science III: All students in the College of Liberal Arts must elect and successfully complete one additional science course from the fields of physical anthropology, astronomy, biological sciences, chemistry, geology, nutrition and food science, physics, or psychology. Courses elected to satisfy this component of the College's Group Requirement in Natural Science must be drawn from a field other than one used to fulfill the Physical or Life Science components of the requirement. Approved Natural Science III options include: ANT 211; AST 201; BIO 103, 105, 151; CHM 100, 102, 105, 107, 131; GEL 101; NFS 203, 221; PHY 102, 104, 213, 217, 310; PSY 101, 102, 405.

HISTORICAL STUDIES (HS)

Historical Studies: Students must elect one course for a minimum of three credits from the following list of approved courses: ANT 320; HIS 110, 120, 130, 140, 160, 161, 195, 304, 335, 368, 369; HUM 310; N E 368, 369; P S 353.

SOCIAL SCIENCES (AI,SS)

American Society and Institutions (AI): Students must elect one course from the following list of approved courses: HIS 103, 105; P S 101, 103.

Social Sciences (SS): Students in the College of Liberal Arts must elect two courses in this category—one from each of two different social science departments. Approved courses include: ANT 210; ECO 100, 101, 102, 180; GEG 110, 200, 313, 320; HIS 200; P S 100, 200, 224; SOC 200, 202, 204, 250, 330, 410.

FOREIGN CULTURE (FC): Students in the College of Liberal Arts 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. (See Foreign Language Requirement below.)

HUMANITIES (VP,PL)

Visual and Performing Arts (VP): Students must elect one course from the following list of approved courses: A H 100, 101, 111, 112; DNC 231; ENG 245, 246; FLM 201, 202; HUM 101, 102, 103, 303; MUH 130, 132, 133, 137, 138; THR 101, 103.

Philosophy and Letters (PL): Students must elect one course from the following list of approved courses: CLA 101, 210, 220; ENG 216, 217, 219, 220, 250, 272, 311, 312, 314; FRE 270 (or GER 270; ITA 270; RUS 270; SPA 270); HON 210; HUM 210, 211, 220, 222; LIN 272; PHI 101, 102, 103, 104, 210, 211, 232, 350, 355, 370; P S 351, 352; RUS 365, 465; SPC 216.

Cultural Studies: All students in the College of Liberal Arts must successfully complete one course from the fields of Africana Studies, American Studies, Chicano-Boricua Studies Women's Studies, folklore, mythology, religious studies, inter-disciplinary courses in the humanities, or culturally-oriented courses offered in the various

College departments of languages and literatures. Approved courses include: A S 201; CBS 210, 211; CLA 200; ENG 260 360; FRE 271; GER 271, 272; GRK 371; HUM 301; NE 200, 201; RUS 351.

Foreign Language: All students in the College of Liberal Arts (excepting those pursuing a Bachelor of Public Administration degree) must successfully complete a three-course sequence (minimum of four credits in each of the three courses) in a single foreign language. Those continuing the study of a foreign language begun in high school or at another college will be placed at an appropriate level by means of qualifying examinations administered by the various language departments of the University. The College Foreign Language Group Requirement will be considered satisfied by those students whose test scores place them beyond the intermediate (third course) level. Approved course sequences include those 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 212.

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.

THE UNIVERSITY AND ITS LIBRARIES as specified in the University General Education Program (see page 25).

UNIVERSITY REQUIREMENT IN AMERICAN GOVERNMENT for students enrolled prior to Fall Term 1987: See General University Information, page 25.

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 207–213.

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 (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, 3 West, 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.

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. Students may not elect for minor credit courses which bear credit limitation precluding their applicability as major credit in the sponsoring department.

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 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)

Africana Studies
Peace and Conflict Studies

Women's Studies

Special Concentrations Available within Departments

Biological Sciences: Biophysics and Molecular Biology (Bachelor of Science in Biological Sciences Degree)

Speech: Communication Disorders and Sciences (Speech and Language Pathology).

Combined Degrees and Second Degrees

A Combined Degree (B.A. or B.S.) 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 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 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 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. Courses transferred will not count towards fulfilling College 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 for restricted courses is given only within the approved limits specified below.

Professional Courses: Students may elect a maximum of sixteen credits as cognate work from elected courses offered for degree credit by the several professional schools and colleges within the University. Eight of these credits may be elected with the approval of an academic adviser prior to the declaration of a major, and eight additional credits may be chosen with the approval of the major department. Where academic advisers have approved fewer than eight credits, the major department may approve credit up to the sixteen maximum credits allowed. In curricula which specifically require professional courses in excess of the maximum, additional credits may be elected.

Specialized Courses: Unless a curriculum specifies otherwise, the maximum amount of degree credit which may be earned in certain specialized areas is limited as follows:

Areas	maximum degree credit
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.



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 14. 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 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

The Honors Programs of the College of Liberal Arts are designed for highly motivated students with superior abilities. Qualified students may elect Honors Program courses, honors sections of departmental courses, honors tutorial courses, honors option courses and honors independent studies offered through the College of Liberal Arts. Liberal Arts students, in consultation with a faculty honors adviser, may pursue a course of study that leads to graduation with University Honors (see page 32). Admission into a departmental honors program is at the discretion of each department. Departmental honors programs vary from one department to another, but they all require fifteen credits in honors designated course work, including independent research, a senior honors thesis or essay, and at least one 400-level seminar offered through the College Honors Program. Honors-designated course work in any department of the College can be included in the required fifteen honors credits. A student who satisfactorily completes a departmental honors program will graduate with honors in that department. A student who completes both the University Honors Program and a Departmental Honors Program will receive dual recognition on the transcript and diploma.

Other features of the Honors Programs of the College include special faculty advising, the waiver of certain prerequisites, guest lectures, participation in regional and national meetings of the National Collegiate Honors Council, an honors study lounge, and an opportunity to participate in the Honors Student Association.

Students who are interested in the Liberal Arts Honors Program should contact the Honors Director at 577-3030. The Honors Program offices are located at 2307 Faculty Administration Building. For information regarding courses, see page 274.

'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 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 Director of the College's Honors Program (577-3030), 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 38.)

Academic Probation

Low Honor Point Average: Student's whose honor point average falls below 2.0 will be placed on academic probation and 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 order to register. Students on

academic probation are encouraged to use support services of the University.

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.

Restriction: While on academic probation, a student may not represent the College in student activities.

Exclusion

Low Honor Point: Students on academic probation who incur serious deficiencies or fail to raise their honor point averages within a reasonable period 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. 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 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.

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 Bachelor of Science. 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

The School of Business Administration is a professional school concerned with instruction in the theory and practice of business administration. The undergraduate program in business administration begins after students have acquired an educational foundation in the basic sciences and the arts during their freshman and

sophomore years. For information concerning the minimum grade point average required for admission to the School of Business Administration; see page 53. Students complete the following courses as pre-business administration students in the College of Liberal Arts:

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.

Business Law

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

Economics

- ECO 101 (3 cr.) (SS) Principles of Macroeconomics

and

- ECO 102 (3 cr.) (SS) Principles of Microeconomics
Note: Either ECO 101 or 102 will satisfy the basic Social Science Group Requirement.

English

- ENG 102 (4 cr.) (BC) Introductory College Writing
Prereq: placement examination or ENG 101.

and

- ENG 301 (3 cr.) (IC) Intermediate Writing
Prereq: ENG 102 and English Proficiency Exam.

Mathematics

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

or

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

Philosophy

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

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.

Statistics

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

or

- ECO 410 (3 cr.) Economic and Business Statistics I
Prereq: ECO 102; MAT 150 or 180 or equiv.

Pre-Dentistry

Satisfactory completion of University General Education Requirements, College Group Requirements, a major field, and the basic sciences listed below lead to the bachelor's degree and qualify students for consideration by most schools of dentistry.

credits

Biology or Zoology with laboratory	12-16
Chemistry: Inorganic, including qualitative analysis, & lab	9-11
Chemistry: Organic with laboratory	8-10
English	8-12
Physics with laboratory	8-10

Recommended electives include psychology, sociology, biochemistry, embryology, and statistics. Because different schools of dentistry may require credits in some or all of these subjects, students are advised to become familiar with *Admission Requirements of U.S. and Canadian Dental Schools*, a brochure which may be ordered from the American Association of Dental Schools, 1625 Massachusetts Avenue N.W., Washington, D.C., 20036.

Pre-Education

—See pages 86 and 213.

Pre-Engineering

—See pages 114 – 119.

Pre-Law

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, 320; four courses in English; History 105, 204, 205, 310, 516, 517; Philosophy 101, 185; Political Science 101, 201, 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, One Dupont Circle N.W., Washington, D.C., 20036. The admission requirements of specific schools of osteopathic medicine are available from the American Association of Colleges of Osteopathic 6110 Executive Blvd., Suite 405, Rockville, Maryland 20852.

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-Medical Technology

The program leading to a Bachelor of Science degree in Medical Technology fulfills the requirements for medical technology education of the Committee on Allied Health Education and Accreditation. Graduates of Wayne State University with the degree Bachelor of Science in Medical Technology are eligible to take a national certification examination in Medical Technology.

Admission to the junior year professional curriculum in the College of Pharmacy and Allied Health Professions is competitive and selective. Applications for admission to this program must be submitted to the Department of Medical Technology by April 15 of the year in which a student wishes to enter the professional program. The professional program begins in September only.

The courses listed below include pre-professional requirements and the University General Education Requirements (see page 21), all of which must be completed prior to admission to the professional curriculum.

First Year

	<i>credits</i>
BIO 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) Introduction to Computing	3
ENG 102 —(BC) Introductory College Writing	4
M T 208 —Medical Technology Seminar	1
MAT 180 —(MC) 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
CHM 510 —Survey of Analytical Chemistry	3
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
SOC 200 —(SS) Understanding Human Society *	3
Humanities electives	6
Foreign Culture elective	3

— Cytotechnology Concentration

The program leading to the Bachelor of Science degree in Medical Technology with a concentration in cytotechnology fulfills the requirements for cytotechnology education set forth by the Committee on Allied Health Education and Accreditation in collaboration with the American Society of Cytotechnology. Graduates from Wayne State University with this degree are eligible to take a national certification examination in cytotechnology.

Admission to the junior year professional curriculum in the College of Pharmacy and Allied Health Professions is competitive and selective. Applications for admission to the cytotechnology program must be submitted to the Department of Medical Technology by April 15 of the year in which a student wishes to enter the professional curriculum. The professional program begins in September only.

The courses listed below include pre-professional requirements and the University General Education Requirements (see page 21), all of which must be completed prior to admission to the professional curriculum. Students transferring into Wayne State University are requested to contact the Department of Medical Technology (577-1386) for their recommended course sequence format.

First Year

BIO 151 —(LS) Basic Biology I	4
BIO 287 —Anatomy and Physiology	5
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 —(MC) Elementary Functions	4
PHI 105 —(CT) Critical Thinking *	3
SOC 200 —(SS) Understanding Human Society *	3
SPB 101 —(OC) Oral Communication: Basic Speech	2
UGE 100 —(GE) The University and Its Libraries	1

Second Year

BIO 152 —Basic Biology II	4
BIO 220 —(LS) Introduction Microbiology	4
BIO 271 —Comparative Vertebrate Zoology	4
CHM 224 —Organic Chemistry I	4
ENG 301 —(IC) Intermediate Writing	3
HIS 110 —(HC) The Ancient World *	3
P S 101 —(AI) American Government **	3
Humanities Electives	6
Foreign Culture Elective	3

* Preferred course to satisfy General Education Requirement.

** A qualifying examination in high school chemistry is a prerequisite to electing CHM 107.

Pre-Mortuary Science

Wayne State University offers a three-year curriculum leading to a certificate in mortuary science as well as a four-year Bachelor of Science degree program in this area. Before admission to the University's Department of Mortuary Science for the third or professional year, the student must have completed the required preprofessional courses (indicated by an asterisk) with a grade of 'C' or better.

credits

First Year

BIO 151—(LS) Basic Biology I *	4
MAT 180—(MC) Elementary Functions	4
ECO 101—(SS) Principles of Macroeconomics	4
ENG 102—(BC) Introductory College Writing *	4
BIO 152—Basic Biology II *	4
PSY 101 or PSY 102	
—(LS) Introductory Psychology *	4
—(LS) Elements of Psychology *	3
ENG 301 or ENG 303	
—(IC) Intermediate Writing *	3
—(IC) Writing the Research Paper *	3
ECO 102—(SS) Principles of Microeconomics	4
UGE 100—(GE) The University and Its Libraries	1

Second Year

CHM 102—(PS) General Chemistry I *	4
CHM 103—General Chemistry II *	4
ACC 301—Elementary Financial Accounting Theory *	3
PSY 260—Psychology of Social Behavior *	4
HIS 110 or HIS 120	
—(HS) The Ancient World	4
—(HS) The Medieval World	4
CSC 101—(CL) Introduction to Computing *	3
SPB 101—(OC) Oral Communication: Basic Speech *	2
ACC 302—Elementary Managerial Accounting Theory *	3
PHI 105—(CT) Critical Thinking	3
P S 101—(AI) American Government	4

Students who register in the College of Liberal Arts with the intention of completing the requirements for admission to the Department of Mortuary Science should consult with the staff of the department at 627 W. Alexandrine as early as possible; phone: 577-2050.

Pre-Nursing

—See page 351.

Pre-Occupational Therapy

The degree Bachelor of Science in Occupational Therapy is offered in the College of Pharmacy and Allied Health Professions. The program is accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association in collaboration with the American Occupational Therapy Association and prepares students to take the national certification examination.

An application for the professional program in occupational therapy must be submitted to the Occupational Therapy Department by February 15 of the year in which a student wishes to enter. The professional program begins during the summer term. A minimum of sixty-five semester credits is required for admission. Applicants must have an overall honor point average of 2.5 as well as a 2.5 average in the natural sciences and behavioral sciences that are required for admission. For information and an application form, contact the Department of Occupational Therapy at 577-1435.

The following curriculum is required of all candidates for subsequent admission to professional study in the Department of Occupational Therapy.

credits

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 213—(PS) General Physics	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	

General Education Requirements: Candidates for the bachelor's degree must complete twelve credits in the following areas, to satisfy the remaining University requirements in general education (see page 21). While requirements in English, mathematics, and American government are fulfilled by courses cited in the preprofessional program above, the following areas are also required:

credits

Historical Studies (HS)	3
Foreign Culture (FC)	3
Visual and Performing Arts (VP)	3
Philosophy and Letters (PL)	3

It is expected that students will complete these requirements before entry into the professional program. It is expected that students will complete these requirements before entry into the professional program.

Pre-Optometry

Satisfactory completion of University General Education Requirements, College Group Requirements, a major field, and the courses listed below lead to the bachelor's degree and qualify a student for consideration by most schools of optometry. Although some schools will accept students who have completed only two years of undergraduate work, preference is given to those who have earned the bachelor's degree.

Biology, including microbiology, with laboratory	12-16
Inorganic chemistry with laboratory	8-10
Physics with laboratory	8-10
Mathematics:	
Algebra and Trigonometry	3-4
Calculus	6-8
English	6-8
Psychology	3
Statistics	3

Recommended electives include biochemistry and social sciences. Information about specific schools is available from the Association of Schools and Colleges of Optometry, 6110 Executive Blvd., Suite 514, Rockville, Maryland 20852.

Pre-Pathologist Assistant

The Pathologist 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.

Pre-professional Program Admission: Students seeking admission to the program in the College of Liberal Arts should refer to the admissions requirements of the University as stated on page 14. Courses in this program are taken under the guidance of the College of Liberal Arts. Students must pass the required pre-professional 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 102 — General Chemistry I	4
CHM 103 — General Chemistry II	4
ENG 102 — (PS) Introductory College Writing	4
MAT 180 — (MC) Elementary Functions	4
PHI 105 — (CT) Critical Thinking	3
SPB 101 — (OC) Oral Communication: Basic Speech	3
UGE 100 — (GE) The University and its Libraries	1

Second Year

BIO 220 — Introductory Microbiology	4
CSC 101 — (CL) Introduction to Computing	3
ENG 305 — (IC) Technical Communication I	3
HIS 110 or HIS 120	
— (HS) The Ancient World	4
— (HS) The Medieval World	4
M S 405 — Human Anatomy and Physiology	4
PSL 322 — Fundamentals of Human Physiology	4
P S 101 — (AI) American Government	4

Pre-Pharmacy

Wayne State University's College of Pharmacy and Allied Health Professions offers a Bachelor of Science degree in pharmacy. Completion of program requires a minimum of five years. Students are registered for their first two years in the College of Liberal Arts (or some other accredited college) in which they must complete the courses listed below (or their equivalents) with grades of 'C' or better.

Admission to the first year Pharmacy curriculum in the College of Pharmacy and Allied Health Professions is competitive and selective (see Pharmacy Admission Requirements, pages 363–364). Students are admitted only for the fall semester.

Pre-pharmacy courses taken under the direction of the College of Liberal Arts:

First and Second Years — Preprofessional Core

	<i>credits</i>
BIO 151 — (LS) Basic Biology I (lab required)	4
BIO 220 — Introduction to 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
CSC 101 — (CL) Introduction to Computing	3

ECO 100 — (SS) Survey of Economics	4
ENG 102 — (BC) Introductory College Writing	4
ENG 301 — (IC) Intermediate Writing	3
MAT 201 — (MC) 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

These requirements *must* be completed by the end of the Spring/Summer semester of the year for which professional admission is sought. Exceptions may be made in extraordinary cases in which application of these requirements constitutes a great injustice.

Because of rapid changes in technology, preprofessional science credits must be completed within five years prior to admission to the professional program.

General Education Requirements: Students must elect additional liberal arts courses, including fulfillment of the University General Education Requirements (see page 21). Some pre-pharmacy courses, indicated by parenthetical prefixes to course titles in the list above, fulfill 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):

	<i>credits</i>
Oral Communication (OC) *	2
Critical Thinking (CT) *	3
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

Pre-Physical Therapy

The program leading to the Bachelor of Science in Physical Therapy is offered by the College of Pharmacy and Allied Health Professions of Wayne State University in cooperation with the College of Liberal Arts and the School of Medicine.

The first two years are taken in the College of Liberal Arts. It is recommended that students interested in the professional program in physical therapy have the following high school courses: biology, chemistry, language, physics, geometry, and intermediate algebra. Freshmen and transfer students may obtain application forms for admission to the College of Liberal Arts from the Office of Admissions of the University. Students who already hold an undergraduate degree are eligible to receive a second bachelor's degree.

The professional program requires two and one-half academic years. Students must apply to the Department of Physical Therapy for information and application forms. Application must be received by January 15 of the year in which a student wishes to enter the professional curriculum. The professional program begins each year in the spring/summer semester only. Only thirty-six students are accepted. Students admitted to the program must have completed all prerequisite courses or their equivalents, have a minimum grade point average of 2.8, be in good health, and possess the personal qualifications necessary for the professional responsibilities of a physical therapist. All applicants to the professional program are required to take the Allied Health Professions Admission Test (AHPAT) and a personal interview may be required.

* Can be waived by passing a competency examination; Oral Communication may also be waived by specific high school preparation.

First and Second Years

	credits
BIO 151 —(LS) Basic Biology I	4
BIO 152 —Basic Biology II	4
Advanced Biology (BIO 340 & 341 recommended), or BIO 271	5-6
CHM 107 or CHM 105	
—(PS) Principles of Chemistry I	4
—(PS) Introductory Principles of Chemistry	6
BCH 101 or CHM 103	
—Introductory Biochemistry (strongly recommended)	2
—General Chemistry II	4
ENG 102 —(BC) Introductory College Writing	4
ENG 301 or ENG 303	
—(IC) Intermediate Writing	3
—(IC) Writing the Research Paper	3
Humanities elective	3
MAT 180 —(MC) Elementary Functions	4
Introductory statistics (PSY 410 or EER 763 or PSL 767 or STA 102 suggested)	4
PHY 213 —(PS) General Physics	4
PHY 214 —General Physics	4
PSY 101 —(LS) Introductory Psychology	4
Psychology elective	4
Human development (PSY 240 or PSY 549)	3-4
Political Science (P S 101 or P S 103 or HIS 103, or HIS 204 and HIS 205, or HIS 516 and HIS 517)	4-8
Electives	3
Total: 63-73	

Pre-Radiation Therapy Technology

Radiation Therapy Technology is a health care discipline which utilizes ionizing radiation for the treatment of malignant diseases. 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 Bachelor of Science program prepares students for the technical, theoretical and psychological aspects of this career.

This program requires four years of study: two years of pre-professional courses and two years of professional courses, comprising a minimum of 131 credits. Upon completion of the program, students are eligible to take the national certification examination administered by The American Registry of Radiologic Technologists.

The *pre-professional* program is offered by the College of Liberal Arts. Application for admission to the *professional* program should be made in the sophomore year, and a completed application must be submitted by April 15 for the following year. Exceptions to this application deadline require approval by the Chairperson, Department of Radiation Technology.

Application forms and procedures can be obtained from the University Advising Center (577-2680) or the Department of Radiation Technology (577-1137). Students should refer to the requirements for application to the professional program as listed in this bulletin under the Department of Radiation Technology, College of Pharmacy and Allied Health Professions (page 397). Students are admitted to the professional curriculum by the College of Pharmacy and Allied Health Professions in the fall term of each year.

Students in the pre-professional program are encouraged to contact the Department of Radiation Technology early in the curriculum for career counseling and scheduling a visit to a clinical radiation therapy facility. Course counseling for the pre-professional program taken in the College of Liberal Arts is provided by the University Advising Center.

High school students planning to enter this program are urged to enroll in as many high school English, mathematics, and laboratory science courses as possible. Courses in computer science and typing are also highly recommended. This will provide students with the best background for successful completion of the college requirements.

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 —General Chemistry I	4
CHM 103 —(PS) General Chemistry II	4
ENG 102 —(BC) Introductory College Writing	4
ENG 301 —(IC) Intermediate Writing	3
MAT 180 —(MC) 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: 68	

With the exception of the Writing-Intensive course in the major field, and the Social Science Group Requirement, all University General Education Requirements and pre-professional course requirements must be completed prior to admission to the professional program.

The Allied Health Admissions Test must be taken not later than March of the year in which the student wishes to apply.

Pre-Social Work

The School of Social Work offers opportunity for study at the undergraduate level to prepare students for practice in the profession of social work. Sixty credits of course work or equivalent at the freshman and sophomore levels must be distributed according to the following pattern as an admission requirement to the professional program in the junior and senior years.

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 21 - 31.

A. *Social Sciences*: The following distribution of courses is required.

1. (SS) Anthropology—3-4 credits
2. (SS) Economics—3 credits (Principles of Macroeconomics, ECO 101, recommended)
3. (HS) History—3 credits (Not HIS 130)
4. (AI) Political Science—3-4 credits
5. (SS) Sociology—two courses

* General Education Group Requirements.

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.
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—3 credits (excluding logic)
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

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.

Additional Competency Requirements and Group Requirements must be satisfied either prior to or subsequent to admission to the professional program in social work.

The professional program begins in either September or January. Deadlines for applying for admission to the professional program are March 31 and August 31, respectively.

For details about regularly scheduled informational meetings concerning the professional program, please contact the School of Social Work at 577-4409.

The professional program leading to the Bachelor of Social Work consists of four semesters of study in the junior and senior years. It is required that the student enroll in the entire professional component during any one semester. Usually the four-semester professional program of class and field work requires full-time study extending over two successive academic years.

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

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 Hearing Clinic if they feel that they have defects which might impair their effectiveness as teachers. A satisfactory TB test is required at the time of admission to the College of Education.

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 submitted after the completion of fifty-three credits with a minimum 2.5 cumulative honor point average, and a passing score has been achieved on the University English Proficiency Examination.

Combined Curriculum for Academic Studies

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 who will supply a curriculum outline, provide guidance, and direct them to the adviser in the major at the beginning of the junior year. Students may also see the Division of Academic Services, Room 489, 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 at 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 junior and senior years, student program requests will be signed by both a College of Liberal Arts major adviser and by the appropriate adviser in the College of Education.

Degree in the College of Education: Students apply for admission to the College of Education after completing fifty-three credits in course work, transfer to that College at the beginning of the junior year, and follow the degree requirements of the College of Education.

K-12 Majors

Students wishing to major in *Art Education* should see an adviser in Room 163, Community Arts Building.

Students wishing to major in *Physical Education* should see an adviser in Room 264, Matthaehi Building.

Students wishing to major in *Music Education* should consult an adviser in Room 105, Schaver Music Building.

Secondary Teaching

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 21 – 31.

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 22.

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.

Vocational Education Programs

The vocational education program requirements as presented below apply only to students admitted prior to August 1990. For requirements applicable to any subsequent enrollment in vocational education programs, students should contact the Academic Services Office, 489 College of Education; 577-1600.

These programs are designed to prepare teachers for vocational education programs in business and distributive education, home economics education, family life education, and industrial education. Satisfactory completion leads to secondary certification in any one of the above curriculum areas. Those students who have also completed the required work experience coupled with the appropriate major or minor receive vocational endorsement in a specific occupational area. Those students who major in Industrial Arts do not receive vocational endorsement.

Students who major in any of the industrial-technical areas usually complete their major at a community college. They also have the option of taking the Michigan Occupational Competency Examination if they feel that their experiences in a trade or technical area have given them the knowledge and skills required of a specialist. Successful completion of the Michigan Occupational Competency Examination meets the requirements of a major area for certification purposes.

Students pursuing a degree in vocational education are eligible for admission to the College of Education as freshmen. During the first two years, vocational students acquire a broad general education; courses required by the future major curriculum area are also taken. During this period, students are encouraged to consult with an adviser in their major in the College of Education. Students who are completing their major at a community college are particularly encouraged to consult with such an adviser. For additional information regarding professional education and the major, refer to the College of Education section of this bulletin.

Teaching Minor: One minor of twenty-four credits is required. The recommended minor for all vocational majors is social science (i.e., anthropology, economics, geography, history, political science, sociology and psychology). Students who wish to select a minor in an area other than social science should discuss their interests with a major adviser.

Elementary Teaching

Pre-elementary majors should include in their first two years' work the following requirements:

University General Education Requirements: see pages 21 – 31.

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, GEG 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

The curriculum in special education prepares teachers for work with 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 the following general education requirements:

University General Education Requirements: see pages 21 – 31.

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 Avenue; 577-2321

Chairperson: Michael T. Martin

Lecturers

Patricia W. Coleman-Burns, L. Todd Duncan, Ella J. Davis

Africana Studies is the systematic investigation of the culture, history, political economy, arts, literature, and languages of peoples of African descent, and their contribution to world civilization. Interdisciplinary research and teaching programs and the co-major in Africana Studies prepare students for professional careers in public service, teaching, human services, community development, law, and international relations. This curriculum is also useful in preparation for professional and graduate studies in the humanities, social and behavioral sciences where the focus of study is on the Black world.

Co-Major Program

The Africana Studies Co-Major is a degree designation which students earn by completing department core and elective courses as a supplement to the degree requirements of another bachelor's degree program offered in a college of Wayne State University.

Admission: Students may apply for acceptance to the Africana Studies Co-Major Program by submitting a *Declaration of Major* form to the co-major adviser at the beginning of their junior year. They may prepare for the Co-Major by completing 100- and 200-level Africana Studies core courses during their first two years.

CO-MAJOR REQUIREMENTS: The co-major requires thirty credits of core and elective courses offered by the Department of Africana Studies and by a variety of other departments such as: English, History, Political Science, Art History, Sociology, Anthropology, and Geography. All course work must be completed in accordance with the academic procedures of the University (see pages 14-39) and those of the college sponsoring the major program taken as a cognate to the Africana Studies curriculum.

CORE REQUIREMENTS

credits

AFS 101 —Introduction to Africana Studies	3
AFS 201 —African-American Culture: Historical and Aesthetic Roots	4
AFS 221 —(SS) Black Social and Political Thought	4
AFS 321 —The Black Community and Public Policy	3

One of the following:

HIS 314 —The Black Experience in America I: 1619-1865	3
HIS 315 —The Black Experience in America II: 1865 to the Present	3

One of the following:

ENG 239 —(IC) Introduction to Afro-American Literature: Literature & Writing	4
SPC 504 —Communication in the Black Community	3

UNDERGRADUATE COURSES (AFS)

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 433.

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. (Y)

201. African American Culture: Historical and Aesthetic Roots. Cr. 4

Core requirement for Africana Studies co-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 co-majors. Survey of the Black intellectual and political tradition from the United States, the Caribbean and Africa. (T)

321. The Black Community and Public Policy. Cr. 3

Core requirement for Africana Studies co-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)

478. Contemporary African Politics. Cr. 4

Nature of African politics; impact of African politics on international relations. (B)

503. Black Politics. Cr. 4

Nature and texture of black politics; various perspectives of politics by blacks; the impact of blacks on American politics. (Y)

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. (F)

513. The Black Family. Cr. 3

Survey and analysis of historical and social forces relative to the study of the Black family. (Y)

531. Special Topics in Africana Studies. Cr. 3

Topics to be announced in *Schedule of Classes*; topics may include: Caribbean politics, African development, male-female relationships, Negritude. (T)

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)

591. Field Work In the Black Community. Cr. 2-12

Prereq: written consent of instructor. Open only to majors. Field placement in community-based, human services, and civic organizations and governmental agencies. (Y)

690. Directed Study. Cr. 3-12

Prereq: written consent of instructor. Open only to majors. Reading and research projects. (Y)

AMERICAN STUDIES

Office: 51 West Warren; 577-2450

Director: Jerry Herron

Advisory Committee

English: Jerry Herron, Ross J. Pudaloff, Henry Golemba; *History:* Alan Raucher, Sandra VanBurkleo; *Humanities:* Sandra McCoy; *Philosophy:* William D. Stine; *Political Science:* Philip R. Abbott

Degree Program

BACHELOR OF ARTS with a major in American studies

American Studies is an interdepartmental program administered by an advisory committee composed of specialists on American culture, offering undergraduates an opportunity for a flexible and diversified major. By enrolling in a core of required courses and by choosing electives among the humanities and social sciences, majors concentrate on the study of the nature and development of American society and culture. Depending on individual interests, electives may be chosen from the departments of Africana Studies, Anthropology, Art History, Economics, English, Geography, History, Humanities, Philosophy, Political Science, Sociology, and some interdisciplinary programs, such as Chicano-Boricua Studies and Urban Studies. Interested students should consult the director or those committee members whose fields most closely approximate their own interests.

Admission Requirements: See the general requirements for undergraduate admission to the University, page 14.

DEGREE REQUIREMENTS: Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 21) and the College of Liberal Arts Group Requirements (see page 202), 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 14-39 and 202-207, 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 A S 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.

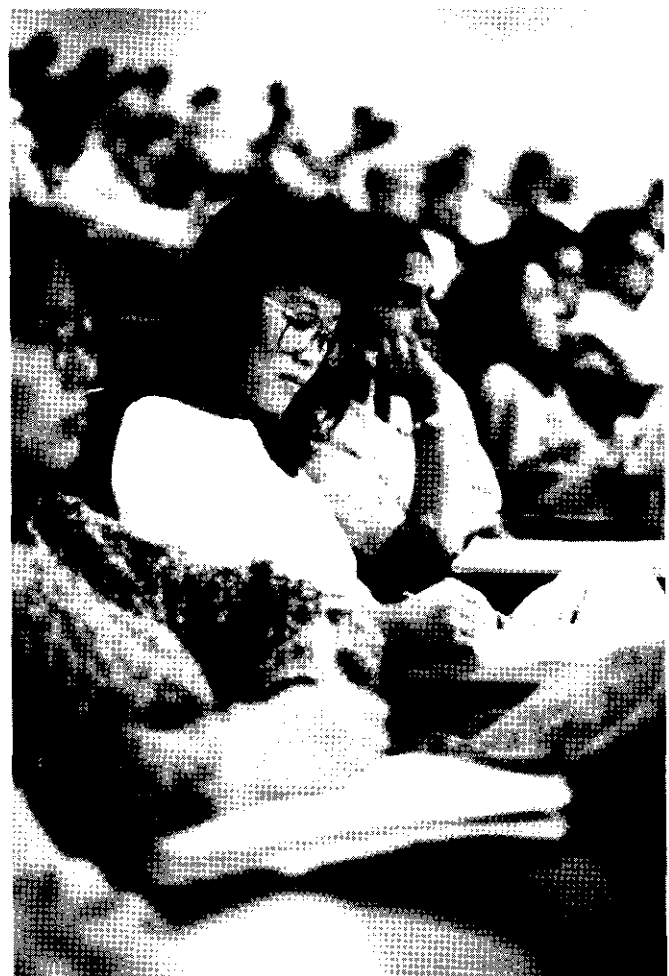
UNDERGRADUATE COURSES (A S)

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 433.

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. American National Character. Cr. 3 or 4
Inquiry into the values of American civilization as revealed in a wide variety of evidence from the beginnings of the American experience to the present, with a view to understanding the distinctive characteristics of the American people. (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

Acting Chairperson: Marietta L. Baba

Professors

Barbara C. Aswad, Marietta L. Baba, James B. Christensen (Emeritus), Bernice A. Kaplan, Bernard Ortiz de Montellano, Arnold R. Pilling, Mark L. Weiss (on leave 1990-92)

Associate Professors

Gordon L. Grosscup, Christine Obbo-Southall

Assistant Professors

Andrea Sankar, Frances Trix

Adjunct Professors

Morris Goodman, Gabriel W. Lasker (Emeritus), Madeleine Leininger, Eugene Perrin

Adjunct Associate Professors

Elizabeth Briody, Guerin Montilus

Adjunct Assistant Professors

Karen Davis, Dorothy Nelson

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 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 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 and applied anthropology, and archaeology. Wayne State's department offers a broad-based Bachelor of Arts in anthropology.

Undergraduate training in anthropology is designed for various groups of students: (1) those desiring scientific knowledge of the social and cultural determinants of behavior; (2) those preparing to enter a public service profession such as librarianship, social work, nursing, medicine, education, or law; (3) those preparing for employment in historical or natural science museums; (4) those preparing to serve the business and/or industrial community as a specialist in cross-cultural analysis; (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

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

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 14.

DEGREE REQUIREMENTS: Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 21) and the College of Liberal Arts Group Requirements (see page 202), 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 14-39 and 202-207, 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, and two of the following three courses: 638, 639, or the capstone course. 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, and two of the following three courses: 638, 639, or the capstone course; Sociology 200, 330, 420, 410 and 405 or 605 or 606. They must complete a total of at least twenty 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 204.

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 and ANT 211 (each offered for three to four 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 fourteen 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. 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 433.

210. (SS) Introduction to Anthropology. Cr. 3-4

Biological evolution, human variability, prehistoric man and early cultures, ethnography, language and cultural growth, diffusion and independent invention, problems of the field. (T)

211. (LS) Introduction to Physical Anthropology.

(Lct: 3; or Lct: 3; Lab: 2). Cr. 3-4

Prereq: sophomore standing. Meets General Education Laboratory Requirement when elected for 4 credits. Role of hereditary and environmental factors, human genetics, meaning of 'race' and racial classifications, fossil records, evolution of man. (T)

291. Directed Study: W.S.U. - Salford Exchange. Cr. 3-8

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)

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, Subsaharan Africa, Asia, American Indian. (T)

311. Detroit Minorities: Arabs, Hispanics, and Blacks.

Cr. 3-4

Offered for four credits to Liberal Arts Honors students only. Arab, black, and Hispanic minorities from the perspective of history, social organization, and cultural background. Topics include: family roles, community structure, migration, religious beliefs, education, and 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. (Y)

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)

325. Death and Dying Around the World. 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 Subsaharan Africa; impact of European and North African culture on the societies of the subcontinent. (I)

353. Native Americans. Cr. 3

Survey of Indian and Eskimo 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 Indian and Mestizo society to modernization within national contexts. (I)

355. (FC) Arab Society In Transition. (SOC 355)(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)

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)

495. 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 man; human genetic variability, human physiological plasticity and culture as associated mechanisms by which humans adapt to environmental stress. (I)

518. (CRJ 515) 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)

519. Human Osteology. Cr. 3

Prereq: ANT 211. Introduction to the identification and measurement of human skeletal material. Topics include: anatomical nomenclature, measurement and analysis of human skeletal parts (including aging and sexing), paleo-pathological diagnoses. (I)

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)

522. Women In Development. Cr. 3

Social change generated when theories, technologies, financial power and consumer goods from industrial nations come in contact with non-industrial ones. Societal ideologies, class issues and outside influences are critical to gender, economic and political issues. (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. 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. (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

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)

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: any ANT course numbered 500 or above. 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: undergraduate anthropology major or graduate student with little anthropology background; or ANT 210. Current analysis of theoretical issues in each of the four fields of anthropology. (Y)

608. Studies in Folklore. (ENG 560). 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)

618. Theory and Problems of Emergent Countries. (SOC 694). Cr. 3(Max. 6)

Prereq: ANT 210 or 520 or S S 191 or SOC 201 or consent of instructor. Underdeveloped and developing countries. Emergent nationalism and socio-cultural factors affecting change. Cultural, demographic, institutional, technological aspects. (I)

623. Cultures of Subsaharan Africa. Cr. 3

Prereq: ANT 210 or S S 191 or SOC 201 or consent of instructor. Subsaharan African cultures and societies; emphasis on both complex and simple political systems. (I)

629. Culture Area Studies. Cr. 3

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. (L S 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: ANT 210 or 520 or consent of instructor. Theoretical analysis and explanation of contemporary 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)

641. (NUR 600) Transcultural Health and Life Cycle. Cr. 3-5

Prereq: introductory course in anthropology or consent of instructor. Comparative theoretical and research focus on cognitive and symbolic health care beliefs and practices of selected Western and non-Western cultures, related to the life cycle: infancy, childhood, adolescence and adulthood. (I)

645. Culture and Health Policy. 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 212 or 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)



ART HISTORY

Office: 150 Community Arts Center, 450 Reuther Mall; 577-2980

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 202-207).

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 160.

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.

BIOLOGICAL SCIENCES

Office: 114 Biological Sciences; 577-2873

Chairperson: P. Dennis Smith

Associate Chairperson: R. Anton Hough

Academic Services Officers: Laura Hamdan, Linda R. VanThiel

Academic Associates: Laurie P. Brooks, Julia Sosnowsky

Professors

Walter Chavin (Emeritus), David R. Cook (Emeritus), Dominic L. DeGiusti (Emeritus), Stanley K. Gangwere, R. Anton Hough, Seikichi Izawa, James M. Jay, Laurence Levine (Emeritus), Lida H. Mattman (Emeritus), Kazutoshi Mayeda, Hiroshi Mizukami, William S. Moore, David L. Njus, Howard R. Petty, William Prychodko (Emeritus), Claude M. Rogers (Emeritus), Harold W. Rossmoore, Albert Siegel, P. Dennis Smith, John D. Taylor, William L. Thompson

Associate Professors

Robert Arking, Kuo-Chun Chen, Hector R. C. Fernandez, D. Carl Freeman, V. Hari, Leo S. Luckinbill, Willis W. Mathews (Emeritus), Ann Sodja, Robert S. Stephenson, Curtis J. Swanson

Assistant Professors

Edward Golenberg, Allen W. Nicholson, Allen J. Rosenspire

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*

**DOCTOR OF PHILOSOPHY with a major in biological sciences and specializations in environmental, evolutionary and systematic biology; cellular and developmental biology; regulatory biology and biophysics*

The department consists of four divisions: Division of Environmental, Evolutionary and Systematic Biology; Division of Microbiology and Molecular Genetics; Division of Cellular and Developmental Biology; and Division of Regulatory Biology and Biophysics. Together, they offer comprehensive knowledge in biological sciences, while individually each offers in-depth training for its special area.

Bachelor of Arts With a Major in Biological Sciences

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.

Admission requirements for the College are satisfied by the requirements for general undergraduate admission to the University; see page 14. Admission to major status in this department requires completion of BIO 151 and 152 with a grade of 'C' or better in both courses.

Students must have an over-all honor point average of at least 2.0 before being admitted to the major program. A grade point average of C (2.0 h.p.a.) is required for graduation.

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

* 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 202) and the University General Education Requirements (see page 21), 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 14–39 and 202–207, respectively.

Biology Core Requirements: A minimum of twenty-eight credits beyond BIO 151 and 152 are required of the major, including BIO 220, 340, 507, and 312 or 509. 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-five 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

Fall Semester

BIO 151	4
Chemistry 107	4
(OC) (SPB 101/ENG 306)	3
English 102	4
UGE 100	1
Total:	16

Winter Semester

BIO 152	4
Chemistry 108	5
Mathematics 180	4
(IC) English elective	3
Total:	16

Second Year

BIO 220	4
Chemistry 224	4
Language 101 course	4
(CL) course	3
Total:	15

BIO elective	4
Language 102 course	4
(CT) (PHI 105/SPC 211)	3
Chemistry 226	4
Total:	15

Third Year

BIO 340	3
Chemistry 227	2
(SS) course	4
Language 201 course	4
Elective	3
Total:	16

BIO 507	4–5
BIO 341/Biol. elective	3
(AI) course	4
(VP) course	4
Total:	15–16

Fourth Year

BIO 312/Biol. elective	4
(PL) course	4
(SS) course	4
(HS) course	4
Total:	16

BIO 509/Biol. elective	3
BIO 341/Biol. elective	3
BIO elective	3
(FC) course	3
(SS) course	4
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. The degree requirements for the Bachelor of Science, therefore, are different from those under the Bachelor of Arts degree. 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.

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 of Liberal Arts Group Requirements (see page 202) and the University General Education Requirements (see page 21), 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 14–39 and 202–207, respectively.

Major Requirements: A minimum of twenty-eight credits beyond BIO 151 and 152 are required of the major, including BIO 220, 340, 507, and 312 or 509. Majors must also take an additional laboratory course, which may be either BIO 341 or BIO 507 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-five credits must be taken in residence.

Cognate Requirements for the B.S. Degree: A major 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 his or her curriculum. 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	4
Chemistry 107	4
(OC) (SPB101/ENG 306)	3
English 102	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 507	4–5
Language 101 course	4
(AI) elective	4
Total:	15–16

Language 102 course	4
BIO 341/BIO elective	3
BIO 509/BIO elective	3
BIO 220	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	6–7
(SS) elective	3
(VP) elective	3
(CS) elective	3
Total:	15–16

—With Specialization in Biophysics and Molecular Biology

The Bachelor of Science with a specialization in biophysics and molecular biology is offered as an alternative Bachelor of Science degree. As with the Bachelor of Science in biological sciences, the biophysics and molecular biology degree fulfills professional school requirements; it has the identical language requirements but the cognates differ.

Students contemplating a specialization in biophysics and molecular biology 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, for the B.S. degree. 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 of Liberal Arts Group Requirements (see page 202) and the University General Education Requirements (see page 21), 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 14–39 and 202–207, 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 semester of 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. Computer Science 206, Biological Sciences 604, or equivalent. (If BIO 604 is elected, its credit will not count toward the required biology electives, above.)

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	4
Chemistry 107	4
Language	4
English 102	4
Total: 16	

Winter Semester

BIO 152	4
Chemistry 108	5
Language	4
English elective	3
Total: 16	

Second Year

BIO elective	4	Mathematics 202	4
Mathematics 201	4	Chemistry 226	4
Chemistry 224	4	Chemistry 227	2
Language	4	Group Requirement	3
Total: 16		Group Requirement	4
		Total: 17	

Third Year

Mathematics 203	4	Mathematics 235	3
Physics 217	5	Physics 218	5
BIO 602	4	BIO elective	2
BIO elective	3	BIO 604	4
Total: 16		Group Requirement	3
		Total: 17	

Fourth Year

Chemistry 542	3	Chemistry 544	4
Physics elective	3	BIO 594	2
BIO 616	3	BIO 596	2
BIO 596	1	Group Requirement	4
Group Requirement	4	Group Requirement	4
Total: 14		Total: 16	

Bachelor's Degree with Honors in Biological Sciences

Honors students in the Department of Biological Sciences must satisfy the following requirements:

1. Enroll in honors sections of Biological Sciences 151 and 152, or 161 and 162.
2. Consult with Biological Sciences Honors Adviser during freshman year.
3. Complete Biological Sciences Core Courses, see above.
4. Complete BIO 390, Directed Study, minimum two credits (max. 4); BIO 590, Honors Directed Study, minimum two credits (max. 4); BIO 595, Senior Honors Seminar, two credits; BIO 599, Terminal Essay, two credits.
5. Complete one semester of a Liberal Arts Honors Program 400-level seminar.
6. A minimum of sixteen credits in honors-designated course work, including the honors credits in Biological Sciences and Honors Program courses listed above, and other honors-designated credits earned in Honors Program courses or in honors sections of courses offered by other departments. For further information about other honors-designated courses 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.

Students must maintain an over-all honor point average of at least 3.3 in the major to be awarded the Honor's Degree.

Students with a Biological Sciences h.p.a. of 3.5 may be accepted into the program without having taken the Introductory Biology Honors sequence. Arrangements may be made with the Honors Adviser to elect sixteen credits in designated Honors course requirements.

Program Calendar

Year I: Completion of honors component in Biological Sciences 151 and 152; meeting with the Biological Sciences Honors Adviser, and selection of the student's sponsor.

Year II: Entry into Directed Study, BIO 390; completion of credits under the tutelage of the honors sponsor.

Year III: Continuation of Directed Study, BIO 390 (max. 4 credits); beginning of Honors Directed Study, BIO 590.

Year IV: Completion of one course in the sequence HON 420 through 425, three credits; BIO 590 (maximum four credits); BIO 595 (Senior Seminar, two credits); BIO 599 (Terminal Honors Essay, two credits). The essay must be approved by the student's sponsor and the honors adviser.

'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. For a description of this program, see page 206.

For further details and eligibility requirements regarding the 'AGRADE' Program and Biological Sciences, contact the Department Advising Office, 309 Natural 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, 507 and 312 or 509.

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 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 433.

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)

107. Biology of Human Health. Cr. 3

Prereq: high school biology. Not for biology major credit. Popular issues relating to human health including: anatomy and physiology of the human body, metabolism, reproduction, genetics, development, immune functions, population, and diseases. (Y)

151. (LS) Basic Biology I. (Lab: 3; Lct: 3). Cr. 4

Prereq: high school science or BIO 105. For the science major and certain pre-professional programs. BIO 151–BIO 152 sequence required of all biology majors. Meets general education laboratory requirement. Material fee as indicated in *Schedule of Classes*. Factual and conceptual treatment of cell molecules, cell structure, metabolism, genetics, and development. (T)

152. Basic Biology II. (Lab: 3; Lct: 3). Cr. 4

Prereq: BIO 151 or 105 and consent of instructor. 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)

161. (LS) Honors Biology I: Basic Principles. Cr. 5

Prereq: high school chemistry and biology. Meets General Education Laboratory Requirement. Fundamentals of prokaryotic and eukaryotic cell biology: biomolecules, cell structure and function, bioenergetics, cell growth and cell division, genetics, control of gene expression, development; viruses. First half of integrated accelerated sequence. (F)

162. Honors Biology II: Basic Principles. Cr. 5

Prereq: BIO 161 or consent of instructor. Principles of evolution: population biology and ecology, their strategies and outcomes in prokaryotes, and in the unicellular and multicellular eukaryotes. Second half of integrated accelerated sequence. (W)

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. (Y)

220. (LS) Introductory Microbiology. (Lab: 4; Lct: 3). Cr. 4

Prereq: CHE 280 or BIO 151 or BIO 105. 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)

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 105 or 151. 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)

- 312. General Ecology. (Lab: 3; Lct: 3). Cr. 4**
Prereq: BIO 152. 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. or coreq: 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)
- 385. Human Heredity. (BIO 585). (Lct: 3). Cr. 3**
Not for biology major credit. No credit after BIO 507. Development, anatomy and physiology of human sexual dimorphism; basis of Mendelian genetics as applied to man; inborn errors of metabolism, genetic engineering and understanding human population dynamics. (B)
- 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. (Lab: 2; Lct: 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)
- 507. Genetics. Cr. 4 or 5**
Prereq: BIO 152 or 220. 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)
- 509. Evolution. (Lct: 3). Cr. 3**
Prereq: BIO 507. Evidence for organic evolution; the nature and consequences of the process. (W)
- 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)
- 512. Quantitative Genetics. Cr. 4**
Prereq: college algebra, BIO 507; 312 or 509. Transmission, distribution, and quantitative effects of genetic elements in populations. (I)
- 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. 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)
- 550. Developmental Biology of Plants. (Lct: 2; or Lct: 2; Lab: 6). Cr. 2 or 4**
Prereq: BIO 102. Material fee as indicated in *Schedule of Classes*. Gametogenesis and development of plants. Control of development by hormones and environment. Tissue culture of cells and experimental plant embryology. (B)
- 555. Systematic Botany. (Lab: 3; Lct: 2). Cr. 3**
Prereq: BIO 102. Material fee as indicated in *Schedule of Classes*. Principles and methods of taxonomy and identification of native vascular plants. (I)
- 560. Invertebrate Zoology. (Lab: 4; Lct: 3). Cr. 4**
Prereq: BIO 152. Material fee as indicated in *Schedule of Classes*. Comparative and functional morphology, embryology; physiology and evolution of invertebrate animals. (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 507. 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 271. 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. (W)
- 564. Cancer Biology I. (Lct: 2). 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)
- 565. Cancer Biology II. Cr. 3**
Prereq: BIO 564. Advanced, integrated analysis of cancer and cell biology, pathology, etiology and therapy. (Y)

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)

574. Entomology. (Lab: 6; Lct: 2). Cr. 4

Prereq: BIO 102. 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 151 or 507 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)

581. Embryology. (Lct: 3). Cr. 3

Prereq: BIO 287 or 271, or equiv. Open only to nursing students. See BIO 561. (W)

585. (BIO 385) Human Heredity. (Lct: 3). Cr. 3

Not for biology major credit. No credit after BIO 507. Development, anatomy and physiology of human sexual dimorphism; basis of Mendelian genetics as applied to humans; inborn errors of metabolism, genetic engineering and understanding human population dynamics. (B)

590. Honors Directed Study in Biology. Cr. 2 (Max. 4)

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)

593. (W) Writing Intensive Course in Biological Sciences. Cr. 0

Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: BIO 510, 511, 512, 523, 525, 531, 546, 548, 550, 555, 560, 561, 562, 564, 569, 570, 572, 574, 575, 600, 601, 602, 608, 610, 616, 618, 620, 635, 645, 664, 666 or 669. 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)

594. Senior Seminar. (Smr: 1). Cr. 2

Prereq: senior standing in biological sciences. Aspects of current biological research. (F,W)

595. Senior Seminar: Honors Program. (Smr: 2). Cr. 2

Prereq: completion of core courses and a minimum of two credits in BIO 590. Open only to Honors students in biology. (F,W)

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)

599. Terminal Essay: Honors Program. Cr. 2

Prereq: consent of department and Honors adviser; senior standing and BIO 590. 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)

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. 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*. Theoretical and practical aspects of instruments used in biological sciences. Topics include: absorption spectrophotometry, fluorometry, gas chromatography, ion-exchange and high performance liquid column chromatographies, electrophoresis, centrifugation, data analyses and computers. Enrollment for the laboratory is highly recommended. (F)

604. Computer Application in Life Sciences. (Lct: 2; Lab: 4). 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. (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)

607. Human Genetics. (Lct: 3). Cr. 3

Prereq: BIO 507. 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: 3). Cr. 3

Prereq: BIO 507 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)

610. 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)

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)

620. General Bacteriology. (Lct: 3). Cr. 3

Prereq: BIO 220 or consent of instructor; a course in organic chemistry. General bacteriological phenomena, including the diversity of bacteria, with emphasis on ideas, mechanisms and fundamental principles. (I)

625. Biology Instruction for Teachers. (Lct: 2). Cr. 2-6

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. 1-3

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 312 or 509; 507. The merger of ecology and evolution, principally reproductive strategies. (I)

645. Aquatic Botany. (Lct: 3; Lab: 3). Cr. 4

Prereq: BIO 152. Material fee as indicated in *Schedule of Classes*. Systematics, physiology and ecology of algae and higher aquatic plants. (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: 3). 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). 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). 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)

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 (ENG 267, GEG 270, HIS 270)
2. Core electives (minimum of six credits, two courses), from:
 - FRE 275 — Introduction to Quebec Studies (GEG 275, HIS 275, P S 275)
 - HIS 335 — Canadian American Relations
 - P S 375 — Government and Politics of Canada
 - GEG 570 — Urban Canada
3. Cognates. Students are expected to complete three courses from the following list of Canadian Studies cognates, at least two of which must be selected from the seven core electives (the four listed above and the three cited below)

Additional courses from the core electives group (see above):

- GEG 232 — Historical Geography of the United States and Canada
- GEG 635 — Geography of Ethnic Groups in the United States and Canada
- P S 551 — Canadian and American Political Thought

Other cognates:

- ANT 353 — Native Americans
- ANT 649 — Historical Archaeology of North America
- ANT 650 — North American Prehistory
- ENG 260 — Introduction to Folklore
- GEG 613 — Advanced Urban Geography
- GEG 651 — Urban and Regional Systems
- HIS 350 — Explorers' Age
- P S 305 — The American Presidency
- P S 581 — American Foreign Policy
- P S 744 — Public Policy and the Aged

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.

Students planning to minor in Canadian Studies should consult with the Canadian Studies Director at the beginning of their junior year.

University and the College; see pages 14–39 and 202–207, respectively.

Major Requirements: Those who wish to follow the curriculum in the College of Liberal Arts 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, 662 or 664. In the first semester of the senior year, the student must enroll for at least two credits in Senior Research in Chemistry (Chemistry 599). The student may elect to do work under the direction of any senior staff member of the Department of Chemistry. It is advised that the student consult with the faculty during the last semester of the junior year in order to choose the field and staff member under whose direction this research will be carried out during the senior year.

2. Physics 217 and 218.

3. Mathematics 201, 202, 203, and 225 (or 235).

4. Language requirement: three semesters of German (preferred), French, or Russian.

At least twelve 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. By reducing the number of required hours in chemistry, this 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. With the consent of the Curriculum Committee, these students may write a B.S. thesis or a suitable research manuscript and, upon satisfactory completion of other minimal requirements, may be certified to receive the degree of Bachelor of Science in Chemistry with Honors.

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	3
Mathematics 202	4
Group Requirement	3
Total:	15

Second Year

Chemistry 224	4	Chemistry 226	4
Chemistry 312	4	Chemistry 227	2
Mathematics 203	4	Chemistry 302	3
Physics 217	5	Physics 218	5
Total:	17	Group Requirement	3
		Total:	17

Third Year

Chemistry 542	3	Chemistry 544	4
Chemistry 555	2	Chemistry 557	2
Mathematics 235 (or 225) ..	3	Chemistry 516	3
Language I	4	Language II	4
Group Requirement	3	Group Requirement	4
Total:	15	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: 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.

— 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 a Liberal Arts Honors Program 400-level seminar (consult the Liberal Arts section of 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 except 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, 542, 560, 644, or 662. Qualified students may substitute Chemistry 131 and 132 for Chemistry 107, 108, and 312.

* May be taken in the winter semester.

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 433.

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)

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*. Breakage 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: CHM 224 or 231 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 CHM 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. 2
Prereq: CHM 302 and 542 or equiv. Transition metal chemistry. Coordination compounds and organometallics. Bonding theories and reactivity. (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,S)

540. Biological Physical Chemistry. Cr. 3
Prereq: CHM 108 or 132 or equiv., MAT 202 or equiv.; prereq. or coreq: PHY 213 or 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 213 or PHY 217 or equiv. Required of B.S. and ACS-approved B.A. majors. 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 213 or PHY 217 or equiv. Required of B.S. and ACS-approved B.A. majors. Kinetic theory, empirical and theoretical kinetics, quantum theory, atomic and molecular structure, molecular spectroscopy, statistical mechanics. (F,W)

551. Chemical Synthesis Laboratory. Cr. 3
Prereq: CHM 227 and 302 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 both organic and inorganic compounds. (F)

555. (WI) Physical Chemistry Laboratory. Cr. 2
Prereq. or coreq: CHM 540 or 542 or 544 or equiv.; and PHY 214 or 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)

576. Special Topics in Chemistry for High School Science Teachers. Cr. 1-6(Max. 20)
Open only to certified high school science teachers. Topics offered in different semesters: laboratory experiment development, computers in chemistry, demonstrations, advanced concepts in various chemical fields. (I)

598. Honors Thesis Research in Chemistry. Cr. 2-4(Max. 8)
Prereq: consent of adviser. Open only to students in Liberal Arts 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. Cr. 3
All fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Computer programming and numerical methods with applications to the solution of chemical problems, instrument control, computer assisted instruction. (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)

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)

663. Biological Chemistry Laboratory. (CHM 763). Cr. 2

Prereq: CHM 660 or equiv. Basic experiments in isolation, purification, and analysis of biomolecules. Techniques currently used in molecular biology and recombinant DNA procedures stressed. (W)

664. Molecular Biology. (CHM 764). Cr. 3

Prereq: CHM 660 or equiv. Does not satisfy proficiency requirement in biochemistry except for students given conditional pass on biochemistry proficiency examination. Nucleic acid structure and function. Mechanism and control of replication, transcription, and translation. Mutation, genetic recombination, and recombinant DNA. Membranes and organelles. (W)

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)

681. Proficiency in Analytical Chemistry. Cr. 2

Prereq: graduate standing. Not offered for major or minor credit. Fundamental principles and methods of analytical chemistry. Satisfies graduate proficiency requirement in analytical chemistry. (I)

682. Proficiency in Inorganic Chemistry. Cr. 2

Prereq: graduate standing. Not offered for major or minor credit. Fundamental principles of inorganic chemistry. Satisfies graduate proficiency requirement in inorganic chemistry. (I)

683. Proficiency in Organic Chemistry. Cr. 2

Prereq: graduate standing. Not offered for major or minor credit. Fundamental principles, structures, and mechanisms of organic chemistry. Satisfies graduate proficiency requirement in organic chemistry. (I)

684. Proficiency in Physical Chemistry. Cr. 2

Prereq: graduate standing. Not offered for major or minor credit. Fundamental principles of thermodynamics, kinetics, bonding, and molecular energy levels. Satisfies graduate proficiency requirement in physical chemistry. (I)

685. Proficiency in Biochemistry. Cr. 2

Prereq: graduate standing. Not offered for major or minor credit. Survey of biochemistry with emphasis on protein structure and function, metabolism, and nucleic acids. (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; 577-3339

Chairperson: John M. Panagos

Graduate Officer: Lynn S. Bliss

Undergraduate Officer: Cathy Williams

Professors

Lynn S. Bliss, John M. Panagos

Associate Professor

Mervyn L. Falk

Assistant Professors

Dorothy E. Dreyer, Sharon Y. Manuel

Lecturers

Kristine V. Sbaschnig, Cathy Williams

Cooperating Faculty, Department of Audiology, School of Medicine

James A. Kaltenback, William F. Rintelmann, Dale O. Robinson, Tom Simpson

Adjunct Faculty

Herbert J. Bloom, Richard M. Cole, Sandra L. Hamlet, John F. O'Leary, John D. 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 primary 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 secondary to this mission.

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 14.

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

DEGREE REQUIREMENTS: Candidates for the Bachelor's degree must complete 120 credits of course work including satisfaction of the College of Liberal Arts Group Requirements (see page 202) and the University General Education Requirements (see page 21), 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 14–39 and 202–207, 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 an 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, 514, 530, 531, 532, 536, 646, 648; SPM 540 and 542.

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.

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 433.

COMMUNICATION DISORDERS and SCIENCES (CDS)

- 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)
- 200. 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)

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). Cr. 3
Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesiology 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)

514. Introduction to Speech Science. (SED 507). Cr. 3
Prereq: CDS 508, 509. Overview of the basic processes of speech production; presentation of the principles of psychology, acoustics, phonetics, linguistics, semantics, and neurology involved in normal speech production. (W)

530. Introduction to Speech Pathology. (SED 530). Cr. 3–4
Development of speech correction in education; classification, basic principles, methods of diagnosing and treating speech deficits; clinical observations required for majors only. (F,S)

531. Clinical Methods in Speech Pathology. (SED 531). Cr. 3
Prereq: CDS 530. 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 Speech Pathology. (SED 534). Cr. 2
Prereq: consent of instructor. 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 Speech Pathology. (SED 636). Cr. 2 (Max. 8)
Prereq: written consent of instructor. Material fee as indicated in *Schedule of Classes*. Supervised experience in application of methods of diagnosis and treatment of clinical cases. (T)

646. Communication Disorders I. (SED 646). Cr. 4
Introduction to the clinical management of articulation and language disorders. (W)

648. Communication Disorders II. (SED 648). Cr. 4
Introduction to the clinical management of cleft palate, voice, and stuttering disorders. (W)

AUDIOLOGY (SPM)

540. Introduction to Audiology. (AUD 540)(SED 540). Cr. 3
Introduction to physics of sound, anatomy of the hearing mechanism, audiometry, hearing aids, habilitation and rehabilitation of the hearing handicapped. (S)

542. Auditory Training and Speech Reading. (AUD 542)(SED 551). Cr. 3
Prereq: SPM 540. Principles and methods of auditory training and speech reading for the hearing impaired. Observations required. (W)

548. **Clinical Instruments. (AUD 548). Cr. 3**
Prereq: graduate status in audiology. Design, calibration, and use of electro- and bio-acoustic instruments in clinical audiology. (F)

600. **(AUD 600) Electrophysiological Procedures. Cr. 4**
Prereq: AUD 540; graduate standing in audiology or consent of instructor. Two distinct electrophysiological measures, auditory evoked potentials (AEPs) and acoustic immittance, are presented. Both procedures consist of several sub-tests used to assess the auditory system from the middle ear to the cortex, both in normal listeners and patients with auditory pathology. (W)

640. **Anatomy and Physiology of the Auditory and Vestibular Systems. (AUD 640). Cr. 4**
Prereq: graduate status in audiology. Functional anatomy, physiology, and central pathways of the auditory and vestibular system. (F)

641. **Pure-Tone and Speech Audiometry. (AUD 641). Cr. 3**
Prereq: graduate status in audiology. Fundamental principles and clinical applications of pure-tone and speech audiometry. Laboratory assignments required. (F)

642. **Special Audiologic Procedures. (AUD 642). Cr. 2**
Prereq: SPM 641. Special applications of pure-tone and speech stimuli in the assessment of peripheral and central auditory problems. Use of physiological tests in the diagnostic process. (W)

643. **Hearing Aids. (AUD 643). Cr. 4**
Prereq: SPM 641. Electroacoustic and clinical aspects of acoustic amplifiers for the hearing handicapped. (W)

645. **Clinical Topics In Audiology. (AUD 645). Cr. 1-2(Max. 8)**
In-depth study of special current topics in audiology. Topics to be announced in *Schedule of Classes*.. (Y)



COMPUTER SCIENCE

Office: 431 State Hall; 577-2476
Acting Chairperson: Robert Reynolds
Administrative Assistants: Sandra Green, Judith Lechvar

Professors

Michael Conrad, William Grosky, Mortesa A. Rahimi, Vaclav Rajlich

Associate Professors

Robert Reynolds, Ishwar Sethi, Nai-Kuan Tsao, Horst Wedde, Seymour J. Wolfson

Assistant Professors

Farshad Fotouhi, Bogdan Korel, Jia-Guu Leu, Alexis Manaster-Ramer, Bernard Nadel, Satyendra Rana

Lecturer

Richard Weinand

Adjunct Professor

Gregory Bachelis

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 238.

BACHELOR'S DEGREE PROGRAMS

Admission requirements for the College are satisfied by the general requirements for undergraduate admission to the University; see page 14. 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

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

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 283.) CSC 102 is the preferred introduction for students planning to continue in computer science, and is generally required before taking more advanced courses. This course (CSC 102) presumes that a student has had previous exposure to computer programming. Those students who have not had such experience should enroll in CSC 101. 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 206 is primarily intended for engineering students. *ALL courses at or below CSC 210 are considered 'introductory' and may NOT be used to complete CSC elective requirements.*

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. Mathematics is required to a level commensurate with the prerequisites of many advanced computer science courses.

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 21) and the College of Liberal Arts Group Requirements (see page 202). All course work must be completed in accordance with the regulations of the University governing undergraduate scholarship and degrees; see page 14–39 and 202–207, respectively.

COURSE REQUIREMENTS:

1. Mathematics 186, 187 (or 286), 201, 202, 203, 221, and 225.
2. Introductory programming courses Computer Science 102 and 203.
3. Computer Science courses beyond the introductory courses including the following:
 - (a) Computer Science 371, 441, 442, 450, and 451.
 - (b) Four additional Computer Science electives of at least three credits each, all numbered above 210 and one above 510, excluding CSC 495 and 590.

(c) A minimum of twenty credits in computer science must be earned at Wayne State University.

Students declaring their major should consult an adviser for a written assessment of current requirements.

— 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 235.

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 21) and the College of Liberal Arts Group Requirements (see page 202). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 14–39 and 202–207, respectively.

COURSE REQUIREMENTS:

1. Mathematics 186, 187 (or 286), 201, 202, 203, 221 and 225.
2. Introductory programming courses Computer Science 102 and 203.
3. Computer Science courses beyond the introductory courses including the following:
 - (a) Computer Science 371, 441, 442, 450, and 451.
 - (b) Three additional Computer Science electives of at least three credits each, all numbered above 210 and one above 510, excluding CSC 495 and 590.
 - (c) A minimum of twenty credits in computer science must be earned at Wayne State University.
4. One semester of a Liberal Arts Honors Program 400–level seminar (consult the Liberal Arts section of the *Schedule of Classes*, under 'Honors Program').
5. Computer Science 595, 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 595 after approval by two faculty advisers.

7. An overall Wayne State cumulative honor point average of at least 3.3.
8. A minimum total of fifteen credits in honors–designated course work, including Computer Science 595, and the Honors Seminar listed

above. For information about additional 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).

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). It may also be suitable for students who decide to enter computer science late in their academic careers and who thus may not be able to complete the requirements for the Bachelor of Science in a reasonable length of time.

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.

Admission Requirements: See page 235.

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 21) and the College of Liberal Arts Group Requirements (see page 202). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 14-39 and 202-207, respectively.

COURSE REQUIREMENTS:

1. Mathematics 186, 187 (or 286), 201, and 221.
2. Introductory programming courses equivalent to Computer Science 102 and 203.
3. Computer Science courses beyond the introductory courses including the following:
 - (a) Computer Science 371, 441, 442, and 451.
 - (b) Three additional Computer Science electives of at least three credits each, all numbered above 210 and one above 510, excluding CSC 495 and 590.
 - (c) A minimum of fifteen credits in computer science must be earned at Wayne State University.

Students declaring their major should consult an adviser for a written assessment of current requirements.

— 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 Liberal Arts 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 235.

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 21) and the College of Liberal Arts Group Requirements (see page 202). All course work must be completed in accordance with the regulations of the University governing undergraduate scholarship and degrees; see pages 14-39 and 202-207, respectively.

COURSE REQUIREMENTS:

1. Mathematics 186, 187 (or 286), 201, and 221.
2. Computer Science 102, 203, 210, 371, 441, 442, 511, and 513.
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 coursework 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 of Liberal Arts.
4. A minimum of twenty credits in computer science must be earned at Wayne State University.

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 of Liberal Arts.

COURSE REQUIREMENTS:

1. Mathematics 186, 187 (or 286), 201, and 221.
2. Introductory programming courses Computer Science 102 and 203.
3. Computer Science courses beyond the introductory courses, including the following:
 - (a) Computer Science 371.
 - (b) Two additional computer science electives of at least three credits each to complete the required eighteen CSC credits, selected from courses numbered above 210 and excluding CSC 495 and 590.
 - (c) A minimum of nine credits in computer science must be earned at Wayne State University.

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 of Liberal Arts. 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 Wayne State University's College of Liberal Arts Group Requirements (see page 202) 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 forty-nine 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 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 186, 187 (or 286), 201, and 221.

3. Introductory courses Computer Science 102 and 203.

4. Computer Science courses beyond the introductory courses, including the following:

(a) Computer Science 371, 441, 442, and 451.

(b) Three additional Computer Science electives of at least three credits, all numbered above 210 and one above 510, excluding CSC 495 and 590.

(c) At least twenty credits in computer science course work must be taken 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. Those who have had no previous programming experience may be required to take CSC 101 in addition to the courses listed above. Although not required for a certificate, please note that CSC 450 is required for admission to the graduate program.

Facilities

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 world.

Students have access to the University's computing facilities through two main terminal rooms located on the Main Campus. Each of these rooms is maintained by the Department with a consulting staff of student assistants to aid those in computer science courses at Wayne State University. Furthermore, the computing facilities are readily accessible through the public telephone networks.

The research activities of the Department are supported by several Research Laboratories equipped with state-of-the-art computing facilities. All laboratories are connected to the Department's 10 Mb/s Ethernet LAN, which is in turn connected to NSFNet. The research facilities include:

A Digital Equipment Corporation MicroVAX 3600. This machine is operated as the Department's dial-up host. Its 16 X.25 lines are accessible as Merit host 'wsu-csvax';

An AT&T 3B2/1000 which serves as the campus Usenet news server, ftp server, and Internet/uucp mail relay;

An Instructional Lab equipped with fourteen Unix-based workstations and six Xerox 1108 Lisp machines. Currently, the Unix workstations are a combination of DEC VAXStation-II/GPX, Sun-3 and SPARC workstations;

A Vision Laboratory containing a VAXStation-II/GPX, a Zenith AT equipped with a Imaging Technology ITEX-100 frame grabber, and a Zenith 386 PC equipped with a Data Translation 2851 frame grabber;

A Software Engineering Laboratory equipped with three VAXStation 2000 workstations and a Zenith AT;

A Artificial Intelligens Laboratory containing a Denning DRV-1 robotic vehicle, an Explorer-LX Lisp machine, two TI BusinessPros and two Xerox 1108 Lisp machines;

A Parallel and Distributed Computation Laboratory containing a Sun-3/160 workstation, hosting a Transputer network, and three IBM RT-6000 workstations;

A Database Laboratory equipped with a Sun-3/50 and SPARCstation1+ workstation; and

A Biological Computing Laboratory equipped with a VAXStation-II/GPX and a VAXStation-3500 workstation and two Zenith ATs.

The Department operates an Information Processing Training Center which is used for training persons in the use, skill and manipulation of word processing equipment and office automation concepts. The Center conducts courses for University staff as well as special courses for the general public.

In addition to the general University interactive facilities, the Department owns a large number of terminals for the exclusive use of its faculty and students.

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 433.

100. (CL) Introduction to Computer Science. Cr. 3

Prereq: placement out of MAT 095. No credit after any other programming course. Student computer account required. Survey of computer science on an elementary level. Introduction to using a terminal. Problem solving: analysis, structured algorithm development and programming, testing. Students run several problems on a computer in the BASIC language using arrays, functions and subroutines. File construction and manipulation using MTS and the editor. (T)

101. (CL) Introduction to Computing. Cr. 3

Not open to students who have taken a previous computer programming course. Brief introduction to programming using Pascal. Use of text editors, formatters, spreadsheet programs, database programs; use of microcomputers and mainframes. (T)

102. (CL) Computer Science I. Cr. 4

Prereq: placement out of MAT 180 and CSC 101 or equivalent knowledge of programming. Student computer account required. Introduction to computer science and programming using MTS and Pascal. (T)

105. (CL) FORTRAN Laboratory for Engineers. Cr. 1-2

Prereq: MAT 180. Credit in College of Engineering only. Student computer account required. An informal introduction to computing; projects related to areas of interest. (T)

203. (CL) Computer Science II. Cr. 4

Prereq: CSC 102 or equivalent knowledge of programming with Pascal. Student computer account required. Advanced programming concepts using Pascal. (T)

206. (CL) Introduction to FORTRAN. Cr. 3

Prereq: placement out of MAT 180. No credit after CSC 102, CSC 105 or CSC 207. Student computer account required. Problem solving; problem formulation, analysis and design of algorithms; data representation: use of flow charts and the FORTRAN programming language in implementing algorithms; introduction to computer systems; use of MTS command language. (T)

208. (CL) Computer Concepts for Engineers. Cr. 4

Prereq: CSC 105. Student computer account required. Programming languages, description of a computing system, interrelationships in functional units, input preparation, problem-solving and algorithm

design applications. Introduction to data structures, storage methods and data base systems. (T)

209. Computers and ManKind. Cr. 2-3

Offered for two credits to lecture students; offered for three credits to students electing lecture and laboratory. 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)

210. (CL) Introduction to COBOL. Cr. 3

Prereq: CSC 100 or 202 or equiv. Student computer account required. Problems in business applications: editing, transaction analysis, file update, report generation, tape and disk files. Structured use of the COBOL language. (T)

314. Information Systems Design Using COBOL. Cr. 3

Prereq: CSC 203 or 210. Student computer account required. COBOL specification and implementation of sequential, indexed, direct and relative file organizations and their related access methods in the context of typical information systems applications. Basic design alternatives analyzed; emphasis on information systems analysis and design methodology. (W)

371. (WI) Data and File Structures. Cr. 4

Prereq: CSC 203, MAT 186. Student computer account required. Trees and graphs, characteristics of storage devices, representation of data structures internally and on external devices, topological sorting and advanced searching. (T)

441. Introduction to Computer Systems. Cr. 4

Prereq: CSC 203 or equiv. Student computer account required. Machine languages and basic assembler languages for IBM 370 style computers; internal data representations and arithmetic: character, integer decimal, floating point; input and output using channels; storage protection; privileged operations; interrupts. (T)

442. Computer Operating Systems. (ECE 564). Cr. 4

Prereq: CSC 371 or former 370, and 441 or ECE 468. Student computer account required. Offered for undergraduate major credit only. Hardware architecture for operating systems: privileged instructions, protection, interrupts, input and output via channel programming; buffering; services provided by operating systems; batch, multiprogramming and time-sharing systems; memory management including virtual memory; concurrent processing: deadlocks, mutual exclusion, and synchronization; job and processor scheduling; device control and virtual devices. (T)

450. Introduction to Theoretical Computer Science. Cr. 3

Prereq: CSC 371 or former 370 and MAT 191. Concepts of computation via finite automata, Turing machines, and decidability; formal languages; complexity theory; program correctness; topics from artificial intelligence. (T)

451. Computer Organization. Cr. 4

Prereq: CSC 441. Offered for undergraduate major credit only. Basic logic design with MSI and LSI; organization and structuring of major hardware components of computers; mechanics of information transfer and control within digital computer systems. (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)

506. Advanced Concepts In Computer Science. Cr. 4

Prereq: CSC 504. Not offered for major or minor credit. Student computer account required. Introduction to theoretical computer science, survey of programming languages; characteristics of micro computers. (I)

511. Advanced Software Development. Cr. 3-4

Prereq: CSC 371 or former 370. Offered for 4 credits to interdisciplinary M.A. students only. Student computer account required. Selection of programming language; debugging techniques and tools; program maintenance; software economics; team programming and its application to projects; software life cycle. (Y)

513. Introduction to Information Systems. Cr. 4

Prereq: CSC 441. Student computer account required. Organizations as adaptive dynamic system. Abstraction-synthesis methodology of information systems development: information needs analysis, requirements analysis, design and implementation of information systems related software. (Y)

518. Introduction to Modelling and Simulation. (I E 518). Cr. 3

Prereq: CSC 203 or equiv. and MAT 202. Student computer account required. Introduction to main concepts: modelling objectives, system boundaries, model formalism, experimentation with models, simulation. Concentration on finite state, cellular space and simple continuous and discrete event models. (I)

519. Computational Modeling of Complex Systems. Cr. 3

Prereq: knowledge of a programming language; MAT 201. Student computer account required. 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)

520. Principles of Programming Languages. Cr. 3

Prereq: CSC 371 or former 370, and 441. Introduction syntax, semantics, defining syntax, BNF, context-free grammars, parse trees, data types, scope and extent, parameter passing, functional programming, data abstraction, concurrent programming, object-oriented programming. (Y)

526. Distributed Systems I. Cr. 3

Prereq: CSC 450. Distributed control and parallelism; synchronization of distributed processes; concurrent programming languages and their semantics; formal specification and analysis techniques. (Y)

537. (ECE 562) Mini- and Microcomputers. Cr. 4

Prereq: CSC 451, ECE 262, ECE 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. (I)

542. Introduction to Computer Networking. Cr. 3

Prereq: CSC 442 and MAT 221. Student computer account required. Network communication in ISO/OSI seven-layer model; long-haul and local area networks; network topologies; error detection and correction; transport problems; applications. (I)

580. Expert Systems: Tools and Languages. Cr. 3

Prereq: CSC 371 or CHE 304. Survey of languages and tools for the development of expert systems applications. Introduction to Lisp, Prolog, Smalltalk and various commercially-available expert system environments; specific applications to medicine, engineering, computer science, and the like. (I)

586. Introduction to Pattern Recognition and Computer Vision. Cr. 3

Prereq: senior standing. Feature extraction and classification model for recognition; simple classification methods and classifier design; syntactic model for recognition; acquisition and representation of visually-sensed data; analysis of binary images for simple part

recognition and inspection tasks; model based recognition and matching; available vision systems. (Y)

587. Computer Graphics. Cr. 3

Prereq: CSC 371 or former 370, MAT 225. Student computer account required. Basic geometrical concepts, graphics primitives, two-dimensional transformations, segmented files, windowing and clipping, camera models, and 3-D transformations. (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 computer; implication of biological information processing principles and mechanisms for artificial intelligence. (B)

590. Directed Study. Cr. 1-4(Max. 8)

Material fee \$15 if computer work is required. Individual study as agreed on by student and supervising faculty. Primarily for material not covered in regular courses. (T)

595. 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)

619. Computational Modeling Laboratory. Cr. 3

Prereq: knowledge of a programming language. Student computer account required. Practical experience in the implementation and documentation of computer models. (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)

640. Engineering Design of Computer Operating Systems. (ECE 760). Cr. 4

Prereq: ECE 564 or CSC 442. Student computer account required. Design and implementation of operating systems for digital computers. Sequential and concurrent processes, processor and store management, scheduling algorithms and resource protection. (I)

645. Structure of Compilers I. Cr. 3

Prereq: CSC 520. Lexical analysis and symbol table; syntactical analysis of expressions and statements; error detection; translation into intermediate code and its correctness. (I)

651. Theory of Computation. Cr. 3

Prereq: CSC 450. Finite state machines; automata; determinism and indeterminism; regular expressions; grammars and formal languages; Chomsky's hierarchy; parsing; pushdown automata; Turing machines. (Y)

654. Computer Graph Structures. Cr. 3

Prereq: CSC 520. Basic graph structures, undirected and directed. Graphs and multigraphs; computer representation of graph structures; primary relations; flow diagrams; data flow schemes; data structures. (I)

658. Analysis of Algorithms. Cr. 3

Prereq: CSC 371 or former 370. Student computer account required. Asymptotic and non-asymptotic complexity measures of algorithms and programs; design of efficient algorithms; complexity measures of important algorithms (searching, sorting, graph algorithms), classes of P and NP, intractable problems. (I)

661. Computational Algorithms: Analysis. Cr. 3

Prereq: MAT 203 and CSC 203 or equiv. Student computer account required. Floating point arithmetic; use of mathematical software packages; interpolation; numerical integration and differentiation;

solution of non-linear equations; solution of ordinary differential equations. (I)

662. Matrix Computation I. (ECE 502). Cr. 4

Prereq: CSC 102 or 206 or equiv. and MAT 225 for computer science students; CHE 304 for engineering students. Student computer account required. 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 371 or former 370. Three-schema architecture; network model; hierarchical model; relational algebra and calculus; normal forms; relational design utilizing dependencies; semantic data modeling; database specifications; database design process; file structures. (Y)

680. Artificial Intelligence I. Cr. 3

Prereq: CSC 520. Student computer account required. Introduction to languages LISP and PROLOG and techniques of artificial intelligence; development of programs in LISP and PROLOG to illustrate problem-solving mechanisms; problem definition using state-space techniques; problem solving heuristics; inference in monotonic and non-monotonic logic; knowledge representation technique; discussion of applications in various areas. (Y)

688. Theory of Adaptable Systems. Cr. 3

Prereq: CSC 588. Formalism of adaptability theory; organization of biological and technical information processing systems in the light of adaptability theory; applications to biological computing and evolutionary programming (I)

699. Topics in Computer Science. Cr. 1-4(Max. 8)

Prereq: senior or graduate standing. Student computer account required. Current topics to be announced in *Schedule of Classes*.(T)



CRIMINAL JUSTICE

Office: 2228 Faculty Administration Building; 577-2705

Director: Steven Stack

Professor

Steven Stack

Associate Professor

Marvin Zalman

Assistant Professor

Thomas M. Kelley

Lecturer

Pam Reising

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

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

topics and pre-professional concerns are available. Concentrations within criminal justice may be fulfilled by electing 12 – 18 credits of criminal justice electives in particular areas, such as corrections, juvenile justice, law enforcement, and pre-law studies. Practical field experience is desirable and may be arranged for up to eight credits under the guidance of the field placement coordinator.

Admission requirements for this program are satisfied by the general requirements for undergraduate admission to the University; see page 14.

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 21) and the College of Liberal Arts Group Requirements (see page 202), 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 14–39 and 202–207, respectively.

Major Requirements: Students majoring in criminal justice must complete twenty-eight credits in criminal justice core courses and at least twelve, but not more than eighteen, credits in criminal justice elective courses. Required courses are as follows.

Core Courses

	credits
CRJ 101—Introduction to the Criminal Justice System	3
CRJ 571—Constitutional Aspects of Criminal Law	4
CRJ 572—Criminal Law	4

Students must select five of the following six options:

CRJ 230—Penology: Punishment and Corrections	3
CRJ 240—Introduction to the Judicial Process	4
CRJ 241—Introduction to Juvenile Justice and Delinquency	3
CRJ 260—Police Role in the Criminal Justice System	4
CRJ 351—Introduction to Security: Persons and Property	4
One research methodology course from:	
P S 360—Methods of Political Inquiry	4
PSY 402—Research in Psychology	3
SOC 420—(WI) Methods of Social Research	3

Cognate Study in Criminal Justice

The introductory course on the criminal justice system (CRJ 101) is designed to acquaint all students with contemporary problems and operations of police, prosecutors, courts, correctional agencies and juvenile justice institutions. Other survey courses in these areas and in security administration (CRJ 230, 240, 241, 260, and 351) may be of interest to students in business administration, health care, social work, journalism, and other public service fields.

Minor in Criminal Justice: The Department offers a minor in Criminal Justice for which the notation of a *minor* appears on the student's transcript. The required Criminal Justice courses are:

	credits
CRJ 101—Introduction to the Criminal Justice System	3
CRJ 230—Introduction to Corrections and Penology	3
CRJ 240—Introduction to the Judicial Process	4
CRJ 260—Police Role in the Criminal Justice System	4
CRJ 571—Constitutional Aspects of Criminal Law	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 Aspects of Criminal Law
CRJ 572	Criminal Law
CRJ 595	Special Topics in Criminal Justice

Also see pre-law courses in Undergraduate Curricula, page 208.

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 433.

101. Introduction to the Criminal Justice System. Cr. 3

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. 3

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. 3

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)

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)

385. (SOC 382) Criminology: Crime and the Criminal. Cr. 3

Criminality as a socio–legal phenomenon. Descriptive analysis of the criminal justice system: police, prosecution, courts, corrections. Interdisciplinary review of criminological thought and theory; methods of reporting and studying crime victimology, crimes of violence, organized crime and white collar crime. (T)

480. (SOC 480) Outsiders, Outcasts and Social Deviants. Cr. 3

Definition and characteristics of behaviors which have, at times, been considered deviant, such as: criminality, mental illness, alcoholism, drug addiction, abortion, prostitution, and pornography. Interdisciplinary theories introduced to facilitate understanding of those behaviors, their diagnosis, management, control, and prevention. (T)

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. (Y)

506. Comparative Criminal Justice Systems. Cr. 3

No credit after former CRJ 650. Selected criminal justice systems in other nations. (B)

515. Introduction to Forensic Science. (ANT 518). Cr. 3

Prereq: CRJ 101 or ANT 211. 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)

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 Aspects of Criminal Law. 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)

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)

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, 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. Field Studies. (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)

602. Practicum: Justice System Counseling. Cr. 3

Prereq: CRJ 241. No credit after former CRJ 693. Supervised practice in interviewing techniques and counseling methods frequently utilized in the treatment of adolescents or adults on probation, parole or in correctional institutions. (B)

623. Advanced Law Enforcement Administration. Cr. 3

Prereq: CRJ 101. Police–management problems; organization and objectives, planning and coordination, public relations and support. (B)

643. Counseling Strategies with Youthful Offenders. Cr. 3

Prereq: CRJ 241. No credit after former CRJ 691. Application of causal theories to counseling strategies. Models for offender classification and treatment. Counselor attitudes and styles. Special issues in the treatment of delinquents. Individual and group models for counseling. Evaluation models to assess counseling effectiveness. (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)



ECONOMICS

Office: 2074 Faculty Administration Building; 577-3345

Chairperson: Allen C. Goodman

Administrative Assistant: Dolores G. Tennille

Professors

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), Lawrence H. Seltzer (Emeritus)

Associate Professors

R. King Adamson (Emeritus), Dilip Bhatlacharyya (Visiting), Ralph M. Braid, Gail A. Jensen, Larry C. Ledebur, An-loh Lin

Assistant Professors

Kevin D. Cotter, Philip J. Grossman, Anthony Owusu-Gyapong, Stephen J. Spurr, Robert W. Wassmer

Lecturers

Kathleen Carr-Possai, Margarita Garza, David Karemera

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 14, as well as the instructions for declaring a major (page 203). The Economics Department presumes as prerequisite to all economics courses at least two years of high school-level algebra and one year of geometry.

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

DEGREE REQUIREMENTS: Candidates for the Bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 202) and the University General Education Requirements (see page 21), 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 14–39 and 202–207, respectively.

Major Requirements: Students considering an economics major should take ECO 101 and 102 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-two credits in economics. These must include Economics 101 and 102 (Principles of Macroeconomics and Microeconomics), Economics 500 and 505 (Intermediate Microeconomics and Macroeconomics), and Economics 410 and 510 (Statistics). The Department recommends that majors complete all of these courses by the end of their junior year.

Majors must elect at least one course in two of these fields: industrial organization, international economics, labor and human resources economics, public finance, economic history and development, money and banking, and urban and regional economics. Each student should consult his/her major adviser to choose the economics electives best suited to his/her intellectual and professional aims.

A maximum of three credits in accounting may be counted as credit in economics.

To satisfy the General Education Major Competency Requirement, Economics majors must have a cumulative honor point average of 2.0 in their economics courses.

English Proficiency: As part of the University's General Education Requirements, students must demonstrate that they can write effectively about topics in their field for an audience of professionals in that field. To enable the Department to evaluate their writing proficiency, economics majors must register for ECO 593, a zero-credit WI course. Papers written for courses designated as corequisites to ECO 593 may satisfy the requirement. Each paper submitted must be 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-two credits in economics.

Combined Curriculum for Teaching Certificate: Economics majors wishing to enter secondary teaching should see page 208 for a description of the requirements and procedures for combining a degree in Liberal Arts with a teaching certificate. Students must complete the Economics major requirements as part of their program of study.

Honors Program

Economics majors with strong academic records and an interest in research are urged to apply to the departmental undergraduate adviser for admission to the Honors Program. Applicants should have overall honor point averages of 3.3 or above.

Honors majors must take Economics 498, 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 498 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 3.5 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 twenty-one credits in Economics. These must include ECO 101, 102, and two of the following three courses: ECO 410 (Statistics), 500 (Intermediate Microeconomics), and 505 (Intermediate Macroeconomics). Other courses are elective.

'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 433.

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)

101. (SS) Principles of Macroeconomics. Cr. 3–4

Problems of unemployment and inflation; money, banking, the price level; public policies to promote stability and growth. (T)

102. (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)

Field A: Economic Theory

500. Intermediate Microeconomics. Cr. 4

Prereq: ECO 102, 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 elementary applications of calculus, analytical geometry, and linear algebra. Problems to illustrate applications in microeconomics and macroeconomics. (F)

505. Intermediate Macroeconomics. Cr. 3

Prereq: ECO 101, 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. No credit after ECO 700. 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. Economic and Business Statistics I. Cr. 3

Prereq: ECO 102; MAT 150 or MAT 180 or equiv. based on satisfactory score on mathematics placement examination. Introduction to statistical inference; probability, including subjective probability; expected value and variance; sampling distributions and elementary problems of estimation and hypothesis testing. (T)

510. Economic and Business Statistics II. Cr. 3

Prereq: ECO 410 or MAT 570 or equiv. Modern statistical inference theory applied to problems of index numbers and forecasting, time series, seasonal and cyclical variation; regression and correlation analysis with introduction to multiple regression analysis. (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 102. 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 102. 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 100, 101, or 102. Applied price theory; economic analysis of substantive and procedural issues of law. (Y)

Field D: International Economics

530. International Economic Relations. Cr. 4

Prereq: ECO 102. 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,S)

531. International Finance. Cr. 4

Prereq: ECO 101. Current theoretical and empirical knowledge and major policy issues in the field of international finance. Topics include the foreign exchange market; balance of payments adjustment; stabilization policies in open economies; forward exchange; the Eurodollar market; international financial capital movements; international reserves; alternative exchange rate systems. (W)

Field E: Labor and Human Resources

441. Labor Institutions. Cr. 4

Prereq: ECO 102. 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)

547. Economics of Aging. Cr. 4

Prereq: ECO 102 or consent of instructor. Economic implications of aging and retirement; public policy issues related to aging, including such matters as health care, social security, income maintenance and other welfare problems. (S)

549. American Labor History. (HIS 529)(HIS 729). Cr. 4

Prereq: ECO 101 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 102. 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 101 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; public relations policies. (F,S)

Field F: Public Finance

550. Public Finance: Taxation. Cr. 3

Prereq: ECO 102 or consent of instructor. Role of taxation in a market economy, its nature and historical development; principles of taxation; incidence of taxes; U.S. federal tax structure; influence of U.S. federal taxes on resource allocation, income distribution, economic stability and growth. (Y)

551. Public Finance: Expenditures. Cr. 3

Prereq: ECO 102 or consent of instructor. Role of government in a market economy; public goods; decision processes in the public sector; voting rules; nature of public expenditures and their historical development, influence of government expenditures. Problems of public debt. (Y)

552. State and Local Public Finance. (U P 675). Cr. 3

Prereq: ECO 102 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. (Y)

555. Economics of Health Care. Cr. 4

Prereq: ECO 100, 101, or 102. 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 101 and 102 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

561. Comparative Economic Systems. Cr. 3

Prereq: ECO 101 and 102 or consent of instructor. Comparative analysis of capitalism, socialism, communism, emphasis on differences in pricing, allocation of resources, functional and personal distribution of income, economic planning. (I)

665. (U S 621) Regional, State, and Urban Economic Development: Policy and Administration. (P S 644). 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 I. Cr. 3

Prereq: ECO 101. 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

180. (SS) Contemporary Urban Problems. Cr. 3

No credit after ECO 100. Analysis of urban problems from an economic standpoint: basic economic theory applied to understanding urban problems; particular emphasis on Detroit. (I)

580. Urban and Regional Economics I. (U P 582). Cr. 3

Prereq: ECO 101, 102 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)

Directed Readings and Special Courses

291. 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)

390. Directed Study. Cr. 1–3(Max. 6)

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)

496. 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)

498. 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, 571 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

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Associate Chairperson: Jerry Herron

Professors

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Associate Professors

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Assistant Professors

Ellen Barton, Bemyce Cleveland (Emerita), Gesa Kirsch (Visiting), Martha Ratliff, Ruth E. Ray

Lecturers

Dennis Bingham, Todd Duncan, Susan Eggly, Cynthia Erb, Dorothy Huson, Gloria Lewis, Michael Liebler, Phoebe Mainster, Marlene Mears, Mathew Nikkari, Sara Tipton, Chris Tysh, Barbara Van Camp

Director, English Language Institute

Bruce S. Morgan

Degree Programs

BACHELOR OF ARTS with a major in English

**MASTER OF ARTS with a major in English*

**MASTER OF ARTS in Comparative Literature*

**DOCTOR OF PHILOSOPHY with a major in English and specializations in American literature, English literature, literary criticism, and composition research*

Bachelor of Arts

With a Major in English

English studies today includes many fields of inquiry and areas of textual theory and analysis. The English major is designed to introduce students to these fields and to provide a challenging and flexible liberal arts education as well as a pre-professional program for students interested in careers in education, the law, business, and other professions.

Admission requirements for this program are satisfied by the general requirements for undergraduate admission to the University; see page 14.

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 202) and the University General Education Requirements (see page 21), 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 14-39 and 202-207, 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 22), and Liberal Arts Group Requirements (see page 202). 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.

2. One upper-division course in cross-disciplinary or comparative studies in one of the following areas: comparative literature, gender studies, Afro-American literature, film, cultural studies, folklore.

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. One majors seminar (four credits): a writing-intensive topics course for English majors; students may substitute English 593, with the consent of the associate chairperson.

In addition to the above requirements, majors must take at least five other English courses for a total of 34 credits (46 credits maximum). Although courses beyond the requirements listed above are elective, 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 Program Requirements

The English Honors Program offers an alternative way to fulfill the requirements of an English major. The Honors Program is open to students with a strong academic record (3.3 h.p.a. or better), superior writing ability, and eagerness to participate in discussions and to study a subject in depth.

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

1. **Course Requirements:** Students accepted into the Program may take advantage of as many or as few of its components as they wish. The design of the Program makes it possible for a student to have a double major. The requirements for graduation with Honors in English are as follows:

A. Thirty-three credits in English courses beyond the University General Education Requirements and the Liberal Arts Group Requirements. The only required courses in English are:

Three basic surveys of English and American literature: English 311 (or English 510–519), English 312 (or English 520–532), English 314 (or English 540–549), nine credits total;

The English Honors Seminar (English 491), nine to twelve credits total;

The English Honors Essay (English 492), three credits total;

Electives in English, nine to twelve credits total, primarily in course work at the 500-level.

B. One interdepartmental Honors Seminar (three credits), which partially fulfills Liberal Arts Group requirements: either Honors 420, Humanities; Honors 421, Social Science; Honors 422, Life Science; or Honors 423, Physical Science.

2. **The Honors Seminar:** The heart of the Program is the English Honors Seminar (English 491), which may be taken for three to six credits per term for a maximum of twelve credits. The seminars are small in size (about seven to twelve students) and conducted as open discussions. Each student has an opportunity to make an oral report, lead a discussion, and write a substantial paper. The focus of the seminar changes each term. A student who wishes to take only the seminar but not write an Honors Essay may count English 491 as one of the conventional English major requirements. English 491 satisfies the writing-intensive requirement for Honors students.

3. **The Honors Essay:** Directed by a professor of the student's choice, and normally written during the first semester of the senior year, the Honors Essay should be a substantial study in literature, literary theory, linguistics, folklore, or film. The essay is longer than a term paper but shorter than a master's thesis. The Honors Essay should be completed by April 1 for a June graduation and by November 1 for a December graduation.

Additional information for a degree with Honors in English can be obtained from the Director of the English Honors Program, or the Director of the Liberal Arts Honors Program (577-3030).

Students contemplating entering the English Honors Program should meet with the Director of the English Honors Program during their second year of course work.

'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 expect to complete the bachelor's and master's 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 213.

Combined Curriculum with Dentistry, Law, or Medicine: (See page 204.) Students who wish to major in English and receive the Bachelor of Arts degree at the end of their first professional year of study are asked to 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 25).

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.

The remaining four courses may be selected to develop individual interests, provided that at least two more are selected from: ENG 220, 311, 312, 314, and 500-level courses.

No 100-level course and no 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. In addition to English 260 (Introduction to Folklore), the student chooses four courses from among English 360, 560, 565, and 567, plus a cognate course selected from appropriate offerings in English or other departments. Folklore minors should consult with the undergraduate folklore adviser to set up an appropriate program. No more than two courses at the 200 level will count toward the minor, and no 100-level course will count. is for students interested in the analysis of the oral and material aspects of a traditional culture. It requires a minimum of six courses. In addition to English 260 (Introduction to Folklore), the student chooses four courses from among English 360, 560, 565, and 567, plus a cognate

course selected from appropriate offerings in English or other departments. Folklore minors should consult with the undergraduate folklore adviser to set up an appropriate program. No more than two courses at the 200 level will count toward the minor, and no 100-level course will count.

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 433.

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. 2–12(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. 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. May be repeated one time only. 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)

128. Science Fiction. Cr. 3

Science fiction as art form; emphasis on major works by twentieth century American writers, with some attention to historical development. (I)

170. English Grammar. (LIN 170). Cr. 3

Intensive course in the rules of English grammar and spelling, 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

Introduction to techniques and forms of poetry through critical reading of, and writing about, poems of various types and from many periods. (T)

211. (IC) Introduction to Drama: Literature and Writing. Cr. 3

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

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

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. 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)

219. (PL) Asian Literature In Translation. Cr. 3

Prereq: ENG 102. Study of major religious, philosophical, and literary classics of Asia, in English translation. (I)

220. (PL) Shakespeare. Cr. 3

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

Critical reading of, and writing about, a representative sample of important and pleasurable English novels from the eighteenth century through the modern period. (T)

231. (IC) Major American Books: Literature and Writing. Cr. 3

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 Afro-American Literature: Literature and Writing. Cr. 4

Introduction to major themes and some major writers of Afro-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

The King James text as a literary masterpiece. (Y)

257. (IC) Literature By and About Women: Literature and Writing. Cr. 3

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**
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)(GEG 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)
- 270. Introduction to Contemporary English. (LIN 270). Cr. 3**
Ways in which use of language affects communication: denotation and connotation, analysis of language of advertising, business, government and education. (I)
- 271. Linguistic Approaches to Language Acquisition. (LIN 271). Cr. 3**
Current models of child first-language acquisition and kinds of evidence supporting them; topics may include: debate over innateness, issues in adult second-language acquisition, relations between acquisition and adult language breakdown (aphasia). (I)
- 272. (PL) Basic Concepts in Linguistics. (LIN 272). 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. (Y)
- 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**
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. (ENG 580). Cr. 3**
Prereq: ENG 102 or equiv. 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. (ENG 581). Cr. 3**
Prereq: ENG 305. 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**
Selected works from such writers as Chaucer, Spenser, Shakespeare, Donne, Milton. Required of English majors. (T)
- 312. (PL) English Literature After 1700. Cr. 3**
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**
Historical survey of American literature from the colonial period through the twentieth century with emphasis on nineteenth and early twentieth centuries. (T)
- 330. English and American Authors. Cr. 3(Max. 12)**
Chief works of a major author or several authors. Literary techniques, innovations, themes and historical context. Authors such as Chaucer, Dickens, Faulkner, Twain, Woolf. Topics to be announced in *Schedule of Classes*. (Y)
- 340. Literary Themes and Genres. Cr. 3(Max. 12)**
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 Afro-American Literature. Cr. 3**
Historical survey of Afro-American literature from Colonial times through the twentieth century. (B)
- 360. Survey of American Folklore. Cr. 3**
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. (Y)
- 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)
- 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 Essay. Cr. 3**
Prereq: senior standing; written consent of departmental honors adviser. Study in literature, linguistics, folklore or film directed by member of 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. 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. 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)
- 505. Literature Into Film. Cr. 3**
Material fee as indicated in *Schedule of Classes*. Ways of adapting literary works to film form. Focus on the artistic and practical problems of transforming literature to film. (B)
- 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. 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)
- 509. Topics In Literary and Cultural Theory. Cr. 3(Max. 9)**
Required of English majors (or substitute: ENG 504, ENG 560, ENG 570, or ENG 579). Study of literary and cultural theory in various contexts — urban, metropolitan, ethnic, global — with reference to primary texts. (B)
- 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. (ENG 610). Cr. 3**
The fundamentals of language and grammar and the literary analysis of Old English texts. (I)
- 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. (ENG 710). 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*. (I)
- 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. (B)
- 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 1800. Cr. 3**
A survey of American literature from the beginning through the Federalist period; transition from English/European heritages to ideas uniquely American. (I)
- 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 Afro-American Literature. Cr. 3(Max. 9)**
Thematic, generic or historical perspectives: topics such as early black writers, Harlem Renaissance, Afro-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. (ANT 608) Studies in Folklore. 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

Basic concepts and methods of modern linguistics and their application to the study of the English language. (Y)

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. 9)

Topics such as phonology, morphology, semantics, pragmatics, language change, history of English, pidgins and creoles, psycholinguistic approaches, text grammar. Topics to be announced in *Schedule of Classes*. (Y)

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. (Y)

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)

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. (I)

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)

580. (ENG 305) Technical Communication I: Report Writing. Cr. 3

Prereq: ENG 102 or equiv. 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)

581. (ENG 306) Technical Communication II: Writing and Speaking. Cr. 3

Prereq: ENG 580. Continuation of technical reporting techniques introduced in ENG 580, 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)

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. (B)

590. Directed Study. Cr. 1–3 (Max. 6)

Prereq: Undergrad., 3.0 h.p.a.; proposal submitted in preceding term; cons. of instr. & chrm.; 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)

593. (WI) Writing Intensive Course In English. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any 500-level English course numbered below ENG 580 or ENG 592. 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*. (I)

610. (ENG 514) 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. (Y)



FILM STUDIES

Offices: 51 West Warren, 577-2978; 585 Manoogian, 577-4173

Co-Directors: Robert Burgoyne, John Spalding

Advisory Committee

ENGLISH: Lesley Brill, Robert Burgoyne

ROMANCE LANGUAGES: Andrea diTommaso

COMMUNICATION: John Spalding, Robert Steele

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 (English, Romance Languages, and Communication) 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 three 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 14.

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 202) and the University General Education Requirements (see page 21), 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 14-39 and 202-207, 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

ELECTIVE COURSES (Twenty Credits)

ENG 505 —Literature into Film	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
ITA 515 —Advanced Study of Italian Cinema	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 II	4
SPF 546 —Motion Picture Animation Techniques	3
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 433.

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)

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)

GEOGRAPHY

Office: 225 State Hall; 577-2701

Chairperson: Robert D. Swartz

Professors

Fred E. Dohrs (Emeritus), Robert J. Goodman (Emeritus), George J. Honzatko, Robert Sinclair

Associate Professors

Eugene D. Perle, Gary Sands, Robert D. Swartz, Bryan Thompson

Adjunct Faculty

Rondal Downing, Mel Ravitz (Emeritus), Sue Smock, L. Zimmerman

Degree Programs

BACHELOR OF ARTS with a major in geography

**MASTER OF ARTS with a major in geography*

**MASTER OF URBAN PLANNING*

Geography is concerned with analyses of environmental and social systems, their variations over the earth's surface and their interactions in different regions. The program has three major goals: (1) to prepare students for many occupations in which geographic understanding is essential, including industrial and retail locational analysis, community and regional development, resource conservation and management, cartography, urban and environmental planning, and numerous government positions; (2) to train students for advanced geographic research, and (3) to provide students with a basis for understanding local, regional and global scale problems and issues. 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 14.

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 202) and the University General Education Requirements (see page 21), 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 14-39 and 202-207, 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: Geography 110, 200 or 310, 302, 642 and Urban Planning 651.

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 faculty in the Geography Department.

* For specific requirements, consult the College of Urban, Labor and Metropolitan Affairs section of the Wayne State University Graduate Bulletin.

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 compliments 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 GEG 660. For details, contact the department chairperson.

UNDERGRADUATE COURSES (GEG)

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 433.

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. (T)

111. (U P 111) Urban Community. Cr. 3 or 4

Aspects of community growth and expansion, functions of cities, planning proposals, and social and physical development policy. (I)

200. (U S 200) (SS) Introduction to Urban Studies. (SOC 250)(P S 200)(HIS 200). Cr. 4

Prereq: sophomore standing. 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)

291. 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)

300. Map Intelligence. Cr. 3

Map literature; visualization and reading topographic maps; functions of scale, graticule, military grid, orientation and use of maps as tools in field work. (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)

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) Western Europe. Cr. 3

Analysis of non-communist 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)

490. Directed Study: Honors Program. Cr. 2-12(Max. 16)

Prereq: consent of chairperson. (T)

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. Urban Canada. 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)

581. Locational Issues in Hazardous Waste Management. Cr. 3

Analyses of spatial aspects of hazardous waste sites; corporate and public considerations and reactions; regulatory impacts. (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. Courses available for upper division credit in geography for W.S.U. – Salford exchange. (F,W)

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. 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. 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. 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/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)

642. (U P 632) Quantitative Techniques I. 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. 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. 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. Internship in Applied Geography. Cr. 4

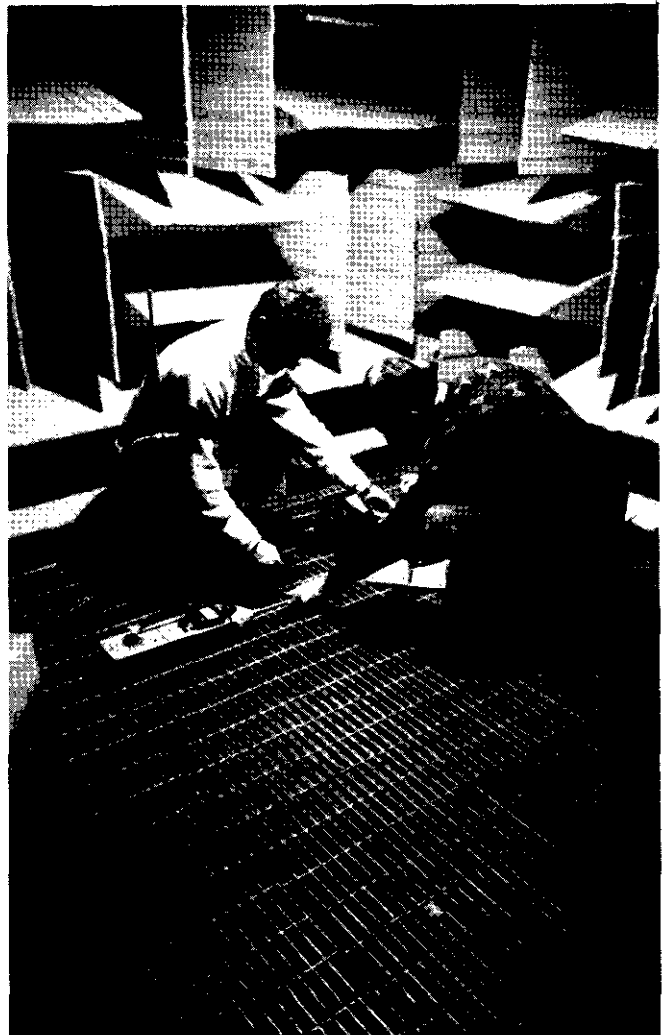
Prereq: 15 credits in geography; consent of instructor. Offered for S and U grades only. On-the-job training, mostly in applied aspects of geography (retail location analysis, land use studies); some internships compensated. Internships are usually for one academic semester. (Y)

665. Computer Assisted Mapping. Cr. 4

Science of computer assisted mapping and hands-on computer assisted map production; geo-management issues. (B)

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)



GEOLOGY

Office: 201 Old Main; 577–2506

Chairperson: Robert B. Furlong

Professors

Robert B. Furlong, Hugo Mandelbaum (Emeritus), Andrew J. Mozola (Emeritus), Willard H. Parson (Emeritus), Luciano B. Ronca

Assistant 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. 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 14.

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 202) and the University General Education Requirements (see page 21), 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 14–39 and 202–207, respectively.

Major Requirements: Students must complete at least thirty-four credits in geology exclusive of the introductory courses (100-level) and including the following:

1. Twenty of the thirty-four credits from advanced courses (numbered 300 and above).
2. Geology 213, 316, 330, 340, 345 or 410, and 420.
3. Six credits in field mapping and field techniques, to be fulfilled by completing six credits in Geology 365 offered as 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 mapping 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 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 14.

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 202) and the University General Education Requirements (see page 21), 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 14–39 and 202–207, respectively.

Major Requirements: Students must complete twenty-six credits in geology beyond Geology 102. These must include Geology 213, 316, 330, 340, 345 or 410, and at least two credits in Geology 365.

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 computer science, civil 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 Liberal Arts 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, 110 and 137 may *not* be applied for credit to a minor. 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 each year to an undergraduate student who has excelled academically and who has 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 433.

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 or PHS 193 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 conditions, 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)

237. Meteorology: The Study of Weather. Cr. 3

Atmospheric conditions, weather maps, forecasting. Instruments and records. (I)

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)

345. Invertebrate Paleontology. Cr. 4

Prereq: GEL 102 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Paleontology of invertebrates; evolutionary relationships between taxa and geological applications. (F)

- 365. Field Geology. Cr. 1–10(Max. 16)**
Prereq: consent of instructor. Field studies involving problems in individual geologic mapping and related techniques. (W,S)
- 390. Directed Study. Cr. 2–6(Max. 10)**
Prereq: consent of instructor, adviser, and chairperson. Primarily for honors students. (T)
- 410. Fundamentals of Geophysics. Cr. 4**
Prereq: at least one course in calculus and one in physics. Application of calculus to geological problems. Introduction to the geophysics of gravity, magnetism, seismology and heat transfer. Theory of radiometric dating. Methods and problems of exploration geophysics. Fundamentals of well logging. (F)
- 420. Geomorphology. Cr. 4**
Prereq: GEL 102. Material fee as indicated in *Schedule of Classes*. Principles underlying development of landforms by geologic agents. (W)
- 496. Research. Cr. 3–4(Max. 8)**
Prereq: consent of instructor, adviser, and chairperson. Primarily for honors students. Independent laboratory and field work. (T)
- 512. Principles and Methods of 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 and to the analytical techniques used by geochemists. Chemistry of common earth materials, reactions within these materials. (W)
- 515. Soils and Soil Pollution. Cr. 3**
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 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)
- 555. Geology of Fossil Fuels. Cr. 4**
Prereq: GEL 330, 340; 410 recommended or consent of instructor. Material fee as indicated in *Schedule of Classes*. The occurrence, origin, exploration and exploitation of petroleum, natural gas, coal, oil shale and tar sands. Interpretation of geophysical logs, well cuttings and reservoir potential. (F)
- 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)
- 600. Optical Mineralogy. Cr. 4**
Prereq: GEL 316. Material fee as indicated in *Schedule of Classes*. Behavior of crystals in polarized light. Use of polarizing or petrographic microscope and its accessories. Determination of rock-forming minerals. (F)

GERMAN and SLAVIC LANGUAGES and LITERATURES

Office: 443 Manoogian Hall; 577–3024

Chairperson: Donald Haase

Professors

Penrith Goff, Edmund Ordon (Emeritus), Marvin Schindler, Guy Stern

Associate Professors

Vladimir Bezdek (Emeritus), Achim Bonawitz, Kenneth Brostrom, Alfred Cobbs, Erhard Dabringhaus (Emeritus), Donald Haase, Maria Roth (Emerita)

Assistant Professor

Frank J. Corliss, Jr.

Lecturers

Halimur Khan, Dickran Toumajan

Degree Programs

BACHELOR OF ARTS with a major in German

BACHELOR OF ARTS with a major in Polish

BACHELOR OF ARTS with a major in Russian

BACHELOR OF ARTS with a major in Slavic

**MASTER OF ARTS with a major in German*

**MASTER OF ARTS with a major in East European studies*

**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 14. 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 202) and the University General Education Requirements (see page 21), 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 14–39 and 202–207, respectively.

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

— Major Requirements

Major Requirements in German: A major in German must take German 271, 272 or 291, 310 and 304 or 320, 361, 362, 460, 510, 593, and two courses in literature on the 600 level. German majors must also take two courses in the literature of another country.

Major Requirements in Polish: Students majoring in Polish are required to complete satisfactorily twenty-two credits in Polish beyond Polish 201 and three credits in Polish history. Courses in Polish will include: Polish 302, 346, 445, 460, 570, 590, and 593. POL 460 or 570 may be repeated for credit on different topics.

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, 465, 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, including 245, 302, 303, and either 409 or 445 and one course in Russian literature, and sixteen credits in Polish 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, or political science.

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, 310, and 510. Three courses must be taken from at least two of the following groups:

- (a) German 271, 272, 291;
- (b) German 304, 320;
- (c) German 361, 362, 460;
- (d) one 600-level course.

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.

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 undergraduate adviser 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 Languages and Literatures 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 Liberal Arts Honors Program (577-3030).

Travel Study Programs

In Poland: Through an exchange agreement with the Jagiellonian University, Krakow, Poland, the Polish Studies Program offers nine scholarships to registered students at Wayne State for Summer Study in Poland. The scholarships cover full room, board, tuition, cultural events and excursions during six weeks of study at the Jagiellonian University Summer School in Krakow. International travel (round trip, Detroit to Warsaw) plus personal incidental expenses while in Poland are the only costs the student must bear. The summer program at Jagiellonian University involves intensive study of the Polish language along with selected topics in the areas of Polish literature, history and culture.

The scholarships are competitive, and applicants must submit a copy of their transcript along with three letters of recommendation. A selection committee will interview each applicant; preference in selection will be given to students of the Polish language and to those with a demonstrated interest in Eastern and Central European affairs. Some knowledge of Polish is preferable, but is *not* required. Students not granted scholarships may participate in this program at their own expense. Inquiries should be made at the Department office, 443 Manoogian Hall; 577-3024.

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 205.

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 433.

— 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.

Armenian Culture and Literature in English (ARM)

341. (SLA 341) (FC) New Soil, Old Roots: The Immigrant Experience. (RUS 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 effect on American culture. (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)

465. Survey of Armenian Culture and Literature in Translation: Ancient and Medieval Periods. Cr. 3
Cultural heritage of the Armenian people; their contribution in arts, literature, music and folklore. (F)

475. (FC) Survey of Armenian Culture and Literature in Translation: 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 Culture and Literature in English (GER)

261. Norse Mythology. Cr. 3
Typical myths, sagas, legends and their relation to the religion, customs, ethics, art, and literature of the Germanic tribes to the end of the Viking age. (Y)

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. Studies in German Literature. 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. Understanding the Fairy Tale. Cr. 3
Fairy tales of the Brothers Grimm and other German writers considered in English; ways fairy tales are meaningful to society. (B)

341. (SLA 341) (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 341) (RUS 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 effect on American culture. (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)

Polish Literature 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 effect on American culture. (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 Culture and Literature 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 effect on American culture. (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)
- 375. Selected Topics: Literature in Translation. Cr. 3(Max. 9)**
A particular writer, genre, theme or topic in Russian literature. Topics to be announced in *Schedule of Classes*. (Y)

FOREIGN LANGUAGE INSTRUCTION

ARMENIAN (ARM)

- 101. Elementary Armenian. Cr. 4**
Material fee as indicated in *Schedule of Classes*. Introduction to sounds, spelling, vocabulary forms, syntax as basis for reading and conversation. (F)
- 102. Elementary Armenian. Cr. 4**
Prereq: ARM 101 or equiv. Material fee as indicated in *Schedule of Classes*. Continuation of ARM 101. (W)
- 201. (FC) Intermediate Armenian. Cr. 4**
Prereq: ARM 102 or equiv. Material fee as indicated in *Schedule of Classes*. Study in depth of structure, particularly syntax, based on reading. Oral and written presentation. (F)
- 590. Directed Study. Cr. 1-3(Max. 12)**
Prereq: ARM 202 or equiv., written consent of chairperson. Undergraduate credit only. For students who wish credit for program of work not included in regularly scheduled courses, either in language or in 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)
- 201. (FC) Intermediate German. Cr. 4**
Prereq: GER 102 or 199 or placement. Material fee as indicated in *Schedule of Classes*. Continuation of GER 102. Reading of graded German literature and grammar review. One section emphasizes development of reading in student's particular field of study; section announced in *Schedule of Classes*. (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)
- 361. German Literary Traditions I. Cr. 3**
Prereq: GER 202 or equiv. (F)
- 362. German Literary Traditions II. Cr. 3**
Prereq: GER 202 or equiv. (W)
- 460. Proseminar: Goethe's Faust. 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)
- 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. (WI) 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)
- 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)
- 665. Romanticism. Cr. 4**
Philosophical and aesthetical foundations, major figures, and works of the period. (B)
- 667. The Age of Realism. Cr. 4**
Junges Deutschland, Heine, Buechner, Grabbe, Hebbel, and the major prose writers of realism. (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)
- 672. The Age of Enlightenment. Cr. 4**
Lessing; *Sturm und Drang*. (B)
- 673. The Classical Age. Cr. 4**
Goethe; Schiller. (B)
- 677. From Naturalism to the End of the Weimar Republic. Cr. 4**
(B)
- 678. Literature from the Third Reich to the Present. Cr. 4**
(B)
- 679. Studies in German Literature. Cr. 1-4(Max. 12)**
Major author, genre, or literary movement. Topics to be announced in *Schedule of Classes*. (I)
- 699. From the Age of Chivalry to the Reformation. Cr. 4**
From the beginning through the Reformation. (I)

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. 3

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. 3

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)

409. Language Skills: Applied Grammar and Syntax I. Cr. 3

Prereq: RUS 201 or equiv. or consent of instructor. Russian as a language system; phonology, morphology, word formation. (F)

410. Language Skills: Applied Grammar and Syntax II. Cr. 3

Prereq: RUS 409 or consent of instructor. Russian as a language system; phrase and sentence types. (W)

445. Language Skills: Advanced Speaking and Writing. Cr. 3

Prereq: RUS 245 or consent of instructor. Intensive practical training in use of Russian idiom to achieve fluency of expression. (W)

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)

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 effect on American culture. 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. In English. (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. In English. (Y)

498. Honors Thesis in Slavic and Eastern Languages and Literatures. Cr. 3-6
Prereq: senior standing; 3.3 h.p.a. Open only to majors in Slavic and Eastern 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. (W)

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 effect on American culture. 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. In English. (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. In English. (Y)

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

Chairperson: Kenneth R. Walters

Professors

Kathleen McNamee, Richard W. Minadeo

Associate Professors

Ernest J. Ament, Joel B. Itzkowitz, Kenneth R. Walters

Assistant Professor

Lena Hatzichronoglou

Lecturers

Mary DeForest, David M. Shive

Degree Programs

BACHELOR OF ARTS with a major in classics

BACHELOR OF ARTS with a major in Greek

BACHELOR OF ARTS with a major in Latin

BACHELOR OF ARTS with a major in classical civilization

**MASTER OF ARTS with a major in classics*

**MASTER OF ARTS with a major in Latin*

**Graduate minor or cognate credit may be earned in classics in English translation and in Greek.*

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 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.

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

Bachelor of Arts Degrees

Admission requirements for this program are satisfied by the general requirements for undergraduate admission to the University; see page 14.

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.

DEGREE REQUIREMENTS: Students must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 21) and the College of Liberal Arts Group Requirements (see page 202), 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 14–39 and 202–207, respectively.

Major Requirements in Classics: A major in Classics consists of twenty to twenty-four credits of concentration in either Greek or Latin, exclusive of Greek or Latin 101 and 102, plus sixteen credits of concentration in the other language. Potential majors also are encouraged to elect Classics 101, Classical Civilization, during the freshman or sophomore year. Recommended cognates are listed below.

Major Requirements in Greek: A major in Greek consists of thirty-two credits exclusive of Greek 101 and 102 and including any two Classics courses 200 level or above. Potential majors are also encouraged to elect Classics 101 (Classical Civilization) during their freshman or sophomore year. For recommended cognates, see below.

Major Requirements in Latin: A Major in Latin consists of thirty-two credits exclusive of Latin 101 and 102 and including any two Classics courses, 200 level or above. Potential majors are also encouraged to elect Classics 101 (Classical Civilization) during their freshman or sophomore year. For recommended cognates, see above.

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 and Roman Architecture
Art History 530	Early Christian and Byzantine Art
Art History 531	The Ancient City of Athens
Classics 200	Greek Mythology
Classics 210	Honors Classical Origins of Western Thought
Classics 219	Daily Life in Ancient Rome
Classics 220	Greek Tragedy
Classics 240	Heroic Poetry: Homer and Vergil
Classics 300	Greek Philosophers
Classics 310	Law and Ancient Society
Classics 325	Urban Study of Ancient Rome
History 533	History of Greece
History 534	History of 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	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 Greece) and 534 (History of Rome). (6 credits)
5. Philosophy 210 (Ancient and Medieval Philosophy) or Classics 300 (The Greek Philosophers). (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 and Roman Architecture
Art History 530	Early Christian and Byzantine Art
Art History 531	Ancient City of Athens
Classics 200	Greek Mythology
Classics 210	Classical Origins of Western Thought
Classics 220	Greek Tragedy
Classics 240	Heroic Poetry: Homer and Vergil
Classics 310	Law and Ancient Society
Classics 325	Urban Study 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 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 major in Latin must complete the major 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 213.

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 'Greek' or 'Latin' 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 twelve to sixteen credits of concentration in either Greek or Latin, exclusive of Greek or Latin 101 and 102, plus twelve credits of concentration in the other language. Recommended cognates are: CLA101, CLA 200, and CLA 220, as well as those listed for majors in the Department; see above.

Minor Requirements in Greek: A minor in Greek consists 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 200 (Greek Mythology) during their freshman or sophomore year. For recommended cognates, see those listed above for majors in the Department.

Minor Requirements in Latin: A minor in Latin consists 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 200 (Greek Mythology) during their freshman or sophomore year. For recommended cognates, see 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 Greece or 534 (History of Rome) (three credits).
5. Philosophy 210 (Ancient and Medieval Philosophy) or Classics 300 (The Greek Philosophers) (three to four credits).

Foreign Language Group Requirement

The student may satisfy the Foreign Language Group Requirement (see page 200) by passing the first three courses 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 and College of Liberal Arts Group Requirements

As noted above, the first three semesters of ancient or modern Greek or Latin satisfy both the College of Liberal Arts Foreign Language Requirement and the University General Education Foreign Culture Requirement. Classics 101, 210, and 220 satisfy the Philosophy and Letters portion of the University General Education and of the College

Humanities Requirement; and Classics 200 satisfies the College of Liberal Arts Cultural Studies Requirement.

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 Epidaurus 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 433.

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)

219. Daily Life in Ancient Rome. Cr. 4

Unit studies reconstructing the development and physical, social and moral milieu of Greco-Roman society at various periods. (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)

300. The Greek Philosophers. Cr. 3-4
Origin and development of Greek philosophical thought from the pre-Socratics through the age of Aristotle. Selected authors and works. (I)

325. Urban Study of Ancient Rome. (HIS 334). Cr. 4
Development of Rome as an ancient urban center from the late Stone Age to the fourth century A.D., based on literary, historical and archaeological evidence. (B)

490. Senior Honors Tutorial. Cr. 3-16(Max.16)
Prereq: consent of departmental honors adviser. Open only to students in departmental honors program. Independent study under the direction of the honors adviser, including research for Senior Honors Essay. (T)

510. (CLA 310) Law and Ancient Society. (HIS 310). 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)

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)

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 the 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)

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)

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)

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)

310. Survey of Modern Greek Literature: From the Beginnings to the Twentieth Century. Cr. 4
Prereq: GRK 261 or equiv. Selected readings of major Greek writers from the tenth century through the Fall of Constantinople down to the twentieth century; language and stylistic analysis. (I)

361. Kazantzakis and Seferis. Cr. 4
Prereq: GRK 261 or equiv. Representative selections of the prose writings of Nikos Kazantzakis and the poetry of George Seferis. (I)

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)

330. Virgil. Cr. 4

Prereq: LAT 201 or 260 or equiv. Representative selections from the poetry of Virgil. (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)

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. Lucretius. Cr. 4

Prereq: LAT 260 or equiv. or consent of instructor. Study of the *De Rerum Natura*. (I)

586. Horace. Cr. 4

Prereq: LAT 260 or equiv. or consent of instructor. Representative selections from the poetry of Horace. (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)

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)

685. Latin Pastoral Poetry. Cr. 4

Prereq: LAT 315 or equiv. or consent of instructor. Study of the *Eclagues* and *Georgics* of Virgil. (I)

HISTORY

Office: 3094 Faculty Administration Building; 577-2525

Chairperson: Alan Raucher

Professors

Thomas N. Bonner, William J. Brazill, Jr., R. V. Burks (Emeritus), Milton Covensky (Emeritus), Corinne Gilb, C. Norman Guice (Emeritus), Edwin C. Hall, Finley A. Hooper (Emeritus), Christopher H. Johnson, Philip P. Mason, Harry J. Magoulias (Emeritus), T. F. Mayer-Oakes (Emeritus), Alan Raucher, Monica Schuler, Samuel F. Scott, Melvin Small, Goldwin Smith (Emeritus)

Associate Professors

Effie Ambler, John Bukowczyk, Charles K. Hyde, Marc Kruman, Stanley D. Solvick

Assistant Professors

Elizabeth Faue, Stanley Shapiro, Tyrone Tillery, Sandra Van Burkleo

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 Europe, America, archival administration*

**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 14.

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 202) and the University General Education Requirements (see page 21), 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 14-39, and 202-207, respectively. The minimum requirement for a major in history is thirty-three credits, distributed as follows:

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

1. at least one survey sequence, or the equivalent, from among the following: History 110–120; 120–130; or 204–205;
2. at least six HIS courses numbered 300 and above;
3. at least two courses in the pre–1789 period and at least two courses in the post–1789 period;
4. at least one course in American and one course in European history;
5. majors are recommended to take also at least one course in non–western history.

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, humanities, 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: Students who plan to apply for admission to Law School should complete many of the following courses: History 110, 120, 130; 204 and 205; and six advanced courses. The following courses are strongly recommended for pre–law students: History 516, 517, and 528 (see also suggested pre–law curriculum in the Liberal Arts Undergraduate Curricula, page 208).

Honors Program

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 (577–3331).

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 and Awards

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. History majors and other history students interested in joining should inquire at the Department.

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 433.

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. (T)

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. (T)

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

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. (B)

161. (HS) African Civilizations Since 1800. Cr. 3

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. (B)

170. East Asian Civilization to 1840. Cr. 3

Traditional East Asian culture and civilization; introduction to origins, growth, and development of the traditional societies of China, Korea, and Japan from remote antiquity until about 1840.

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. (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. (GEG 200)(SOC 250)(P S 200). Cr. 4**
Prereq: sophomore standing. 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. (Y)
- 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)
- 242. (CBS 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. (Y)
- 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) Nuclear 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. Nuclear war as a present-day possibility. How nuclear war may differ from previous human conflict. Origin and growth of the nuclear arms race and its likely outcome. Principles of the human and physical sciences applied to predict the future of the arms race and to formulate appropriate responses to the implications of nuclear war. (B)
- 270. (P S 270) Introduction to Canadian Studies. (GEG 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)(GEG 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)
- 287. The Transformation of Western Society. Cr. 3**
No credit after HIS 130. Structure and functioning of pre-industrial society; the impact of overseas expansion, capitalism, and the bureaucratic states; revolution and social change in the modern West. (F)
- 291. 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)
- 304. (HS) Historical Studies in War and Society in the Modern World. Cr. 3**
Interaction between military and social change from introduction of standing armies to the eve of world war. (B)
- 305. United States and the Vietnam Experience. Cr. 4**
The United States' involvement in Vietnam; military, domestic and diplomatic impact. (Y)
- 312. History of the Polish Community in America. Cr. 4**
The development and growth of Polish emigration to the United States from the eighteenth century to the present. (B)
- 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. The Black Experience in America II: 1865 to the Present. 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)
- 320. Slavery, Racism, and Anti-Semitism. Cr. 4**
Comparative study of slavery, racism, and anti-semitism in the Western world from ancient times to the present. (I)
- 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)
- 334. (CLA 325) Urban Study of Ancient Rome. Cr. 4**
Development of Rome as an ancient urban center from the late Stone Age to the fourth century A.D., based on literary, historical and archaeological evidence. (B)
- 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. 3**
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)

350. Explorers' Age: 1400-1750. Cr. 3

Spanish, English and French experiences in America and the Native Americans who faced them, seen in context of European and American cultures and backgrounds. (B)

368. (N E 368) (HS) 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)

369. (N E 369) (HS) Islamic History: The Formation of the Empire. Cr. 3

Prereq: N E 368 or consent of instructor. The rise of the Abbasids as a world empire with particular emphasis on their revolutionary origins. (Y)

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*. (T)

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 before the twentieth century. (B)

506. Modern America: 1917-1945. (HIS 706). Cr. 4

Analysis of economic and social problems, politics, and government policies. (B)

508. Medicine and Disease in America: 1600-1950. (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. (Y)

510. (CLA 310) Law and Ancient Society. (HIS 310). 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)

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. (Y)

516. Constitutional History of the United States to 1877. (HIS 716). Cr. 4

American constitutional development from British settlement through the Civil War. Emphasis on British colonial regimes, revolutionary republicanism, and evolving federalism, changing conceptions of citizenship, the constitutional dilemmas associated with territorial expansion, and the sectional controversy. (F)

517. Constitutional History of the United States Since 1877. (HIS 717). Cr. 4

American constitutional development from reconstruction to the present. Emphasis on economic regulation, the nationalization of the Bill of Rights, modern bureaucratic governance, the imperial presidency, and changing conceptions of citizenship among women, blacks, Indians, and others. (W)

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. (Y)

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.' (Y)

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. (Y)

530. Industrial History of the United States. (HIS 730). Cr. 4

American industrial growth from origins to present; emphasis on transformation from agrarian to industrial society and its social and economic impact. (Y)

533. History of Greece. (HIS 733). Cr. 3

Ancient Greek culture, emphasizing political events, social and economic institutions, cultural achievements. (F)

534. History of 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)
- 540. Europe Under the Old Regime: 1660–1789. (HIS 740). Cr. 3**
Analysis of monarchical institutions and society; examination of the economic, social and intellectual changes that foreshadowed the age of revolution. (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)
- 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)
- 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. (Y)
- 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)
- 552. Uses of Terror: History of the Police State. (HIS 752). Cr. 4**
History of the police state as a form of political organization in the twentieth century. General analysis of the phenomenon; case studies. (B)
- 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)
- 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)
- 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. (Y)
- 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)
- 602. Studies in European History. Cr. 2–4(Max. 9)**
Topics to be announced in *Schedule of Classes*. (Y)

HONORS PROGRAM

Office: 2307 Faculty Administration Building; 577-3030

Acting Director: William D. Stine

Adviser: Elizabeth MacBride

See page 206 for a general description of the honors program.

Students who are candidates for a degree with University Honors will pursue a course of study, in consultation with a faculty adviser, which must consist of at least thirty credits of honors designated course work including: (1) one 400-level seminar offered by the Honors Program (HON 420-427) and (2) at least three credits in a senior honors essay or thesis. These students will normally achieve many of their honors designated credits in courses which fulfill University General Education and College of Liberal Arts Group Requirements. Honors option courses and honors seminars given by departments for students majoring in their respective disciplines are other sources of honors credits applicable to a degree with University honors.

Students who are pursuing a degree with Departmental Honors must contact that department or the Honors Program Office for specific curricular requirements; however, all departmental honors programs require (1) at least fifteen credits of honors designated course work; (2) a senior essay or thesis; (3) at least one 400-level seminar offered through the Honors Program; and (4) a specified honor point average for graduation.

Honors Sections

The following courses offer honors sections which (when scheduled) will be listed under the Honors Program in the University *Schedule of Classes*; however all of the courses listed below will not be offered each semester. Departmental honors courses intended exclusively for individual departments' honors majors 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 211	(LS) Introduction to Physical Anthropology
ANT 310	Cultures of the World
ANT 311	Detroit Minorities: Arabs, Hispanics, and Blacks
ANT 524	Cross-Cultural Study of Women
A H 112	(VP) Renaissance through Modern Art Survey
BIO 151	(LS) Basic Biology I
BIO 152	Basic Biology II
BIO 103	(LS) Environmental Biology
CHM 131	(PS) Chemical Principles and Analysis I
CHM 132	Chemical Principles and Analysis II
CHM 231	Organic Structures and Reactions
CHM 232	Organic Synthesis and Spectroscopy
CLA 200	Greek Mythology
CLA 300	The Greek Philosophers
ECO 101	(SS) Principles of Macroeconomics
ECO 102	(SS) Principles of Microeconomics
ECO 361	Honors Comparative Economics Systems
ENG 105	(BC) Freshman Honors: English I
ENG 205	(IC) Freshman Honors: English II
ENG 491	Honors Seminar
HIS 325	The Family in History
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 Existential Literature
MAT 201	(MC) 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 104	(PL) Honors Introduction to Philosophical Problems
PHI 186	Honors Symbolic Logic
PHI 232	(PL) Introduction to Ethics
PHI 233	Introduction to Social and Political Philosophy
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 260	Psychology of Social Behavior
PSY 331	Abnormal Psychology
PSY 407	Psychology of Drugs and Behavior
SOC 558	Ethnic Groups in Urban America
SOC 587	Violence in the Family
SPB 101	(OC) Oral Communication: Basic Speech

Honors-Option Coursework

This option, available for intermediate and advanced courses, allows a student in a regular course to elect honors-level work for the course and receive a retrospective transcript designation as 'honors,' if such work is completed in a satisfactory manner and if the overall grade in the course is a 'B' or above. Application for Honors-Option Coursework must be completed before the end of the first week of classes in any term, and must be agreed to by the course instructor and the department's chairperson or curriculum adviser. Application forms are available at the Office of the Liberal Arts Honors Program.

UNDERGRADUATE COURSES (HON)

The following courses, numbered 090-699, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 433.

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 the 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 has been major transition or change. 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)



HUMANITIES

Office: Room 423, 51 West Warren; 577-3035

Chairperson: Martin M. Herman

Professors

Bernard M. Goldman (Emeritus), Martin M. Herman, Sara E. Leopold, Alexandra McCoy

Associate Professors

Ramon J. Betanzos, Marc Cogan, Richard P. Studing, Nola H. Tutag (Emerita)

Lecturers

Rosemary Catanese, Linda J. Speck

Degree Program

BACHELOR OF ARTS with a major in humanities

The Humanities curriculum 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 four curricular needs:

1. Those so designated and approved may be taken to fulfill portions of the University General Education Program (see page 21), and the College of Liberal Arts Group Requirements (see page 202).
2. Some may serve as electives or cognates for students majoring in other disciplines.
3. Various combinations provide a major in Humanities.
4. Various combinations may be approved for students pursuing a master's degree.

Bachelor of Arts with a Major in Humanities

Admission to this program is satisfied by the general requirements for undergraduate admission to the University; see page 14.

DEGREE REQUIREMENTS: Candidates for the Bachelor of Arts degree in humanities must satisfactorily complete 120 credits in course work. Courses taken must fulfill all University General Education Requirements (see page 21), College of Liberal Arts Group requirements (see page 202), and Departmental Major Requirements (see below). All course work must be completed in accordance with the academic procedures of the University and the College which govern undergraduate scholarship and degrees; see pages 14-39 and 202-207, respectively.

Major Requirements for the Bachelor of Arts degree in humanities consist of satisfactory completion of twenty-four credits in specified course work offered by the Department of Humanities (see below), supplemented and complemented by one of the following options:

1. Satisfactory completion of all major requirements in another department or program; or
2. Satisfactory completion of a twenty-four credit concentration in a single discipline other than humanities; or

3. Satisfactory completion of a coherent period or area study consisting of a twenty-four credit concentration of course work drawn from the offerings of appropriate departments and programs.

Students who are interested in this major should consult a Departmental Adviser for further information.

All majors are required to complete the following courses in the Department of Humanities:

Humanities 102	(VP) Experiencing the Arts
Humanities 210	(PL) Humanities and the Western Tradition I
Humanities 211	(PL) Humanities and the Western Tradition II
Humanities 221	Medium, Form and Meaning in the Arts
Humanities 222	(PL) Constructs of Human Experience
Two Humanities courses at the 500 level	

To insure a coherent program, one with adequate breadth and depth, each major must decide, in consultation with a Departmental adviser, on an appropriate *Plan of Work*. A copy of this *Plan* must be filed with the Department Chairperson by the end of the semester in which a major is declared.

Minor in Humanities

To minor in Humanities, a student must satisfactorily complete eighteen credits, consisting of: HUM 102, 210, 211, 221, and 222. Students with substantial experience in various humanistic disciplines may, with the consent of the Chairperson, substitute Departmental offerings at the 300 level or 500 level for one or several of these courses.

Honors in Humanities

The Honors Program in Humanities is open to students of superior academic ability who are majoring in Humanities. Honors students must demonstrate the ability to study independently and to complete an original Honors Thesis during the senior year, and must maintain a cumulative honor point average of at least 3.3. 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 Humanities 498 and the 400-level honors seminar. For information about the requirements of the department's honors curricula, contact the Chairperson of the Department, or the Director of the Liberal Arts Honors Program (577-3030).

UNDERGRADUATE COURSES (HUM)

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 433.

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, 221 or 485. Attending and reviewing assigned performances and exhibitions related to HUM 101, HUM 102, HUM 103, HUM 210, HUM 211, HUM 221 or HUM 485. (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. (Y)

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. (Y)

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. (Y)

250. Images of Labor in the Arts and Literature. (LBS 250). Cr. 4

Examining the diverse images of the labor movement presented in the popular arts (films, songs, stories, and graphics) and exploring the contrasting perspectives which shape these images. (Y)

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. (Y)

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)

485. Humanities and Education. Cr. 4

Study of major traditions in Western art, literature and philosophy as they relate to education. (I)

498. Honors Thesis In Humanities. Cr. 3-6

Prereq: senior standing; 3.3 h.p.a. Open only to humanities majors. Research problem completed under direction of faculty member. (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)

536. Western Culture in the Renaissance. 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)

537. Western Culture in the Baroque 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)

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)

576. Studies in the Arts and Ideas of American Culture II: The Gilded Age to the Present. Cr. 3

Prereq: HUM 211 and one course in American literature or American history or A S 201 or equiv. (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)

601. Foundations of the Disciplines of the Humanities. Cr. 3

Consideration of how philosophical principles are related to the ways in which the humanities are experienced, defined and investigated. Differing divisions of the humanistic fields compared and explored. (I)

LINGUISTICS

Office: 71 West Warren; 577-3254

Director: Patricia Siple

Participating Faculty

Ellen Barton, *Assistant Professor, English*

Lynn Bliss, *Professor, Communication Disorders and Sciences*

Walter Edwards, *Professor, English*

Joel Izkowitz, *Associate Professor, Greek and Latin*

Steven Lapointe, *Associate Professor, English*

Sara E. Leopold, *Professor, Humanities*

Alexis Manaster-Ramer, *Assistant Professor, Computer Science*

T. Michael McKinsey, *Associate Professor, Philosophy*

John Mullenix, *Assistant Professor, Psychology*

Martha Ratliff, *Assistant Professor, English*

Hilary Ratner, *Associate Professor, Psychology*

Aleya Rouchdy, *Professor, Near Eastern Languages*

Eli Saltz, *Professor, Psychology*

Gary Scavnick, *Associate Professor, Romance Languages*

Patricia Siple, *Associate Professor, Psychology*

Robert Titiev, *Associate Professor, Philosophy*

Rebecca Treiman, *Professor, Psychology*

Degree Programs

BACHELOR OF ARTS with a major in linguistics

**MASTER OF ARTS in Linguistics*

Linguistics is devoted to the scientific study of language structure and use. The Linguistics Program at Wayne State offers an interdisciplinary approach to this field, permitting students to explore a wide range of topics and issues in language research. 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), (f) the disorders of language behavior, and (g) 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

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

Program is administered by a director and an advisory committee of faculty members drawn from the Departments of Anthropology, Computer Science, English, German and Slavic Languages, Greek and Latin, Humanities, Near Eastern Studies, Philosophy, Psychology, Romance Languages, and Communication Disorders and Sciences.

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 14.

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 21), the College of Liberal Arts Group Requirements (see page 202), 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 14–39 and 202–207, 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 —Symbolic Logic	4
LIN 557 —Philosophy of Language	4

Elective courses to complete 28-credit major requirements:

ENG 576 —American Dialects	3
PHI 520 —Modal Logic	4
PHI 535 —Logical Systems I	4
PHI 539 —Logical Systems II	4
PHI 563 —Twentieth Century Analytic Philosophy I	4
PHI 564 —Twentieth Century Analytic Philosophy II	4
PSY 671 —Psycholinguistics	3

C. Psycholinguistics

Required Courses:

PSY 671 —Psycholinguistics	3
PSY 309 —Cognitive Processes	4

Elective courses to complete 28-credit major requirements:

PSY 240 —Developmental Psychology	4
PSY 410 —Statistical Methods in Psychology	4
PSY 490 —Directed Study and Research (credit max. 9)	2–4
PSY 620 —Development of Memory	3
PSY 699 —Special Topics in Psychology (elect with consent of adviser)	3
CDS 508 —Phonetics	3
SPC 501 —Psychology of Human Communications	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:

SPC 504 —Communication in the Black Community	3
SOC 410 —(SS) Social Psychology	3
SOC 628 —Social Statistics	3
PSY 671 —Psycholinguistics	3
ANT 520 —Social Anthropology	3
ENG 560 —Studies in Folklore	3
LIN 576 —American Dialects	3
LIN 577 —Sociolinguistics	3

E. Individualized Program

Under exceptional circumstances 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 570 —Introduction to Linguistic Theory	3
LIN 529 or LIN 572	
—Phonology	3
—Topics in Language (Phonology)	3
LIN 530 —Theory of Syntax	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 one of the departments in 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 433.

- 170. (ENG 170) English Grammar. Cr. 3**
Intensive course in the rules of English grammar and spelling, especially those rules needed for written work in college. Explication of the linguistic principles inherent in the rules of usage. (Y)
- 185. (PHI 185) Symbolic Logic. Cr. 4**
The logic of propositions; the general logic of predicates and relations; identity and description; a brief introduction to set theory. (T)
- 186. (PHI 186) Honors Symbolic Logic. Cr. 4**
Open only to Honors students. See LIN 185. (T)
- 270. (ENG 270) Introduction to Contemporary English. Cr. 3**
Ways in which use of language affects communication: denotation and connotation, analysis of language of advertising, business, government and education. (B)
- 271. (ENG 271) Linguistic Approaches to Language Acquisition. Cr. 3**
Current models of child first–language acquisition; kinds of evidence supporting them. Topics may include: debate over innateness, issues in adult second–language acquisition, relations between acquisition and adult language breakdown (aphasia). (Y)
- 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. (Y)
- 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)
- 309. (PSY 309) Cognitive Processes: Language, Thinking and Problem Solving. Cr. 4**
Prereq: PSY 101 or PSY 102. Material fee as indicated in *Schedule of Classes*. Fundamental theories, concepts, and empirical findings in the study of human cognition. Topics include thinking, problem solving, language comprehension and production, the acquisition and use of knowledge, memory, attention and consciousness. Laboratory investigations of cognitive processes. (F,W)
- 401. (ARB 401) Arabic Linguistics. Cr. 3**
Prereq: ARB 202 or consent of instructor. Continuation of intermediate grammar exercises in translations, reading in selected modern texts.
- 504. (SPC 504) Communication in the Black Community. (S E 537). Cr. 3**
Sociolinguistic and rhetorical analysis of speech and language behavior among Afro–Americans; linguistic history and development of black English. Related issues concerning the education of black children. (Y)
- 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)
- 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. (Y)
- 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. (Y)
- 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**
Basic concepts and methods of modern linguistics and their application to the study of the English language. (Y)
- 572. (ENG 572) Topics in Language. Cr. 3(Max. 9)**
Topics such as phonology, morphology, semantics, pragmatics, language change, history of English, pidgins and creoles, psycholinguistic approaches, text grammar, to be announced in *Schedule of Classes*. (Y)
- 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. (Y)
- 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. (B)

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. (Y)

593. (WI) Writing Intensive Course in Linguistics. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: LIN 529 or 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. Intensive training in literature search, linguistic analysis, and the preparation of scholarly written work related to phonology or syntax. (T)

620. (PSY 620) Development of Memory. Cr. 3

Prereq: PSY 209, PSY 240, or consent of instructor. Major theoretical models of memory development will be discussed and used to explore various aspects of the memory process from infancy to adulthood. (I)

664. (CDS 664) Language Pathology: Etiology and Diagnosis. (SED 664). Cr. 3

Prereq: SPD 530 and SPD 532. Descriptions, etiology, methods of diagnosis of language disorders in children, including remediation. (F)

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

Academic Services Officer: Mary C. Parks

Professors

Gregory F. Bachelis, Lawrence J. Brenton, Leon Brown, Paul A. Catlin, Pao-Liu Chow, William S. Cohn, Bertram J. Eisenstadt, Karl W. Folley (Emeritus), David Handel, Chong-Shi Houh, John M. Irwin, Judith Q. Longyear, Leonid Makar-Limanov, Jose L. Menaldi, Boris Mordukhovich, D. Clarence Morrow (Emeritus), Togo Nishiura, Owen G. Owens (Emeritus), Jingyal Pak, Choon-Jai Rhee, Yury Rodin, Claude L. Schochet, Bertram M. Schreiber, Tze-Chien Sun, Martin T. Wechsler, Paul Weiss (Emeritus)

Associate Professors

Robert D. Berman, John C. Breckenridge, Robert R. Bruner, Daniel S. Drucker, Henryk Fast, Daniel E. Frohardt, David H. Gluck, Lowell J. Hansen, David W. Jonah, Steven M. Kahn, Morris W. Katz, Marc Konvisser, Leonid Makar-Limanov, Peter Malcolmson, Charles A. McGibbon, Jose L. Menaldi, Harold T. Slaby, Stephen A. Williams

Assistant Professors

Su-Yun Chen Huang, Andrzej Kozlowski, Richard Kramer, Gail Letzter, Tachen Liang, Kay Maggaard, Edmond Nadler, Gang Yin

Adjunct Associate Professors

David E. Bindschadler, Lance K. Heilbrun

Degree Programs

BACHELOR OF ARTS with a major in mathematics

BACHELOR OF SCIENCE with a major in mathematics

**MASTER OF ARTS with a major in mathematics*

**MASTER OF ARTS with a major in mathematical statistics*

**MASTER OF ARTS in Applied Mathematics*

**MASTER OF ARTS in Teaching College Mathematics*

**DOCTOR OF PHILOSOPHY with a major in mathematics and specializations in pure mathematics, applied mathematics and mathematical statistics*

The courses offered by the Department of Mathematics serve several purposes; they supply the mathematical preparation necessary for students specializing in the physical, life or social sciences, in business administration, in engineering, and in education; they provide a route by which students may achieve a level of competence to do research in any of several special mathematical areas; they allow students to prepare themselves for work as mathematicians and statisticians in industry and government; and they give an opportunity to all inquisitive students to learn something about modern mathematical ideas.

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

BACHELOR'S DEGREES

Admission Requirements for the College are satisfied by the general requirements for undergraduate admission to the University; see page 14. 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 of Liberal Arts Group Requirements (see page 202) and the University General Education Requirements (see page 21), 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 14–39 and 202–207, 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 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 Liberal Arts 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.

Mathematics Qualifying Examinations

Mathematics 150: Students must qualify for entry into MAT 150 by either (a) successfully completing MAT 095 or 098 in the term immediately preceding the one in which they plan to enroll with the recommendation of their instructor to enter MAT 150, or (b) by receiving a satisfactory score on the MAT 150 Qualifying Examination during the testing period immediately preceding the semester in which they plan to enroll. This examination will cover topics in arithmetic and first year high school algebra. A student may take the examination only once during one testing period. All transfer students are required to take the Qualifying Examination before enrolling in MAT 150.

Mathematics 180: Students must qualify for entry into MAT 180 by either a) completing MAT 095 or 098 in one of the two terms immediately preceding the one in which they plan to enroll, with the recommendation of their instructor to enter MAT 180; or b) by receiving a satisfactory score on the MAT 180 Qualifying Examination during one of the two preceding terms. All transfer students are required to take the Qualifying Examination before enrolling in MAT 180.

Mathematics 201: Students must qualify for entry into MAT 201 by either a) receiving a 'C' or better grade in MAT 180 in one of the two terms immediately preceding the one in which they plan to enroll; or b) by receiving a satisfactory score on the MAT 201 Qualifying Examination during one of the two preceding terms. Students who received a 'C' or better grade in MAT 180 prior to Fall Term 1990 are exempt from these requirements. However, they are strongly encouraged to take the Qualifying Exam to determine their preparedness for MAT 201. All transfer students are required to take the Qualifying Exam before enrolling in MAT 201.

The examinations are administered prior to the beginning of each semester. It is important for the student to review thoroughly before taking an examination. A student may take an examination only once during one testing period.

The MAT 180 and MAT 201 Qualifying Examinations are both included in one examination. Parts A and B of the examination are used to determine eligibility for Mathematics 180. The level of this part corresponds to the competence gained in two and a half years of college preparatory mathematics including topics from elementary algebra and geometry. Candidates for Mathematics 201 must take the full examination of about two hours duration. The full exam is based on three and one-half to four years of college preparatory mathematics including topics from algebra, plane and solid geometry and trigonometry.

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 and 616, or from (b) CSC 518, 651, 658, 661, 662, or 699 (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 and 616, or two such courses and one elected from the following: CSC 518, 651, 658, 661, 662, and 699 (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 available only to students in the Combined Curriculum for Secondary Teaching.

1. The Basic Sequence (MAT 201, 202, 203, 225 and 235).
2. Mathematics 507.
3. Mathematics 614, 615, and 616.
4. Mathematics 540 or 552.
5. (MAT 560 is required for the B. S. degree. It is not required for the B. A. degree.)

6. Two additional mathematics courses numbered above 500, excluding service courses, or one such course and 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 542.
5. Mathematics 570 or 221.
6. Mathematics 510.
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 and 616, or one such course and one course elected from: CSC 518, 586, 587, 651, 658, 661, 662, and 699 (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 542.
4. Mathematics 570.
5. Mathematics 582.
6. Mathematics 510.
7. Mathematics 577.
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 and 616, or one computer science course numbered above 510. Students in the Combined Curriculum for Secondary Teaching should elect MAT 614.

Curricular Alternatives

Combined Curriculum for Secondary Teaching: Under the Combined Curriculum (see Teacher Preparation Curricula, page 213), 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 programs specified above. Though Option C is specifically designed for such purposes, students are not restricted to Option C.

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, above. 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 518, 586, 587, 651, 658, 661, 662, or 669 (depending on the topic) can be used as a mathematics elective. An accelerated one-semester 'Discrete Mathematics' course, MAT 286, is available as a substitute for the year-long sequence MAT 186–187.

Actuarial Science Concentration: Students embarking on a career as an actuary will be expected to pass certain exams administered by the profession. Option E (above) 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.

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 206).
4. Completion of a Senior Task, for which a student registers under Mathematics 490, Directed Study, Honors Program. These MAT 490 credit honors 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.

'AGRADE' Program

The Department of Mathematics participates in the College of Liberal Arts '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 of Liberal Arts (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 and 616, or (b) MAT 235 or 221 or 286 and two mathematics courses numbered above 500, excluding service courses and MAT 613, 615 and 616.

Scholarships and Awards

The Department of Mathematics has undergraduate scholarships for entering freshmen, designed primarily for students talented in mathematics who were at one time at risk of dropping out of high school. In addition, the *Farmers Insurance Group Award* is a scholarship available to mathematics majors after their freshman year.

Each year the Department also presents its 'Outstanding Undergraduate Award,' along with other awards and gifts to its top undergraduate majors and graduate students.

Introductory Courses for Non-Majors

For undergraduate or graduate students who need an introduction to college level mathematics but do not expect to take advanced courses, the Mathematics Department has designed a variety of service courses. These courses are collected in a separate list entitled 'Service Courses' which appears at the end of the Courses of Instruction; see page 283. Ordinarily, the courses in this list are not suitable for degree work in mathematics or as preparation for more advanced mathematical study. The following paragraphs enumerate mathematics courses of particular relevance to designated groups of students. Therefore, they should not be elected by students in any area who plan a continuing education in mathematics.

Pre-Business Administration: Mathematics 150 (or equivalent for transfer students) is required in this curriculum. Mathematics 180 also satisfies the requirement and is recommended by the Department.

Pre-Education: The student in elementary education normally elects the sequence, Mathematics 111, 112.

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 and Linear Programming	MAT 577, 586
Probability and Stochastic Processes	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 433.

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)

095. Algebra. Cr. 3
Prereq: passing a standardized basic arithmetic test administered in class (failure requires transfer to MAT 098). Offered for S and U grades only. No degree credit. Real number system, operations with algebraic expressions, exponents and radicals, linear equations, systems of two linear equations, solutions of quadratic equations by method of factoring; elementary geometry. For students who need a review of high school algebra and geometry. (T)

098. Mathematics Workshop. Cr. 3
No degree credit. Offered for S and U grades only. Remedial, individualized workshop in mathematics. Students complete computer modules in Mathematics Tutoring Center. Individual programs must be approved by Mathematics Department at beginning of term. (Y)

180. (MC) Elementary Functions. Cr. 4
Prereq: satisfactory score on Qualifying Exam. No credit after former MAT 0178 or 0179; only 2 credits toward graduation after MAT 150. The properties and graphs of polynomials, rational functions, trigonometric functions, exponentials and logarithms; properties and graphical representation of complex numbers. (T)

186. Discrete Mathematics for Computer Science I. Cr. 4
Prereq: MAT 180. Logic, sets, induction, relations, functions, sequences, matrices, combinatorics, applications to computer science. (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)

201. (MC) 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)

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)

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)

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)

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 part 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 chosen from among: topological equivalence and topological properties, complexes, Euler characteristic, connectedness, compactness, continuity, Brouwer's Fixed Point Theorem, vector fields, hairy ball theorem, n -dimensional spaces, classification of surfaces, cut and paste techniques, the Mobius band, orientability, the fundamental group. (Y)

553. Differential Geometry of Curves and Surfaces I. Cr. 3

Prereq: MAT 203 and 225. Classical differential geometry of curves and surfaces in three dimensions. (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. Probability and Stochastic Processes. 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 and binomial distribution; joint, marginal and conditional distribution functions; law of large numbers; central limit theorems; random walks; Markov chains; Poisson processes. (T)

571. Stochastic Processes with Applications. 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)

586. Introduction to Linear Programming. Cr. 3
Prereq: MAT 203 and 225. Theory of linear programming; methods of solving linear programming problems (simplex, dual simplex and other methods); applications of linear programming (problem formulation, computational aspects, sensitivity analysis); networks. (B)

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 to be 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
Prereq: written consent of chairperson of mathematics education. 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)

616. Topics in Mathematics for High School Teachers IV. Cr. 3
Prereq: MAT 203 and 225. No credit after MAT 542. Algebraic structure: rings, integral domains, fields, groups; applications to polynomials and theory of equations. (Y)

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. (B)

660. Complex Analysis. Cr. 4
Prereq: MAT 561 or consent of instructor. Complex differentiation; elementary functions; Cauchy's integral theorem; power series; Laurent expansions; singularities; residue theorem; entire and meromorphic functions; Reimann mapping theorem. (B)

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

090. Mathematics for Pre-Nursing Students. Cr. 3
Prereq: one unit of high school algebra. Offered for S and U grades only. No degree credit. Open only to pre-nursing students. Review of arithmetic and elementary algebra. Fractions, percentage, ratio, proportions, and units of measurement. Operations with algebraic expressions, exponents and radicals, logarithms, linear and quadratic equations. (T)

111. Mathematics for Elementary Teachers I. Cr. 3
Prereq: passing of a standardized basic arithmetic test administered in class. No degree credit in College of 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 College of 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: satisfactory score on Qualifying Exam. No credit after MAT 180; not for students who plan to take MAT 180. Finite mathematical methods for model building in the social and management sciences. Polynomial, exponential, and logarithmic functions, matrices, and linear programming. (T)

151. Calculus for the Social and Management Sciences. Cr. 3
Prereq: MAT 150 or equiv. No credit after MAT 201. Elementary techniques of calculus with particular application to the social and management sciences. Sequences and limits, differentiation, integration and optimization. (Y)

340. Applied Statistics. (E T 340). Cr. 3
Prereq: college algebra. No degree credit in College of Liberal Arts. Student computer account required. Application of probability concepts; statistical theory in the use of engineering data. (T)

343. Applied Calculus I. (E T 343). Cr. 4
Prereq: MAT 180. No degree credit in College of Liberal Arts. Limits, derivatives, applications of derivatives, definite integrals and their applications, and trigonometric functions. (T)

345. Applied Calculus II. (E T 345). Cr. 4
Prereq: MAT 343. No degree credit in College of 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

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)

617. Mathematics for High School Teachers I.
Cr. 1-4(Max. 6)

No graduate credit. Selected topics from set theory, abstract algebra; geometry, and current curriculum studies in high school mathematics at ninth grade level. (I)

NEAR EASTERN and ASIAN STUDIES

Office: 437 Manooagian; 577-3015

Chairperson: Jacob Lassner

Professors

Jacob Lassner, Aleya A. Rouchdy, Ivan Starr

Degree Programs

BACHELOR OF ARTS with a major in Hebrew

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 14.

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 202) and the University General Education Requirements (see page 21), 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 14-39 and 202-207, respectively.

Major Requirements

Major Requirements in Hebrew: A major in Hebrew consists of twenty-six credits beyond Hebrew 102. In addition, the student is required to take twelve credits in Hebrew culture including the Biblical and post-Biblical periods.

Major Requirements in Near Eastern Languages: A major in Near Eastern languages consists of: (a) twenty-four credits beyond first year proficiency in Arabic or Hebrew, and first year proficiency in a second language: Arabic, Aramaic, or Hebrew; or (b) eleven credits beyond first year proficiency in both Arabic and Hebrew. In addition, the student is required to complete twelve credits in elective courses in ancient near eastern, Hebrew, or Islamic culture.

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

Major Requirements in Near Eastern Studies: A major in Near Eastern Studies consists of eleven credits beyond the first year proficiency in Arabic or Hebrew. In addition, the student is required to take thirty credits in elective courses including no less than six credits in each of the following: ancient near eastern culture, Hebrew culture, Islamic culture.

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 Liberal Arts 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 433.

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)
- 202. Intermediate Arabic II. Cr. 4**
Prereq: ARB 201 or consent of instructor. Continuation of ARB 201. (W)
- 203. Arabic for Business. Cr. 4**
Prereq: ARB 202 or consent of instructor. Arabic for basic business transactions. (I)
- 390. Directed Study. Cr. 1-6(Max. 9)**
Prereq: consent of chairperson. Readings, periodic reports and consultations. (T)
- 401. Arabic Linguistics. (LIN 401). Cr. 3**
Prereq: ARB 202 or consent of instructor. Continuation of intermediate grammar exercises in translations, reading in selected modern texts. (Y)
- 501. Medieval Arabic Texts I. Cr. 3**
Prereq: ARB 201 or consent of instructor. Reading and translation of Arabic Medieval texts. (Y)

- 502. Medieval Arabic Texts II. Cr. 3**
Prereq: ARB 501 or consent of instructor. Continuation of ARB 501. (B)

- 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)

- 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)
- 390. Directed Study. Cr. 3-6(Max. 12)**
Prereq: consent of chairperson. Directed readings.
- 455. Introduction to 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. 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.
- ### 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. Modern Hebrew Literature in English Translation. Cr. 3**
Selected readings in poetry and prose from Bialik to the present; drama selections at instructor's option. (Y)
- 390. Directed Study. Cr. 3-6(Max. 9)**
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)

Near Eastern Studies (N E)

200. (FC) Introduction to Islamic Civilization of the Near East. Cr. 3

Muhammad and the origins 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)

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)

332. History and Civilization of the Ancient Near East II. Cr. 3
Prereq: N E 331 or consent of instructor. Continuation of N E 331. (I)

355. (ANT 355) (FC) Arab Society In Transition. (SOC 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 relations to international systems. (I)

365. History of the Jews I. Cr. 3
From the Hellenistic period to the seventh century. (I)

368. (HS) 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)

369. (HS) Islamic History: The Formation of the Empire. (HIS 369). Cr. 3
Prereq: N E 368 or consent of instructor. The rise of the Abbasids as a world empire with particular emphasis on their revolutionary origins. (Y)

390. Directed Study. Cr. 3-6(Max. 9)
Prereq: consent of chairperson. Readings; consultations and reports. (T)

498. Honors Thesis in Near Eastern Studies. Cr. 3-6
Prereq: senior standing; 3.5 h.p.a. Open only to majors in Near Eastern studies. Research problem completed under direction of faculty member. (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)

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)

Swahili (SWA)

101. Elementary Swahili I. Cr. 4
Prereq: sophomore standing. Material fee as indicated in *Schedule of Classes*. Foreign language credit only. 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. Foreign language credit only. Material fee as indicated in *Schedule of Classes*. Continuation of SWA 101. (W)

201. (FC) Intermediate Swahili. Cr. 4
Prereq: SWA 102. Foreign language credit only. Material fee as indicated in *Schedule of Classes*. Conversational Swahili and grammar review; reading of Swahili literature. Continuation of SWA 102. (S)



NUTRITION and FOOD SCIENCE

Office: 160 Old Main; 577-2500

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Administrative Assistant: Evette Weaver

Professors

Mary Jane Bostick (Emerita), Esther D. Callard (Emerita), Leora A. Shelef

Associate Professors

K.-L. Catherine Jen, Adhip N. Majumdar (Visiting)

Assistant Professors

Nancie Merlino, Ifendu Nnanna

Senior Lecturer

Joyce Mooty

Lecturers

Elizabeth Kustin, Tonia Reinhard

Field Instructors

Joan Brown (VA Medical Center—Allen Park); Mary Clor (St. Clair Renal Center); Debbie Finklestein (Detroit Osteopathic Hospital); Pat Flemings, Carrie Helms (Wayne County Health Department); Karen Jackson (Saratoga Hospital—Detroit); Michael Johnson (U.S. Army Tank—Automotive Command); Beth Lyman, Linda O'Donnell, Deborah Zibell—Frisk (Providence Hospital—Southfield); Ann Matish (Martha T. Berry Hospital—Mt. Clemens); Cheryl Nagy (Pontiac Osteopathic Hospital); Joanne Reid (Hutzel Hospital); Delores Stamps (Detroit Receiving Hospital); Vera Thompson (Hammond Senior Center); Jennie Valin (Selectcare); June Ventimiglia (Children's Hospital of Michigan); Cindy Yungton (William Beaumont Hospital—Troy)

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 Medical 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 combined major in nutrition and food science and one of the following: biochemistry, biological sciences, chemistry, pharmacology, or physiology.*

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.

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

BACHELOR'S DEGREES

Admission Requirements: See the general requirements for undergraduate admission to the University, page 14. 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 of Liberal Arts Group Requirements (see page 202) and the University General Education Requirements (see page 21), 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 14-39 and 202-207, 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, equipment, 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: A student must complete at least thirty-two credits in course work (a minimum of twenty-four credits in NFS courses, and at least eight credits in Management courses) and have an overall honor point average of at least 2.0 in course work within the major field. 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, 413, 535, 592, 616, 685
Biological Sciences 105, 220
Chemistry 102, 103
Computer Science 100
Economics 101, 102
Mathematics 150
Psychology 240
Accounting 301
Management 550, 552, 570, 574

COMMUNITY COLLEGE COURSES

Candidates for the degree must complete one course in each of the following areas: food management, quantity food purchasing, quantity food production, equipment and design. As many as twelve credits from these courses can be applied to the degree either by transfer from previous community college work or by concurrent enrollment with a local community college. For an approved list of courses from area institutions, consult the Department.

Bachelor of Science with a Major in Nutrition and Food Science

This program is designed for science-oriented students who are interested in the various food and nutrition professions. Students are prepared for these professions by the integration of chemistry and the biological sciences with courses in food science and nutrition. Employment opportunities may be found in various phases of food processing, research and development, public health, and community education, as well as in positions in state and federal regulatory agencies dealing with food products. The program is offered with two curricular orientations: basic nutrition and food science, and general dietetics, either of which provides good preparation for medical school enrollment. Students should consult an adviser for program planning.

Admission Requirements: See above under Bachelor's Degrees.

DEGREE REQUIREMENTS: See above under Bachelor's Degrees.

—Basic Nutrition and Food Science

Major Requirements: Students must complete ninety-two credits in the following science courses of which at least thirty-two must be in the major subject, nutrition and food science:

CORE COURSES

Nutrition and Food Science 213, 214, 221, 413, 513, 514, 523, 685 and an additional eight credits of upper division course work in Nutrition and Food Science.

Biological Sciences 151, 152, 220, 287, 507, 525

Chemistry 105 or 107, 108, 224, 226, 227, 312

Chemistry 560 or Biochemistry 501

Computer Science 102

Mathematics 180

Physics 213, 214

Statistics 102

—General Dietetics

This curriculum provides the theoretical and practical knowledge in food science, nutrition, food service systems management, chemistry and the biological sciences, to prepare students for careers in dietetics. Upon completion of the program, the student earns the Bachelor of Science with a Major in Nutrition and Food Science. To become a registered dietitian, a graduate of the program must complete an American Dietetic Association (ADA) accredited internship in a hospital or other accredited health agency; following this he or she must successfully complete the registration examination given by the ADA. Alternatively, a student may pursue a master's degree in nutrition and food science and complete a supervised practice experience, followed by successful completion of the ADA registration examination. Students should confirm the availability of this option with a Nutrition and Food Science adviser.

Major Requirements: Candidates for the Bachelor of Science with a Major in Nutrition and Food Science and concentration in general dietetics must complete the core courses and general dietetics sequence outlined below:

GENERAL DIETETICS

Nutrition and Food Science 413, 522, 525, 616

Psychology 240

Management 570

Instructional Technology 511, 512

Bachelor of Science in Medical Dietetics

The medical 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 Medical Dietetics degree and are eligible to write the national registration examination for professional certification without the need for an internship. The medical dietetics program is currently granted accreditation status by the American Dietetic Association Council on Education Division of Education Accreditation, 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 granted only to students with junior standing in the College after completion of the core courses indicated below by an asterisk (*). 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 of Liberal Arts advisers and medical 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, 523, 535, 685

Anthropology 210 * or Sociology 200 *

Biological Sciences 151,* 220,* 287 *

Chemistry 105 or 107,* 108,* 224 *

Economics 102 *

Psychology 102 *

Statistics 102 *

Biochemistry 501 *

Management 550 *

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 medical dietetics, as well as any remaining courses necessary to satisfy the College Group Requirements and the University General Education Requirements (see pages 202 and 21, respectively).

MEDICAL DIETETICS

Nutrition and Food Science 321, 322, 421, 422, 526

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 495, 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

Plus eleven credits from the following:

Nutrition and Food Science 413, 513, 514, 523, 616, 685

'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 433.

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; facts of 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. 2

Coreq: NFS 214 for nutrition and food science majors only. 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. 2

Coreq: NFS 213. Material fee as indicated in *Schedule of Classes*. Breakage 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)

321. Medical Dietetics I. Cr. 8

Prereq: completion of all pre-professional courses as specified in course outline. Open only to medical dietetics majors. Material fee as indicated in *Schedule of Classes*. Introduction to coordinated classroom and clinical study of dietetic practice. Focus on patient health care delivery problems in a primary care setting. (F)

322. Medical Dietetics II. Cr. 8

Prereq: NFS 321. Open only to medical dietetics majors. Material fee as indicated in *Schedule of Classes*. Continuation of NFS 321. Focus on patient health care delivery problems in acute care. (W)

413. Food Preservation. (NFS 713)(CHE 613). Cr. 4

Prereq: BIO 220, NFS 213; or equiv. Material fee as indicated in *Schedule of Classes*. Breakage 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)

421. Medical Dietetics III. Cr. 8

Prereq: NFS 322. Open only to medical dietetics majors. Material fee as indicated in *Schedule of Classes*. Continuation of NFS 322. Focus on patient health care delivery problems in both acute care and primary care settings. (F)

422. Medical Dietetics IV. Cr. 9

Prereq: NFS 421. Open only to medical dietetics majors. Material fee as indicated in *Schedule of Classes*. Continuation of NFS 421. Focus on management of nutritional care in selected health care delivery systems. (W)

490. Directed Study. Cr. 1–4

Prereq: written consent of instructor. (T)

491. Workshop. Cr. 2–4(Max. 8)

Application of theoretical principles to selected area of nutrition and food science. Topics and prerequisites to be announced in *Schedule of Classes*. (I)

495. Honors Directed Study. Cr. 1–4(Max. 6)

Prereq: College honors standing; 3.3 h.p.a. (T)

500. Contemporary Issues in Nutrition and Food Science. Cr. 1–4(Max. 8)

No topic may be repeated. Topics to be announced in *Schedule of Classes*. (I)

513. Food Chemistry. Cr. 3

Prereq: NFS 213 or equiv., CHM 224. Material fee as indicated in *Schedule of Classes*. 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*. Breakage fee as indicated in *Schedule of Classes*. Basic modern and classical analytical techniques and instruments in nutrition and food science. Background theory to principals of instrumental assays. Procedures for evaluation of macro and micro food components analysis. Physiological functions relevant to nutrition. (Y)

522. Community Aspects of Nutrition. Cr. 4

Prereq: NFS 213, 214, 221. Introduction to community assessment. Uses of assessment in determining cultural, economic, and lifestyle interrelationships that impact on nutrition problems and education needs throughout the life cycle. (F)

523. Nutrition and Metabolism. Cr. 4

Prereq: NFS 221, BIO 287 or equiv., CHM 224 or equiv. The physio-biochemical properties of nutrients and their bionutritional interrelationships at the cellular and sub-cellular level. Carbohydrate,

protein, and lipid metabolism and the role of vitamins and minerals in these metabolic processes. (F)

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)

592. Supervised Field Experience. Cr. 2-4

Prereq: written consent of instructor. Supervised field experience designed to correlate classroom theory with practical work. (F,W)

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)

616. Food Laws and Regulations. Cr. 3

Prereq: NFS 221 and 513 or equiv. No credit after NFS 716. 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)

685. (W) Seminar. Cr. 2-4(Max. 6)

Prereq: consent of instructor; senior standing. Topics to be announced in *Schedule of Classes*. (F,W)

PEACE and CONFLICT STUDIES

Office: 2319 Faculty Administration Building
Director: Frederic S. Pearson

Executive Committee

Chairperson: M. Marlyne Kilbey, *Psychology*
Vice-Chairperson: Otto Feinstein, *Political Science*
Education Adviser: Lillian Genser

Sheldon Alexander, *Psychology*
Ronald Aronson, *Weekend College*
Patricia Coleman-Burns, *Africana Studies*
Jose Cuello, *Chicano-Boricua Studies*
Eddie Davis, *Social Work*
Sheryl Edwards, *Student*
Joella Gipson, *Education*
Mark Kahn, *Economics (Emeritus)*
Bernice Kaplan, *Anthropology*
Simon Payaslian, *Student*
Eugene Perrin, *Medicine*
Jean Dietrick Rooney, *Center for Urban Studies*
Alvin Saperstein, *Physics*
Peter Schoenbach, *Music*
Mary Sengstock, *Sociology*
Francis Shor, *Weekend College*
Melvin Small, *History*
Guy Stern, *German and Slavic Languages*
Joseph Stulberg, *Industrial Relations*
Maurice Waters, *Political Science*
Maurice White, *Education*
Edward Wise, *Law*
Marvin Zalman, *Criminal Justice*

Co-Major Program

The Peace and Conflict Studies Co-Major Program integrates varieties of courses and research programs within the traditional disciplines that deal with this most fundamental and universal of human problems. The program complements a variety of disciplines dealing with resolving disputes, including: pre-law, sociology/psychology, government, economics, science and pre-medicine, business, history, languages, criminal justice, religion, education, communications and media. The aim is: (1) to coordinate the approaches to human conflict now being presented in the University; (2) to provide tools and expertise needed for graduate work and professions; (3) to provide opportunities for co-majors to work on projects in the community that involve conflict and its resolution.

The 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. Depending upon the interest of the student, with the consent of the Director, other courses may be substituted for any of the core courses.

CORE REQUIREMENTS (16 Credits) credits

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 500 —Dispute Resolution	3
PCS 501 — Internship on Dispute Resolution	3
PHI 110 —Contemporary Moral Issues	3
PHY 202 — Nuclear War	4
P S 281 —World Politics	4
PSY 563 —Group Dynamics	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; many others might qualify for inclusion upon petition of the student.

College of Liberal Arts

ANT 514 —Biology and Culture	3
ANT 520 —Social Anthropology	3
BIO 569 —Animal Behavior	3
ECO 441 —Labor Institutions	4
ECO 560 —Introduction to Development Economics	4
GEG 110 — (SS) World Regional Patterns	4-5
GEG 230 —Soviet Union	4
HIS 305 — United States and the Vietnam Experience	4
HIS 529 —American Labor History	4
HIS 548 —Nazi Germany	3-4
PHI 524 —Special Topics in Social and Political Philosophy	4
P S 202 —(SS) Current Issues in American Foreign Policy	2
P S 251 —Introduction to Political Ideologies	4
P S 483 —International Law	4
P S 557 — Marxism and Socialist Thought	4
P S 581 —American Foreign Policy and Administration	4
P S 583 —International Conflict and Its Resolution	4
P S 584 —The Politics of Disarmament	4
PSY 260 —Psychology of Social Behavior	4
PSY 331 —Abnormal Psychology	4
PSY 563 —Group Dynamics	3
PSY 656 — Psychology of Union-Management Relations	3
SOC 382 —Criminology: Society, Crime and the Criminal	3
SOC 540 —The Family	3
SOC 557 —Race Relations in Urban Society	3

College of Education

EDP 541 — Mental Hygiene and Its Relation to the Problems of Education	2-3
EDS 662 —Sociology of Urban Schools	2-3
SSE 673 —New Perspectives in Social Education	1-8

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 433.

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. Cr. 1-4

Special topics relating to peace and conflict studies. (Y)

202. (PHY 202) Nuclear War. (HIS 251)(P S 244). Cr. 4

May not be used to fulfill natural science group requirement. Nuclear war as a present-day possibility. How nuclear war may differ from previous human conflict. Origin and growth of the nuclear arms race and its likely outcome. Principles of the human and physical sciences applied to predict the future of the arms race and to formulate appropriate responses to the implications of nuclear 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)

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)

PHILOSOPHY

Office: 51 West Warren; 577-2474

Chairperson: T. Michael McKinsey

Professors

Richard B. Angell (Emeritus), Lawrence B. Lombard, Robert J. Yanal

Associate Professors

Barbara M. Humphries, T. Michael McKinsey, Lawrence Powers, Bruce A. Russell, William D. Stine, Robert J. Titiev

Assistant Professors

Herbert Granger, Ruth A. Saunders

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 14. 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 202) and the University General Education Requirements (see page 21), 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 14-39 and 202-207, respectively.

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 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 295).

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.

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

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 433.

Introductory Courses

101. (PL) Introduction to Philosophical Systems.
(Lct: 3; or Lct: 3; Dec: 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. (I)

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. (T)

185. Symbolic Logic. (LIN 185). Cr. 4

The logic of propositions; the general logic of predicates and relations; identity and descriptions; a brief introduction to set theory. (T)

186. Honors Symbolic Logic. (LIN 186). Cr. 4

Open only to Honors students. See PHI 185. (T)

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)

515. Existentialism and Phenomenology. Cr. 4

Prereq: PHI 211 or 212 or 213 or consent of instructor. Selected topics or readings related to the work of one or more of the major existentialist or phenomenological philosophers, such as Nietzsche, Husserl, Heidegger and Sartre. (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? (Y)

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. (Y)

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)

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)

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. (B)

250. Minds and Machines. Cr. 3

It is frequently claimed that machines are capable of intelligent behavior such as creating artworks, teaching, learning, carrying on a conversation, and making decisions. Is there any merit to such claims? What important distinctions ought to be made in connection with the concept of artificial intelligence? How can computers be used to provide models for cognitive processes? Exploration of philosophical issues related to machines, without presupposing technical knowledge about computers or electronic circuitry. (B)

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? (B)

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. (B)

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*. (B)

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*. (B)

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. (B)

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. (B)

580. Special Topics in Philosophy. Cr. 3-4(Max. 9)

Topics and prerequisites to be announced in *Schedule of Classes*. (I)

Logic

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. (B)

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. (B)

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. (W) 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. (T)



PHYSICS and ASTRONOMY

Office: 135 Physics Research Building; 577-2721

Chairperson: David M. Fradkin

Assistant Chairperson: Talbert S. Stein

Professors

George B. Beard, William P. Beres, Henry V. Bohm, Jhy-Jiun Chang, Juei-Teng Chen, Harry H. Denman (Emeritus), Gerald L. Dunifer, Lawrence D. Favro, David M. Fradkin, Suraj N. Gupta (Distinguished), Walter E. Kauppila, Yeong Wook Kim, Pao-Kuang Kuo, William B. Rolnick, Alvin M. Saperstein, Martin Stearns (Emeritus), Talbert S. Stein, Melbourne G. Stewart, Robert L. Thomas, Jogindra M. Wadehra, Lowell E. Wenger

Associate Professors

William E. Dorenbusch, Paul H. Keyes, Caroline G. Morgan-Pond, Karur R. Padmanabhan

Assistant Professors

Matlub Ahmad, Myung Keun Kim, Ching-Kwan Kwan (Research), H.M. Naik

Adjunct Professors

Gary L. Eesley, Robert C. Jaklevic, Eleftherios M. Logothetis, Melvin P. Shaw, Chi-Chung Jeffrey Yang

Adjunct Associate Professors

Y.T. Cheng, John E. Keem, 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*

The Department of Physics and Astronomy offers professional courses for students in science, engineering and pre-medical programs, as well as general courses for those who seek a knowledge of physics and/or astronomy as part of their cultural background. While the Department offers various programs within the Bachelor of Arts and Bachelor of Science curricula, the student is advised that additional possibilities exist. For instance, it is possible to have a dual major in physics and mathematics by completing the requirements for both degrees within the normal course load. Also, it is possible for a physics major to earn a secondary school teaching certificate by electing courses in the College of Education under a combined curriculum.

Physics Colloquium: The department colloquium is normally held Thursday afternoons. Advanced undergraduates are invited to attend.

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

BACHELOR'S DEGREES

Admission Requirements: Admission to this program is contingent upon admission to the College, requirements for which are satisfied by the general undergraduate admission requirements for the University; see page 14.

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 202) and the University General Education Requirements (see page 21), as well as one of the individual program 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 14–39 and 202–207, 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.

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. For example, a student might elect to meet the requirements of the pre-medical physics option and still go on to graduate school in physics even though that is not the primary purpose of the pre-medical option.

— Basic Requirements for All Options

1. Physics 217, 218 and 330.¹
2. Elementary mathematics sequence—MAT 201, 202, 203, 235.
3. Chemistry 107
4. The Department recommends that the Foreign Language Group Requirement (see page 203) be satisfied by French, German, or Russian for students planning to go on to graduate study.

— 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.

Course requirements consist of the basic requirements above, plus MAT 507, 522 and at least twenty-two additional credits in physics at the 500 level or above, including Physics 620, 660, 680 and 685 and one additional laboratory course.

Suggested Course Sequence

Freshman Year

Fall Semester

Chemistry 107	4
Mathematics 201	4
Group Req. Elective ²	4
English ²	4
Total:	16

Winter Semester

Physics 217 ¹	5
Mathematics 202	4
Group Req. Elective ²	4
English ²	4
Total:	17

Sophomore Year

Physics 218 ¹	5	Physics 330	3
Biology Elective ²	4	Physics 520	3
Mathematics 203	4	Mathematics 235	3
Group Req. Elective ²	4	Group Req. Elective ²	4
Total:	17	Total:	13

Junior Year

Physics 560	3	Physics 562	5
Physics 535	5	Foreign Language ²	4
Mathematics 507	4	Mathematics 522	4
Group Req. Elective ²	4	Group Req. Elective ²	4
Total:	16	Total:	17

Senior Year

Physics 620	4	Physics 660	4
Physics 680	3	Physics 681	3
Computer Science	4	Physics 650	4
Foreign Language ²	4	Foreign Language ²	4
Total:	15	Physics 685	2
		Total:	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 study 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.

Course Requirements consist of the basic requirements above plus two semesters of Computer Science and at least eighteen credits in physics at the 500 level or above including Physics 520, 560, 562 and 685. MAT 507 is recommended.

Suggested Course Sequence

Freshman Year

Fall Semester

Chemistry 107	4
Mathematics 201	4
Group Req. Elective ²	4
English ²	4
Total:	16

Winter Semester

Physics 217 ¹	5
Mathematics 202	4
Group Req. Elective ²	4
English ²	4
Total:	17

Sophomore Year

Physics 218 ¹	5	Physics 330	3
Biology Elective ²	4	Physics 520	3
Mathematics 203	4	Mathematics 235	3
Group Req. Elective ²	4	Group Req. Elective ²	4
Total:	17	Total:	13

Junior Year

Physics 560	3	Physics 562	5
Technical Elective	4	Technical Elective	4
Mathematics 507	4	Foreign Language	4
Group Req. Elective ²	4	Group Req. Elective ²	4
Total:	15	Total:	17

Senior Year

Physics Elective	3–5	Physics 685	2
Foreign Language ²	4	Physics Elective	3–5
Technical Elective	4	Foreign Language ²	4
Computer Science	4	Technical Elective	4
Total:	16	Computer Science	4
		Total:	17–19

¹ Physics 213 and 214 may be substituted for Physics 217 and 218 with the permission of the Departmental Undergraduate Adviser.

² Students are responsible for satisfying College Group Requirements.

— 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 and electronics, the student may elect to take courses which will directly benefit his/her intended medical specialty. A prospective ophthalmologist can study optics; an orthopedic surgeon, mechanics; a radiologist, atomic physics and radiation.

Course requirements consist of the basic requirements above plus Biology 101, 102, 507 and one additional course in biology, Chemistry 108, 224, 226, 227 (which fulfill current medical school requirements), and Physics 520, 560, 562 and six additional credits in physics at the 500-level or above. Students should consult the University Advising Office for changes in pre-medical requirements, outlined in the following suggested curriculum.

Suggested Course Sequence

Freshman Year

Fall Semester

Chemistry 107	4
Mathematics 201	4
Group Req. Elective ²	4
English ²	4
Total:	16

Winter Semester

Chemistry 108	5
Mathematics 202	4
Physics 217	5
English ²	4
Total:	18

Sophomore Year

Physics 218 ¹	5
Group Req. Elective ²	4
Biology 151	4
Mathematics 203	4
Total:	17

Physics 330	3
Physics 520	3
Biology 152	4
Mathematics 235	3
Total:	13

Junior Year

Physics 560	3
Chemistry 224	4
Biology 507	4
Group Req. Elective ²	4
Total:	15

Physics 562	5
Chemistry 226	4
Chemistry 227	2
Foreign Language ²	4
Total:	15

Senior Year

Physics Elective	3-5
Biology Elective	4
Group Req. Elective ²	4
Foreign Language ²	4
Total:	15-17

Physics Elective	3-5
Group Req. Elective ²	4
Group Req. Elective ²	4
Foreign Language ²	4
Total:	15-17

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;

¹Physics 213 and 214 may be substituted for Physics 217 and 218 with the permission of the Departmental Undergraduate Adviser.

²Students are responsible for satisfying College Group Requirements.

(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, above.

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 fifteen 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. The Department recommends that the Foreign Language Group Requirement (see page 203) be satisfied with French, German, or Russian.

Advanced Placement: Students should seek to obtain advanced placement in English and foreign languages. Information on advanced placement examinations may be obtained from the University Advising Office.

Videotaped Courses

All advanced physics lecture courses (330 and above) are 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, 310 and 502. 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 433.

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
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. (I)

105. Problem Solving for the Physical Sciences. Cr. 1
Open only to Research Careers for Minority Scholars students. Introduction to mathematical methods of the physical sciences and computer programming concepts for scientific problem solving. (Y)

202. Nuclear War. (HIS 251)(P S 244)(PCS 202). Cr. 4
May not be used to fulfill natural science group requirement. Nuclear war as a present-day possibility. How nuclear war may differ from

previous human conflict. Origin and growth of the nuclear arms race and its likely outcome. Principles of the human and physical sciences applied to predict the future of the arms race and to formulate appropriate responses to the implications of nuclear war. (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 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)

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. Material fee as indicated in *Schedule of Classes*. 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. (Y: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)

502. Physical Basis of the Fine Arts. Cr. 3

No credit for physics majors. Music, color and perception; waves and information-energy transfer; generation of musical sounds, perception of tone quality, the physics and physiology of sound and color; psychophysics of music and light, holography. (W)

503. Plasma Physics. Cr. 3

Prereq: PHY 214 or 218 and MAT 201 or consent of instructor. Material fee as indicated in *Schedule of Classes*. 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:W)

520. Applied Mechanics. Cr. 3

Prereq: PHY 218 or 214, MAT 203. Material fee as indicated in *Schedule of Classes*. Statics and dynamics of particles and systems with emphasis on applications to structures, oscillating systems, fluid flow, elasticity. (W)

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) Applied Electricity and Magnetism. Cr. 3

Prereq: PHY 218 or 214, MAT 235. Material fee as indicated in *Schedule of Classes*. Electrostatics, magnetostatics, dielectrics, magnetic materials, capacitors, inductors, D.C. and A.C. circuits, complex representation of current elements, rectifiers and filters, p-n junctions and an introduction to transistors. (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. (F)

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. 4

Prereq: PHY 218 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Development and critical analysis of concepts of thermodynamics, first and second laws of thermodynamics, thermodynamic equilibrium, Nernst's postulate. Illustrative applications to problems of physical interest. Kinetic theory of gases and introduction to classical statistical mechanics. (W)

660. Electromagnetic Fields. Cr. 4

Prereq: PHY 560 and MAT 507. Material fee as indicated in *Schedule of Classes*. Potential theory, electromagnetic field energy, Poynting vector, displacement current, Maxwell's equations, electromagnetic waves, wave guides and cavities. (W)

680. Modern Physics. Cr. 3

Prereq: PHY 520 and MAT 235 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Introduction to quantum mechanics, spectra and atomic physics, x-rays, properties of nuclei, radioactivity, particle accelerators and detectors, nuclear reactions, elementary particles, solid state. (F)

681. Modern Physics. Cr. 3

Prereq: PHY 680. Material fee as indicated in *Schedule of Classes*. Continuation of PHY 680. (W)

685. (WI) Experimental Physics Laboratory. Cr. 2

Prereq: senior standing or consent of instructor. Material fee as indicated in *Schedule of Classes*. Selected experiments in a variety of fields of modern 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)

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)

POLITICAL SCIENCE

Office: 2040 Faculty Administration Building; 577-2630

Chairperson: Charles D. Elder

Professors

Philip R. Abbott, David W. Adamany, Pi-chao Chen, Edward L. Cushman (Emeritus), Rondal G. Downing, Charles D. Elder, Otto Feinstein, Theodore B. Fleming, Jr. (Emeritus), Wesley L. Gould (Emeritus), Charles J. Parrish, Frederic S. Pearson, Henry J. Pratt, Maurice M. Ramsey (Emeritus), Wilbur C. Rich, Murray B. Seidler (Emeritus), Jorge Tapia-Videla, Maurice Waters, Harold L. Wolman

Associate Professors

Timothy Bledsoe, James T. Chalmers, Richard C. Elling, Susan P. Fino, Ray E. Johnston, Robert W. Miller, John M. Strate

Assistant Professors

James A. Jarvis, Mary Herring

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 the study of individual and collective political behavior, and through analyses of policy problems and the processes through which public policies are formulated and administered. 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 large private concerns doing business abroad.

5. Leadership, research and staff roles in citizen organizations, political parties, economic and social interest groups, municipal research bureaus and voluntary health and welfare organizations.

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 202) and the University General Education Requirements (see page 21), 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 14-39 and 202-207, 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. A distribution of courses in political science that includes course work in *two* (or more) of the following areas: 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 for satisfying the requirement in the context of the course. 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.

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

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 207, 301, 302, 304, 305, 306, 343, and 506.

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, 207, 224, 311, 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, 506, 522, 544, 552, 581, 643, and 644.

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, 551, 552, 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, 372, 475, 476, 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 alliance politics; American foreign policy and issues of disarmament, deterrence, and intervention. Relevant courses include: P S 281, 282, 381, 581, 583, and 584.

— 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, 311, 511, and 512 is recommended along with courses in American Government and public policy (numbered with second digits of 0 and 4, respectively). An alternative for students anticipating careers in the

legal profession is the Bachelor of Public Affairs and its judicial administration concentration, described below. 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 14. 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 203).

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 202) excepting the foreign language requirement, and the University General Education Requirements (see page 21), 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 14-39 and 202-207, respectively.

Major Requirements: A Bachelor of Public Affairs major must complete twenty-five to twenty-seven 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 for satisfying the requirement in the context of the course. 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.

English (7 credits): Two courses in composition (English 102 and 301). Students with outstanding performance in 102 may, upon approval by the political science undergraduate adviser, substitute for the second

composition course any English course involving a substantial amount of essay or report writing.

Mathematics (4 credits): MAT 150 or 180 required.

Computer Science (3–4 credits): CSC 100, 101, or 102 required; CSC 101 recommended.

Economics (8 credits): Two introductory principles courses (Economics 101 and 102).

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
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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 among P S 231, 303, 311, 333, 343, 506, 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, 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, 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. Complete P S 492—Senior Honors Seminar.
3. Under the direction of one or more members of the department, complete a senior honors paper (P S 495).
4. Complete all requirements for the Bachelor of Arts or Bachelor of Public Affairs degree.
5. 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').
6. Accumulate at least fifteen credits in honors-designated course work, including P S 492, 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 Liberal Arts 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 206). Students should contact the Department's undergraduate adviser for further details.

Minors in Political Science

Students majoring in other fields 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

While not required, 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.

Awards and Honorary Societies

The Tudor Award is given annually for the best paper or essay written by an undergraduate student in a political science course.

The 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 433.

- 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)(GEG 200)(HIS 200). Cr. 4**
Prereq: sophomore standing. 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) Nuclear War. (HIS 251)(PCS 202). Cr. 4**
Prereq: P S 101 or 103. Nuclear war as a present-day possibility. How nuclear war may differ from previous human conflict. Origin and growth of the nuclear arms race and its likely outcome. Principles of the human and physical sciences applied to predict the future of the arms race and to formulate appropriate responses to the implications of nuclear war. (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)
(GEG 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)(GEG 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)

291. 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 work at the University of Salford, England, as part of the W.S.U.-Salford Exchange Program. (F,W)

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)

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)

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)

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 Democratic Systems: Great Britain and
Germany. Cr. 4**

Government and politics of Great Britain and Germany. Political, social, economic, and cultural foundations of the systems; structure and functions of institutions and political processes; problems arising from unification of Germany. (Y)

**372. Major European Democratic Systems: France, Italy and
Spain. Cr. 4**

Government and politics of Latin European Democracies: France, Italy and Spain. Political, social, economic and cultural foundations of the systems; the structure and function of institutions and political processes. (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 the U.S.S.R., China, Japan, and the European economic community. (B)

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. Government and Politics of the Soviet Union. Cr. 4
Social, economic and political-administrative institutions of the Soviet Union. Soviet Union in world affairs. (Y)

476. Government and Politics of Eastern Europe. Cr. 4
Process of Soviet domination; transition from one-party to multi-party systems, from centralized economy to free markets; political institutions and processes of representative East European countries. (Y)

483. International Law. Cr. 4
Relation between international law and politics, historical survey of doctrines of law, consensus and disagreement on legal principles. (I)

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 for senior honors paper and completion of preliminary literature review and annotated bibliography. (Y)

495. Senior Honors Paper. Cr. 3
Prereq: admission to political science honors program; P S 492. 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)

506. Comparative American State Politics and Policy. Cr. 4
Examination of the variation in the policy outcomes of American state political systems. The impact of state social, economic and political characteristics on the nature of state policies. The impact of nonstate governments on state policy processes and outcomes. (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 program 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; reference to special governmental programs and agencies serving the aged. (B)

549. Topics in Public Policy. Cr. 4(Max. 8)
Examination of selected areas of public policy, focusing on matters of national and/or international importance. Topics vary to include such policies as those relating to the environment, health, population, and social welfare. Topics to be announced in *Schedule of Classes*. (I)

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)

552. Politics and the Family. Cr. 4
Prereq: P S 101. The family in political thought, Plato to Marx; implications for public policy with emphasis on American context. (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)

577. Government and Politics of Latin America. Cr. 4
Political, social, economic and cultural foundations of the systems, the functions, and the structure 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)

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)

584. The Politics of Disarmament. Cr. 4
Arms control; successes and failures analyzed from perspectives of history, sociology, psychology and political science. Differences between United States and U.S.S.R. (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 AGRADE 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. AGRADE Program. Internship to supplement classroom course work with practical experience gained through substantial involvement in a responsible capacity in a public or quasi-public agency or civic organization. (T)

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, 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 undergraduate adviser. 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)

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)

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)

637. Comparative Public Administration. Cr. 3
 Prereq: P S 231. 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
 Substance of national government policy related to old-age assistance, income maintenance, food stamps, health care, and other entitlement programs. (B)

644. (U S 621) Regional, State, and Urban Economic Development: Policy and Administration. (ECO 665). 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)

PSYCHOLOGY

Office: Room 214, 71 West Warren; 577-2800

Chairperson: M. Marlyne Kilbey

Associate Chairperson: Alan R. Bass

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, Kalman J. Kaplan, M. Marlyne Kilbey, Arthur Kornhauser (Emeritus), Gisela Labourvie-Vief, Sheldon J. Lachman, Sheldon G. Levy, Annette U. Rickel, Hjalmar Rosen (Emeritus), Gerald Rosenbaum (Emeritus), Eli Saltz, Carolyn M. Shantz, Charles M. Solley, Ross Stagner (Emeritus), Laurence J. Stettner, Dalmas A. Taylor, Rebecca A. Treiman, Francine Wehmer, R. Douglas Whitman

Associate Professors

Alan M. Delamater, Winifred R. Fraser (Emeritus), S. Edson Haven (Emeritus), Rolando R. Henry, Joseph L. Jacobson, Melissa G. Kaplan, Brian Lakey, Cary M. Lichtman, Hilary Ratner, Michael M. Reece (Emeritus), Patricia Siple, Lois Tetrick, Kathryn Urberg, Glenn E. Weisfeld, Alice M. Young

Assistant Professors

Karen S. Ebeling (Visiting), Sebastiano Fisicaro, John Mullenix, Felicia W. Seaton, Ellen Walker (Visiting)

Lecturers

J. Scott Allen, Cindy Marriott

Research Associates

Ranka Bijeljic-Babic, Jeremy Hall, Jerry Tolson

Research Scientists

Sandra W. Jacobson, Ali Naqvi

Adjunct Professors

Kenneth M. Adams, Donald F. Caldwell, Samuel Gershon, Mark S. Goldman, Marvin Hyman, Allen Raskin, Eli Z. Rubin

Adjunct Associate Professors

Gregory Brown, Shirley I. Dobie, David Faigenbaum, Robert R. Freedman, James L. Grisell, Valerie Klinge, Helene Lycaki, Mark W. Shatz, Herbert Silverman, Michael K. Tanenhaus, Barry A. Tanner

Adjunct Assistant Professors

Antonia Abbey, Linda S. Angell, Kenneth M. Axelrad, Rebecca D. Baird, Jesse Wylie-Oliver Bell, Jr., David Benjamins, Michael Butkus, Louis A. Chiodo, Joan Chodorkoff, Allan B. DeHorn, Jerel E. Del Dotto, Grenae D. Dudley, Lisa A. Fruchtmann, Manfred F. Greiffenstein, Melanie Hwalek, Joan Lessen-Firestone, Ronald F. Lewis, Lynn V. Pantano, Ned Papania, Edward C. Podany, Arthur Robin, Douglas L. Shore, Walter J. Zetusk

Degree Programs

BACHELOR OF ARTS with a major in psychology

BACHELOR OF SCIENCE with a major in psychology

BACHELOR OF APPLIED STUDIES 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*

Undergraduate training offered by the Department of Psychology serves several related purposes. For the liberal arts major, the study of psychology provides an opportunity for increased 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 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 Arts or Bachelor of Science

Admission Requirements for the College are satisfied by the general requirements for undergraduate admission to the University; see page 14.

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 the College of Liberal Arts Group Requirements (see page 202) and the University General Education Requirements (see page 21), 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 14-39 and 202-207, respectively.

Major Requirements: To graduate with a major in psychology, a student must complete satisfactorily at least nine courses and at least thirty credits in the Department of Psychology, in a sequence approved by the student's major adviser. Degree requirements include:

Psychology 101 (LS) Introductory Psychology

One laboratory course chosen from the following:

Psychology 305 Psychology of Perception

Psychology 307 Psychology of Learning and Memory

Psychology 309 Cognitive Processes: Language, Thinking & Problem Solving

Four of the following seven courses:

Another (second) laboratory course from the selection listed above (PSY 305, 307, 309)

Psychology 240 Developmental Psychology

Psychology 260 Psychology of Social Behavior

Psychology 331 Abnormal Psychology

Psychology 402 Research in Psychology

Psychology 405 or 505 Physiological Psychology

Psychology 410 Statistical Methods in Psychology

Psychology 493 and 496 do not count toward the thirty credit requirement. No more than forty-six credits in psychology can be counted toward the total required for a degree. Transfer students must complete at least fourteen credits in the Psychology Department at Wayne State University.

The Bachelor of Arts degree incorporates all of the Liberal Arts Group Requirements; see page 202.

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. In addition, students must also fulfill the Liberal Arts language requirement. Consult an adviser for the circumstances under which the language requirement is waived for the Bachelor of Science degree.

Bachelor of Applied Studies with a major in Psychology

The Bachelor of Applied Studies in Psychology degree is designed to provide opportunities for two-year technical degree recipients to pursue baccalaureate studies with minimal credit loss. This program is intended for persons employed in a mental health related field who want to improve their knowledge of psychology for career advancement in their organization or a related organization. The Bachelor of Applied Studies in Psychology is not designed for people who may want to enter a graduate program in psychology leading to a doctor of philosophy (Ph.D.) degree.

Admission Requirements: Applicants for admission must hold a two-year technical degree from an accredited institution in an area that provides an appropriate foundation for entry into this psychology program. See the general requirements for undergraduate admission to the University, page 14.

DEGREE AND MAJOR REQUIREMENTS: The Bachelor of Applied Studies in Psychology degree requires between 126 and 141 total credits. Students may transfer up to sixty-four credits from their two-year program. The entire curriculum consists of satisfaction of the University General Education Requirements (see page 21) and the College Group Requirements (see page 202) as well as transferred credits, electives, and the major requirements as 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 14-39 and 202-207, respectively. Further detailed information about this program is available from the undergraduate office of the Psychology Department.

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

Major requirements, total thirty credits, including:

- Psychology 101 (LS) Introductory Psychology
- Psychology 331 Abnormal Psychology
- Psychology 338 Human Sexuality
- Psychology 405 Introduction to Physiological Psychology

One laboratory course chosen from the following:

- Psychology 305 Psychology of Perception
- Psychology 307 Psychology of Learning and Memory
- Psychology 309 Cognitive Processes: Language, Thinking & Problem Solving

One of the following three courses:

- Psychology 230 Psychology of Adjustment
- Psychology 240 Developmental Psychology
- Psychology 260 Psychology of Social Behavior

One of the following two courses:

- Psychology 432 Introduction to Clinical Psychology
- Psychology 437 Behavior Modification: Theory & Applications

Elective course in psychology (at least 3 credits; 300 level or above)

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 department's undergraduate secretary and make an appointment to see Professor Francine Wehmer, 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), 331 (Abnormal Psychology), and 407 (Psychology of Drugs and Behavior). In addition, there are Senior Honors seminars (497, 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, 402, 410, 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 Psychology Department undergraduate secretary 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 410 (statistical methods), 350 (industrial-organizational psychology), 411 (psychological tests), 554 (motivation in the world of work), 653 (organizational psychology), 490, 496 (special projects under direction of a faculty member). 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), 407 (drugs and behavior), 437 (behavior modification), 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), 407 (drugs and behavior), 411 (psychological tests), 331 (abnormal), 437 (behavior modification), 528 (psychoanalytic theory), 493 (field study).

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, in addition to those listed for the B.A. or B.S. degree:

- Psychology 240 —Developmental Psychology
- Psychology 547 —Developmental Assessment of the Young Child

One of the following two courses:

- Psychology 243 —Applied Human Development: Infancy
- Psychology 244 —Applied Human Development: Childhood

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 —Psychology of Infant Behavior and Development
- Psychology 344 —Psychology of Child Behavior and Development
- Psychology 348 —Parent-Child Interactions Across the Lifespan

Two of the following four courses:

- Psychology 260 —Psychology of Social Behavior
- Psychology 402 —Research in Psychology
- Psychology 405 or 505 —Physiological Psychology
- Psychology 410 —Statistical Methods in Psychology

Additional courses in human development are available as electives; see courses numbered 34x, 44x, 54x, and 64x in the *Courses of Instruction* section.

Minors 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 496 (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.

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 433.

- 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. (F,W)
- 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. (Y)
- 243. Applied Human Development: Infancy. (Lct: 2; or Lct: 2; Lab: 4). Cr. 2 or 4**
Prereq: PSY 240; satisfactory health record; TB test within last six months. Psychology majors must elect for four credits. Growth and development of the child from birth to two and one-half years of age. Direct participation in infant and toddler care within day care center; observation of parent-child interactions. (Y)
- 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. (Y)
- 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)

305. Psychology of Perception: The Interpretation of Experience. Cr. 4

Prereq: PSY 101 or 102. Material fee as indicated in *Schedule of Classes*. Our knowledge of the world around us; basic sensory processes; organization and differentiation of percepts. Laboratory investigations of basic perceptual phenomena. (T)

307. Psychology of Learning and Memory: Fundamental Processes. Cr. 4

Prereq: PSY 101 or 102. Material fee as indicated in *Schedule of Classes*. Fundamental theories, concepts, and empirical findings in the study of learning. Laboratory investigations of basic learning phenomena, including sensory and motor learning and complex learning processes. (T)

309. Cognitive Processes: Language, Thinking and Problem Solving. (LIN 309). Cr. 4

Prereq: PSY 101 or 102. Material fee as indicated in *Schedule of Classes*. Fundamental theories, concepts, and empirical findings in the study of human cognition. Topics include thinking, problem solving, language comprehension and production, the acquisition and use of knowledge, memory, attention and consciousness. Laboratory investigations of cognitive processes. (F,W)

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)

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)

341. Day Care Administration. Cr. 3

Prereq: PSY 240. Applied principles of human development relating to the operation and management of day care facilities. Technical and financial aspects. (Y)

342. The Young Child in the Physical Environment. Cr. 3

Influence of space and physical setting on child behavior. Application to an optimal learning environment for infants and young children. Includes field exercises related to material covered in lecture. (Y)

343. (PSY 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)

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. (T)

350. Industrial-Organizational Psychology. 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)

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)

405. Introduction to Physiological Psychology. Cr. 3
Prereq: PSY 101 or 102. No credit after PSY 505. Physiological mechanisms underlying behavior and mental processes; sensory-motor mechanisms; integrative action of the nervous system; neuro-physiological mechanisms involved in emotional behavior and learning. (T)

407. Psychology of Drugs and Behavior. Cr. 3-4
Prereq: PSY 101 or 102. Offered for four credits to Liberal Arts Honors students only. The effect of drug action on the nervous system and behavior. Subjective effects of drugs; use of drugs as tools in the study of behavior. Use and misuse of drugs in society. (Y)

410. 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)

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)

437. Behavior Modification: Theory and Applications. Cr. 3
Prereq: PSY 101 or 102. Critical examination of the behavioral approach to the theory, assessment, and treatment of problem behavior in normal and abnormal groups. (Y)

467. Environmental Psychology. Cr. 3
Prereq: PSY 101 or 102. Research and theoretical perspectives on the influence of environmental factors on social behavior. (I)

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)

496. 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)

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)

499. 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)

505. Physiological Psychology. Cr. 3
Prereq: PSY 101 or 102. No credit after PSY 405. 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 405 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)

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)

546. Applied Issues in Adolescent Development. Cr. 3
Prereq: PSY 346 or consent of instructor. Problems encountered by adolescents during development, including: parents, peers, puberty, pregnancy, police, drugs, psychopathology, and schools. (I)

547. Developmental Assessment of the Young Child. Cr. 4
Prereq: PSY 240 and either 243 or 244 or graduate standing; satisfactory health record, TB test within last six months. Material fee as indicated in *Schedule of Classes*. Examination of reliability, validity, test construction, selection of appropriate assessment measures, and use of assessment results to plan intervention. Supervised assessment experience of the young child, ages three to five, through systematic observation and testing within the Psychology Child Development Laboratories. (Y)

548. Child Development Principles Applied to Preschool Programming. Cr. 3
Prereq: introductory course in child development or experience in preschool program; satisfactory health record; TB test within last six months. The individual child in a group setting, utilization of space and materials to foster growth. Case studies of children; one morning per week in preschool setting. (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)
- 565. Psychological Aspects of Leadership. Cr. 3**
Prereq: PSY 101 or 102. Problems of leadership; functions and duties of leaders, executives. Surveys and methods of study utilized to train and select leaders. (I)
- 568. 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)
- 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)
- 580. Maturation and Development of the Individual. Cr. 3**
No credit after FAC 180. Infancy through adolescence; critical problems in each period; development of personal identity. (I)
- 593. (W) 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. (F,W)
- 620. Development of Memory. (LIN 620). Cr. 3**
Prereq: PSY 209, 240, or consent of instructor. Major theoretical models of memory development will be discussed and used to explore various aspects of the memory process from infancy to adulthood. (I)
- 640. Approaches to Child Rearing. Cr. 3**
Undergrad. prereq: PSY 240 and either 244 or 245. Child rearing theories, research concerned with contemporary child rearing practices and their effects. Implications for social policy and for teachers, social-workers, and other professionals. (I)
- 642. Psychology of Infant Behavior and Development. (PSY 343). 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. (F)
- 644. Psychological Development in Childhood. Cr. 3**
Prereq: one course in developmental psychology. Not open to psychology graduate 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, TB test within last six months; PSY 642 or equiv. Orientation to infant research, assessment, and programming. Experience in infant observation and testing within the Psychology Infant 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. (W)
- 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)
- 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)
- 699. 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)

ROMANCE LANGUAGES and LITERATURES

Office: 487 Manoogian Hall; 577-3002

Chairperson: Andrea di Tommaso

Academic Services Officer: Mary Hoffiz

Professors

Vincent C. Almazan (Emeritus), Fernande Bassan (Emerita), Henry N. Bershas (Emeritus), Manuela M. Cirre (Emerita), Jesus Gutierrez, Jacques L. Salvan (Emeritus), E. Burrows Smith (Emeritus), Donald C. Spinelli, Richard Vernier

Associate Professors

Jorgelina Corbatta (Visiting), Andrea di Tommaso, Michael J. Giordano, Louise M. Jefferson, Louis Kibler, Charlotte Lenke (Emerita), Sol Rossman, Gary E. Scavnicky, Donald E. Schuriknight, Charles J. Stivale, A. Monica Wagner (Emerita)

Assistant Professor

Francisco J. Higuero

Lecturer

Claude Astrachan

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 14. 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 202) and the University General Education Requirements (see page 21), 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 14-39 and 202-207, respectively.

Major Requirements

All majors in the fields of Italian and Spanish 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, such as those offered by this department in English translation. (For a listing of the latter offerings, see page 315.) Majors are expected to consult with their major advisers concerning suitable cognate courses. 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 or 550, 640, 645 or 646 or 647, and any two of the following: 649, 651, 663, 665, 677, 681, 684, 686, 691, 692.

A major in French language and culture must take French 210 or 410, 260 or 271 or 272, 361, 362, 510 or 531, 520, 540 or 550, 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 major in Spanish must take any two of Spanish 361, 362, and 363, one of which must be taken by the end of the student's first semester as a major, and the other by the end of the first year as a major. Also required are Spanish 310, 510, 520, 555 or 556, three literature courses at the 600 level (at least one peninsular and at least one Latin American), and one elective course in Spanish numbered 300 or above in either language or literature.

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 213.

Preparation for Careers In Business: Foreign language majors who do not plan 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 Liberal Arts Honors Program (577-3030).

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

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 205.)

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 202 and five courses beyond that level for a minimum of nineteen credits. With the guidance of the undergraduate adviser, courses may be chosen from the following: (language) 304, 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 203.

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.

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 433.

— 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; study of French history, thought, art, architecture, society, geography, and institutions, illustrated with slides and films; includes visits to the Detroit Institute of Arts. (B)

272. (FC) The Contemporary French. Cr. 3

Prereq: FRE 271 recommended. The French way of life today: its moral and intellectual foundations, its culture and institutions, and their transformation under the stress of the twentieth century. (B)

275. Introduction to Quebec Studies. (HIS 275) (P S 275)(GEG 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)

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)

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)

597. Dante's Divine Comedy. Cr. 3

The poem as a synthesis of medieval culture; its structure, poetic value, and relevance to Western literature. (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. (W)
- 250. (CBS 211) Puerto Rican Literature and Culture. Cr. 3**
Examination of Puerto Rican literature. Themes and figures in a social and historical context. (F)
- 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)
- 550. History of the French Language. Cr. 4**
Prereq: FRE 510, 540 or consent of instructor. Development of the French language from its origins to the present day; special emphasis on language as a reflection of culture. (I)
- 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. 4**
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, society, institutions, and culture; interrelation of cultural trends in French art and thought. Films, slides, visits to the Detroit Institute of Art. (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, Scève, 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)

090. French for Ph.D. Reading Requirement. Cr. 4
Offered for S and U grades only. No degree credit. (T)

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. (WI) 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)

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)

202. 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; spoken and written skills emphasized. (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)

301. Cultural Awareness of the Hispanic World. Cr. 3
Not applicable to Liberal Arts foreign language group requirement. Differences between U.S. culture and culture of Latin America, including customs and manners. Taught in English; includes 'survival Spanish' for those who will soon be in contact with the language. (Y)

304. Commercial Spanish. Cr. 3
Prereq: SPA 202. 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)

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 202. 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 202 or placement. Spanish literature from its origin to 1700. (F)

362. Survey of Spanish Literature II. Cr. 3

Prereq: SPA 361. Spanish literature from 1700 to the present. (W)

363. Survey of Spanish American Literature. Cr. 3

Prereq: SPA 202 or placement. 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)

555. Spanish Culture and Its Tradition. Cr. 3

Prereq: SPA 361 or 362. 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 or 362. 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)

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 or 362 or consent of instructor. Main currents and masterworks of Spanish literature from its origins to 1500. (Formerly SPA 650.) (B)

644. Spanish Literature of the Eighteenth Century. Cr. 4

Prereq: SPA 361 or 362. 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 or 362. Origins and development of Romanticism in Spain: theatre, poetry, costumbrismo, and novel. (Formerly SPA 652.) (B)

656. Cervantes. Cr. 4

Prereq: SPA 361 or 362. A detailed study of *Don Quijote*. Other short works of Cervantes. (B)

657. The Comedia. Cr. 4

Prereq: SPA 361 or 362. 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. 4

Prereq: SPA 361 or 362. 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)

661. The Spanish American Novel I. Cr. 4

Prereq: SPA 361, 362 or 363. Origins and development of the novel in Spanish America, beginning with *El periquillo sarniento*, through the modernist period and up to the novel *Criollista*. (Formerly SPA 686.) (B)

669. Genres and Topics in Spanish American Literature. Cr. 4

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)

Special Courses (SPA)

391. Foreign Language Service Practicum. Cr. 2(Max. 4)

Prereq: oral and written proficiency in the Spanish language with consent of chairperson. No credit for major or group requirements. Two hour weekly visits with foreign-born residents of nursing homes to converse in their native language, gather life histories, serve as translators, read aloud foreign language materials, provide companionship, and enhance social functioning and adjustment. (T)

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: David W. Britt

Professors

Joseph Albini, David W. Britt, J. Ross Eshleman, Mel J. Ravitz (Emeritus),
Raye A. Rosen (Emeritus), Mary C. Sengstock, Steven Stack, Leon H.
Warshay, Eleanor P. Wolf (Emeritus)

Associate Professors

Clifford J. Clarke, Edmund G. Doherty, Thomas J. Duggan, Janet R.
Hankin, Mary J. Van Meter, Rhonda Montgomery

Assistant Professors

Augustine Kposowa, Anne Rawls, Leon Wilson

Lecturers

Michael Indergaard, John R. Kinkel

Research Associate

Joseph Therrien

Adjunct Faculty

Elizabeth Chapleski, *Institute of Gerontology (Joint Appointment)*
Barbara Hirschorn, *Institute of Gerontology*
Bill Hoffman, *United Automobile Workers*
Dorothy Klupert, *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.

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

Bachelor of Arts

Admission Requirements for these programs are satisfied by the general requirements for undergraduate admission to the University; see page 14.

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 202) and the University General Education Requirements (see page 21), 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 14-39 and 202-207, 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.

Cognate Requirements: The following subjects are suggested as cognate electives. It is recommended that not less than twelve credits be selected from the list: Anthropology 210, 506, 520, 537, 617, 638, 639; Economics 102; Geography 320, 565, 613, 624; History 105, 120, 130, 204, 205, 513; Political Science 231, 251, 343; Psychology 230, 331, 565. Undergraduates who plan graduate study in sociology are encouraged to elect some courses in mathematics and statistics as part of their undergraduate program.

—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 14.

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 202) and the University General Education Requirements (see page 21), 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 14–39 and 202–207, 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, 480, or 583);
- 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, 563, or 581);
- Special Problems (SOC 578, 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 (SOC 422* or equivalent); 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 Liberal Arts 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 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 563 (American Labor: Blue Collar, White Collar).

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 558 (Ethnic Groups in Urban America), 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 (Criminology: Society, Crime and the Criminal), 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).

* Sociology courses used to satisfy these management and organization skills requirements may also be counted toward the major.

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 433.

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)

250. (U S 200) (SS) Introduction to Urban Studies. (GEG 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)

291. 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)

330. (SS) Social Institutions and Social Structure. Cr. 3

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. Religion and 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. 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)

355. (ANT 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 relation to international systems. (I)

382. Criminology: Society, Crime and the Criminal. (CRJ 385). Cr. 3

Criminality as a socio-legal phenomenon. A descriptive analysis of the various agencies of the criminal justice system: police, prosecution, courts, corrections. Interdisciplinary review of criminological thought and theory; methods of reporting and studying crime, victimology, crimes of violence, organized crime, and white collar crime. (T)

384. (CRJ 230) Penology: Punishment and Corrections. Cr. 3

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)

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)

405. Basic Sociological Theory. Cr. 3

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. 3

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. 3

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)

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. 3

Topics to be announced in *Schedule of Classes*. (I)

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)

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. (UP 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)

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)

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 Programs. Cr. 1

Prereq. or coreq: SOC 587. Role of law, court system, schools, public and private agencies, and other factors in the prevention and treatment of family violence. Representatives of various community agencies will speak to class. (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. 3

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. 3

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. Family Systems and Interventionists. Cr. 1

Prereq. or coreq: SOC 643. Policies affecting families and family-based intervention strategies. Effects of policies on various aspects of family interaction. (Y)

646. Family-Based Intervention Techniques. Cr. 4

Prereq: an introductory social science course. Variety of strategies for working with families on an in-home basis, to change family interaction, child-rearing patterns, health practices, and home management. Focus on high-risk urban families. (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)

678. Intergenerational Relations: Adult Children and Their Elderly Parents. Cr. 4

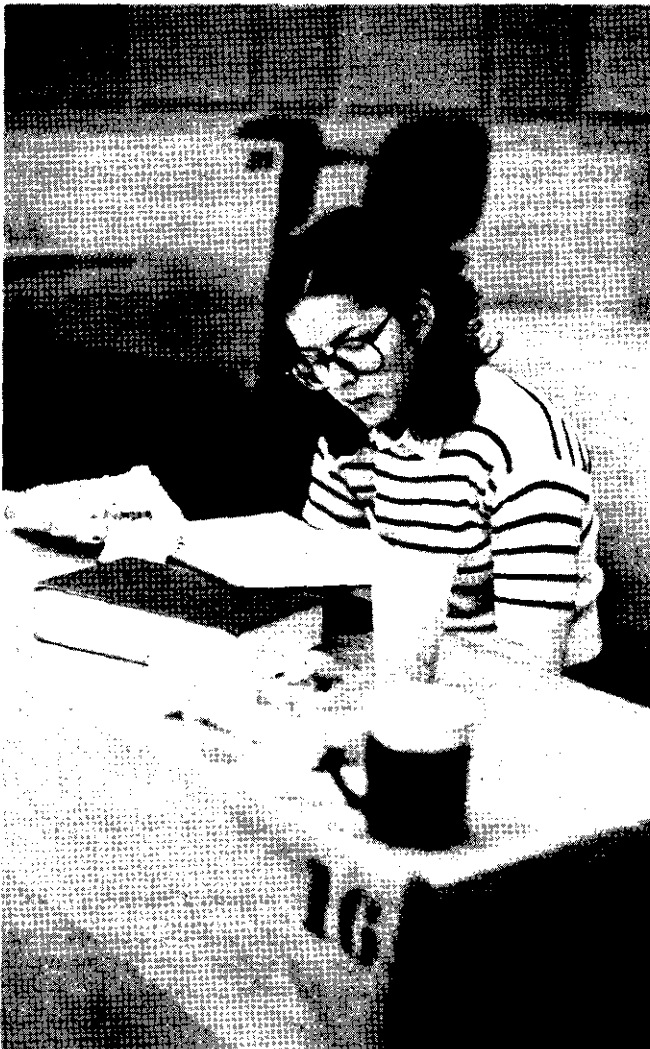
Prereq: introductory course in a social science or gerontology. Historical and cross-cultural experiences contrasted with current demographic features of the aging population and its adult children; emphasis on institutionalization, family caregiving, elder abuse. (B)

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)

694. (ANT 618) Theory and Problems of Emergent Countries. Cr. 3(Max. 6)

Prereq: SOC 200 or ANT 210. Underdeveloped and developing countries. Emergent nationalism and socio-cultural factors affecting change. Cultural, demographic, institutional, technological aspects. (I)



STATISTICS

In addition to the interdepartmental course described below, several specialized advanced courses in statistics are offered by individual departments:

- ECO 410 —Economic and Business Statistics I
- ECO 510 —Economic and Business Statistics II
- 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 —Probability and Stochastic Processes
- 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 410 —Statistical Methods in Psychology
- SOC 821 —Seminar in Methods of Social Research and Statistics

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 433.

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)

WOMEN'S STUDIES

Office: 3121 Faculty Administration Building; 577-3331

Acting Directors: Effie Ambler and Sandra VanBurkleo

Co-Major Program

The Women's Studies Co-Major Program is designed to augment existing curricula and to stimulate development of courses and research within traditional disciplines. The aims of the program are: (1) to put women students in touch with their own historical, social, and cultural heritage; (2) to help them define their own values and goals through study of the contemporary environment and their place in it; (3) to open for all students hitherto neglected areas of study and research related to women within and beyond the traditional disciplines; (4) to relate the experience of various courses in a structure that has coherence and usefulness for the individual student; (5) to explore with students the contributions women have made to society, the arts, the sciences, and the human spirit.

The Program offers co-major and minor concentrations of study. The co-major is designed for students who wish both diversity and specialization from a selection of women's studies related courses that represent the full range of offerings in the humanities and social sciences, and to complete a substantial project in this major. 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 for professional or personal goals.

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:

History 377, Women's Lives, Cr. 3 (Max. 6): an analysis of biographical materials, past and present, reflecting ordinary women's lives as shaped by their environment, how they have reacted creatively with it, how they have confronted problems, and how their values, aspirations, and even failures can inform the lives of students today. Students may elect the course to a maximum of six credits, three of which fulfill the core requirement and three of which may be applied to group (1) of the elective portion of the co-major.

Sociology 446, Women in Society, Cr. 3: in-depth investigation of living and working conditions of women in the world today, with emphasis on the importance of socio-economic changes.

An independent study, Cr. 4, is required, to be arranged with an instructor in the student's major field during the senior year. The student should devise and complete a project using the materials and methods of the major field to address a topic in women's studies. Usually, but not always, a paper or report will result from the project. All arrangements for this course are made by the student, who is also responsible for notifying the Coordinator as to the subject 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, 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 speech communication.

Courses in Women's Studies

credits

AFS 511 —Black Women in America	3
ANT 424 —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 —Contemporary Moral Issues (when appropriate)	3
PHI 111 —Ethical Issues in Health Care	3
P S 552 —Politics and the Family	4
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 580 —Maturation and Development of the Individual	3
PSY 640 —Approaches to Child Rearing	3
PSY 642 —Psychology of Infant Behavior and Development (PSY 343)	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
SPC 220 —Interpersonal Communication	3
SPC 617 —Theories of Interpersonal Communication	3

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; see list above)	
Women and literature (elective in English or foreign languages in translation)	
One elective in another discipline (see list above)	

All departmental courses included in the women's studies program may also count toward satisfying a departmental major or appropriate group requirements. Each semester the directors of the program prepare a list of courses offered in the following term to aid students in making selections; it is available in the offices of the Departments of English, History, and Psychology.

UNDERGRADUATE COURSE (W S)

For interpretation of numbering system, signs and abbreviations, see page 433.

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)

LIBRARY SCIENCE PROGRAM

DEAN: Peter Spyers-Duran

Foreword

The field of library and information service is experiencing dramatic growth and change, and 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 Science in Library Science degree program.

Approximately 100,000 libraries in the United States employ 140,000 professionals. The ALA-accredited M.S.L.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.

History

The Library 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. The Library Science Program also offers a certificate program in archival administration, offered in conjunction with the History Department of the College of Liberal Arts.

The Library Science Program is under the administrative jurisdiction of the Dean of University Libraries and Library 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 sciences.

Accreditation: The Library Science Program first received accreditation for its master's degree by the American Library Association in 1967; the M.S.L.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.S.L.S.

degree program; and/or provide education for those desiring supportive positions and responsibilities in libraries and information centers.

The mission of the Library 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 library 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 librarianship;
4. To identify and examine the concepts, structure, and organization of knowledge;
5. To select, acquire, organize, store, retrieve, 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, multi-ethnic 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 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 professionalism;
14. To accept responsibility for professional accountability;
15. 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 2.3 million books and twenty-six 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 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 Shiffman Medical Library.

The Walter P. Reuther Library of Labor and Urban Affairs is a rich source of archival materials. It includes the personal papers of many urban leaders and is an important source of original data regarding Detroit, the auto industry and unionization.

The location of Wayne State University in the heart of Detroit's cultural center provides additional advantages to the library science student.

Readily available to the University student is the main branch of the Detroit Public Library, the professional research library of the Detroit Institute of Arts, and the Detroit Historical Museum.

Computer Laboratory: The Library 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 Purdy/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 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 Science Program. Undergraduates interested in enrolling in library science courses should consult with an adviser in the Library 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 Science*

**SPECIALIST CERTIFICATE in Library Science*

**CERTIFICATE in Archival Administration*

Faculty

Office: 106 Kresge Library; (313) 577-1825; Fax: (313) 577-4172

Dean of University Libraries and Library Science: Peter Spyers-Duran

Director of Library Science Program: Joseph J. Mika

Professors

Robert Booth (Emeritus), Genevieve M. Casey (Emerita), Michael Keresztesi (Emeritus), Margaret Grazier (Emerita), Philip Mason, Joseph J. Mika, Vern Pings (Emeritus), Peter Spyers-Duran

Associate Professors

Terrence Erdt, Betty Maurstad (Emerita), Edith Phillips, Bruce Shuman

Assistant Professors

Kathleen Eisenbeis, Carole McCollough, Bor-sheng Tsai

Lecturer

John Koen

Adjunct and Cooperating Faculty

Roger Ashley, Director, Andover High School Media Center; Donald Bissett, Professor, College of Education; Shirley Black, Instructional Services Librarian, University of Detroit; John Childs, Professor, College of Education; Jennie Cross, Assistant Director, Educational Resource Center, Oakland Schools; George Cunha, Adjunct Professor, College of Library and Information Sciences, University of Kentucky; Cullum Davis, Professor of Oral History, Sangamon State University; Anaclete Evans, Technical Services Librarian, University Libraries; Judith Field, Information Broker; George Grimes, Professor, Media and Professional Development Services, Eastern Michigan University; Marianne Hipp, Head of Technical Services/Cataloging, Lawrence Technological University; William Husker, Librarian III, University Libraries; Stephen James, Assistant Director, Public Libraries, Saginaw; Margery Long, Associate Professor, Archives; Sandra Martin, Director, Harper Hospital Library; James Matarazzo, Professor, Simmons College; Lawrence McCrank, Dean, University Library and Instructional Services, Bowling Green State University; Jane Morgan, Director (retired), Detroit Public Library; Charles Morrissey, Director, Oral History Projects, Baylor College of Medicine; Blaine Morrow, Coordinator, Automated Services, Grosse Pointe Public Library; James Moseley, Program Coordinator III, College of Medicine; Genevieve Oldani-Carusio, Detroit Public Library; Twyla Racz, Acting Assistant Dean, Library Resources and Technologies, Eastern Michigan University; Freda Richards, Librarian/Media Specialist, Groves High School; Rita Richey, Associate Professor, College of Education; R. Craig Roney, Associate Professor, College of Education; Peter Sanders, Professor, College of Education; Kathleen Schmelling, Archivist I, Reuther Library and Archives; Ruth Schneider, Director, Department of Curriculum and Instruction, Bowling Green State University; Janics Selberg, Database Coordinator, Neef Law Library; Heather Simmons, Assistant Director, Neef Law Library; Albert Stahl, Associate Professor, College of Education; Jacqueline Tilles, Associate Professor, College of Education; Faith Van Toll, Shiffman Medical Library

* 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 Science Program, and/or the University Office of Scholarships and Financial Aids, 2 East, Helen Newberry Joy Student Services Center.

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 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 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 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 Science Student Association: is recognized by the University as an organization of students in the Library 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.

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 Science Alumni Association: Library Science graduates have established the Library 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 (L S)

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 433.

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)

611. Reference and Bibliographic Database Services. 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 international 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)

631. School Library Media Programs. Cr. 4
Role of library media programs in the school; methods of planning, organizing, and operating such programs; impact of technology upon instruction and library service. (F,S)

636. (IT 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. (IT 512) Instructional Materials Workshop.
Cr. 1-3(Max. 3)**

Design and development of audiovisual materials for use in educational, industrial, and/or human services programs. Students produce an audiovisual presentation. (Y)

638. (IT 510) Using Audiovisual Methods, Materials and Equipment. Cr. 2

Survey of educational media, methods, and materials. Principles of systematic instructional design applied to the design of group-based and individualized instructional materials. Operation of common audiovisual equipment; review of innovative instructional practices; computer applications and learning games. (Y)

651. (ELE 722) Survey and Analysis of Literature for Younger Children. Cr. 3

Intensive examination of books appropriate for preprimary and primary 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: L S 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. Foundations of African-American Bibliography and Resources. Cr. 3

Study and investigation of the literature of African-Americans with special attention focused on problems of publishing, bibliographic access, collection development, research in the field, general and special reference materials, and research strategies. (W)

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. (W)



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 CLL and extension courses of other schools and colleges of Wayne State University. Through its Division of Metropolitan Programs and Summer Sessions, the College also administers the University Summer Sessions. To perform its duties, the College operates numerous instructional centers throughout the Detroit metropolitan area and engages in the delivery of instructional programs through television broadcasts. By way of such efforts, the College serves a diverse student audience: persons pursuing university degrees; working adults who are unable to accommodate their schedules to the traditional on-campus programs of study; persons desiring courses of instruction at their place of employment; persons needing special guidance to help them participate in higher education; and others who are simply taking classes to improve technical skills or enrich their educational background.

For this variety of student interests the College sponsors a corresponding array of services. Through the University Studies/Weekend College Program (US/WCP) the College offers an interdisciplinary curriculum in the arts and sciences leading to the Bachelor of General Studies or the Bachelor of Technical and General Studies degrees. Through the Division of Metropolitan Programs and Summer Sessions, CLL offers off-campus (extension) classes from other Wayne State University colleges which can be used to fulfill credit requirements for many undergraduate and graduate degree and certificate programs.

For individuals not intent upon pursuing a degree or certificate, the College offers noncredit courses in which skill development and knowledge acquisition may be enhanced without the customary routine of homework, examinations, and written assignments. A similar opportunity is provided by the CLL Visitor's Program through which individuals enroll for regular credit courses on or off campus on a noncredit basis and at greatly reduced fees.

By way of assisting those whose educational background has left them unprepared for university classes, the Division of Community Education helps 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.

Degree Programs

BACHELOR OF GENERAL STUDIES

BACHELOR OF TECHNICAL AND GENERAL STUDIES

Class Schedules and Registration

A comprehensive schedule of CLL courses and programs is issued each semester. Individuals wishing to be added to the mailing list should contact CLL Marketing, 6001 Cass Avenue, Detroit Michigan 48202; (313) 577-4597.

Registration materials may be presented at any CLL center or at the CLL Registration Services Office, 6001 Cass Ave., Detroit, Michigan 48202, on the main campus. If registering by mail, materials and class schedules may be requested from this office; telephone: 577-4671.

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.

Instructional Centers

The College of Lifelong Learning maintains comprehensive instructional centers at convenient locations throughout the Detroit metropolitan area:

Birmingham Center
Groves High School
20400 W. Thirteen Mile
Birmingham, MI 48010
Telephone: 642-2661, 577-3605

Eastside Detroit Center
3127 E. Canfield
Detroit, MI 48207
Telephone: 577-4701

Harper Woods Center
Bishop Gallagher High School
19360 Harper Avenue
Harper Woods, MI 48225
Telephone: 577-3590

Northeast Center
St. Basil School
22860 Schroeder
East Detroit, MI 48201
Telephone: 771-3730, 577-3590

Northwest Activities Center
18100 Meyers Road
Detroit, MI 48235
Telephone: 577-2837

Southfield Center
Signature One Building
27300 W. Eleven Mile
Southfield MI 48034
Telephone: 358-2104, 577-3592

Sterling Heights Center
Heritage Junior High School
37400 Dodge Park
Sterling Heights, MI 48077
Telephone: 978-7881, 577-4470



DIVISION of COMMUNITY EDUCATION

Director: Sandra E. Alford

Associate Director: Mary C. Dickson

Instructional Support

English: Julie Mix; *Mathematics:* Sandra Merriweather

Academic Advisers

Dannie Brown, Pamela Dale, Charles Davis, Adrienne Elliot-Brown, Ruthie White, Karen Wilson

The Division of Community Education (DCE) is an 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, special remediation programs, and financial aid are available for program participants.

Participants in the Community Education Program are individuals who, though otherwise inadmissible to Wayne State University, are admitted into 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. Under certain circumstances, individuals without these credentials may be considered admissible.

Prior to admission, participants are required to take placement tests to evaluate their academic needs and to assist them in choosing curricula. These results are also used to plan the tutorial and remedial support which may be recommended to enhance the student's academic performance.

Application: Admission applications may be submitted at any time during the academic year. Applications should be submitted approximately two months prior to anticipated enrollment.

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 Financial Aids office.

DIVISION of METROPOLITAN PROGRAMS and SUMMER SESSIONS

Associate Dean: Ramona Lumpkin

Director of Metropolitan Centers: Kristopher Krzyzanski

Director of Credit Program Administration and Summer Session: Donna Sottile

Academic Advising

Irene Gordon

Center Managers

Susan English, W. Kathryn Flack, Jennifer Keas, Sharon O'Brien, Barbara Roseboro, Earl Newman

Program Coordinators

Robert Erickson, Lynn Miller-Wietecha, Linda Robertson, Lorraine Serra, William Slater, Cynthia Ward

The Division of Metropolitan Programs and Summer Sessions is responsible for making available off-campus courses and degree programs offered by other Wayne State University schools and colleges. Close coordination with 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 programs.

The Division also develops and offers—often in conjunction with cooperating schools and colleges—a variety of noncredit career and professional development courses. 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. Program centers are maintained at convenient locations (see page 332).

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 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.

Persons wishing 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. Upon admission to a Wayne State school or college, credits earned in this status may be applied toward degrees, subject to the approval of the admitting school or college. Students are advised to consult the specific degree program requirements and are urged to process formal application and admission documents as soon as possible.

Advising

Advising services for students in the Division of Metropolitan Programs and Summer Session are provided by CLL academic advisers and the managers of the College's centers. Students who do not have formal matriculated status in the University are especially urged to confer with an adviser before registration. Skilled advisers offer assistance with educational problems or degree objectives. Appointments may be arranged by telephoning any conveniently located center or the Registration Services Office.

Registration Services

Coordinator: Alberta Ellis

Office: Room 329, Criminal Justice Building, 6001 Cass Avenue, Detroit, Michigan 48202; telephone: 577-4671

Credit Registration: Registration for off-campus credit classes is held during the regular early and final registration periods for each University semester (see Academic Calendar, page 4). Registration forms used for such classes are available at any CLL center or by mail from the Registration Services Office, 6001 Cass Avenue, Detroit, Michigan 48202, on the main campus. Registration forms may be presented at any of these locations, or if registering by mail, materials and courses schedules may be obtained from and returned to the Registration Services Office. A comprehensive schedule of courses and programs offered through CLL is issued each semester. Individuals wishing to be added to the mailing list should contact the College Marketing Office, 6001 Cass Avenue, Detroit, Michigan 48202; telephone: 577-4597.

Fees for credit classes offered by the Division of Metropolitan Programs and Summer Sessions are the regularly established fees of Wayne State University and 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.

Academic Programs

The Division of Metropolitan Programs and Summer Sessions offers entire curricula or selected courses applicable to many Wayne State degrees at convenient times and places for adult learners. The following schools and colleges regularly offer courses through the Division of Metropolitan Programs and Summer Session of CLL. For information on current or upcoming programs, call the program coordinator at 577-4682.

Business Administration: Pre-Business and Master of Business Administration courses are offered in Oakland County at the Birmingham Center, and in Macomb County at the Sterling Heights Center.

School of Business Administration courses in the 600-609 series, and all 700-level courses, are open only to students holding matriculated graduate status at Wayne State University.

Education: Bachelor's, master's, and doctoral programs are offered at CLL extension centers and other locations; in-service courses and programs are offered at the request of local schools and districts.

Engineering: Courses leading to a bachelor's degree with a major in electrical/electronic engineering technology are scheduled at the Northeast Center, and with a major in electromechanical engineering technology at the Mott Community Center in Flint.

A Graduate Certificate in Hazardous Waste Management is offered at the Sterling Heights Center, and in Brighton; nine of thirteen credits required for this certificate may be applied towards the master's degree.

Periodically other courses from various departments in the College of Engineering are scheduled at CLL Centers.

Fine, Performing and Communication Arts: Undergraduate courses in music, art, and dance are offered at most off-campus centers.

Interdisciplinary Certificate: Graduate Certificate in Infant Mental Health. This certificate is offered by the Merrill-Palmer Institute in cooperation with the Colleges of Education, Liberal Arts, and Nursing, and the School of Social Work. It includes twelve credits in course work, and two semesters of field work in an agency which works with infants and parents at risk.

Liberal Arts: Introductory and advanced courses are available at all off-campus locations. Sequences of courses leading to majors in English, political science, and sociology are offered over several semesters at the same location.

Library Science: Graduate courses in library science are available at several CLL extension centers, in Traverse City, and in Grand Rapids.

Nursing: Bachelor's and master's courses are offered at several locations, including Macomb County Community College.

Pharmacy: One-day Sunday seminars for pharmacy practitioners and other health care professions are offered on a regular basis. In addition, there is a Home Study program for Wayne State University alumni.

Social Work: Bachelor's and master's courses are offered at CLL Centers and at other off-campus locations. Professional continuing education programs are also offered.

Urban, Labor and Metropolitan Affairs: Introductory and advanced courses are scheduled at most CLL centers.

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: Travel-study programs are offered through CLL for the sponsoring schools and colleges. Times and locales vary each year; for information, telephone: 577-4682.

Telecommunications

Coordinator: Paul Fiedler

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 Session offers many personal and professional development 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 and gather insight from traditional disciplines; and to present contemporary thinking, practice and technology. Offerings vary widely in subject matter and length. Courses require no special admission status and are regularly scheduled both on and off campus for all interested individuals. 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.

PERSONAL COMPUTING CLASSES

Since 1984 Wayne State University has operated a Personal Computing Center in Southfield, and a second center now operates at Sterling Heights. Eighteen personal computers, experienced faculty, instruction on best-selling software, hands-on course presentation, and qualified laboratory assistance ensure a degree of quality found among few universities or commercial computer programs. A twelve clock-hour introductory course in personal computer use is offered; in addition, classes are available in spreadsheet, word processing, and data-base software programs. For information or to register, call 577-4451.

VISITOR PROGRAM

Individuals interested in taking classes without grades, degree requirements, written assignments or examinations may participate in the Wayne State Visitor Program. Visitor status is open to any individual who is not concurrently enrolled in courses for credit at Wayne State. Registration for classes at extension Centers will be processed by the College of Lifelong Learning's noncredit program staff beginning with early registration, and for on-campus classes by the University Registration Office on a space-available basis, beginning the first day of classes. Tuition is one-half of the freshman tuition rate plus one-half of the registration fee. For information, call 577-4665.

CONTRACT PROGRAMMING

Courses are provided at business or organization sites for employees or members. Custom-designed programs for employee education and skills development may be arranged at a location designated by the employer. Courses for academic credit or for continuing education units (CEUs) can be made available. For information, call 577-4665.

NONCREDIT REGISTRATION

Noncredit classes have no admission requirements and are open to all interested individuals. Course fees, refunds, and transfer policies vary with the offering. Registration for noncredit and professional development classes may be made by telephoning 577-4665, by mail, or in person at the Noncredit Registration Office, Room 215, 6001 Cass Avenue.

The Division of Metropolitan Programs and Summer Sessions also offers both credit and noncredit courses on alternative schedules, such as seminars and workshops, that are convenient to particular audiences.

Marketing

Coordinator: Derek Donnellon

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.

COLLEGE DIRECTORY

Dean 577-4575
Assistant to the Dean 577-6710
Administrative Officer 577-4659

TELECOMMUNICATIONS

Coordinator 577-4636
Studio 577-4205

DIVISION OF ADULT DEGREE PROGRAMS and UNIVERSITY STUDIES/WEEKEND COLLEGE

Associate Dean/Director 577-4627

DIVISION OF COMMUNITY EDUCATION

Director 577-4590
Associate Director 577-4591
Counseling Services 577-4695

DIVISION OF METROPOLITAN PROGRAMS and SUMMER SESSIONS

Associate Dean 577-4595
Director, Metropolitan Centers 577-4596
Extension Credit Registration/Academic Advising 577-4671
Birmingham Center 577-3605 or 642-2661
Eastside Detroit Center 577-4701
Harper Woods Center 771-3730
Northeast Center 577-3590 or 771-3730
Northwest Detroit Center 577-2997
Southfield Center 577-3592 or 358-2104
Sterling Heights Center 577-4470 or 978-7881

Director, Credit Programming and Summer Sessions ... 577-4682
Extension Credit Information 577-4682
Noncredit Programs 577-4665
Career and Personal Development 577-4665
Personal Computing Centers 577-3595 or 356-1540
Registration 577-4665
Visitor Program 577-4665

MARKETING

Coordinator 577-4597

UNIVERSITY STUDIES WEEKEND COLLEGE

Office: Fourth Floor, Criminal Justice Building, 6001 Cass Avenue,
Detroit, MI 48202

Associate Dean and Director: Roslyn Schindler

Professors

A. Ronald Aronson, Jerry G. Bails, Martin Glaberman (Emeritus), Julie T. Klein, Clifford L. Maier, Richard Raspa, Rolland Wright

Associate Professors

Sandor Agocs, Eric A. Bockstael, David Bowen, Mary Lee Field, Gloria House, Guerin C. Montilus, Roslyn Schindler, Norma Shifrin (Retired), Francis Shor, Roland Wacker

Assistant Professors

Robert L. Carter, Peter Friedlander, Andre Furtado, Theodore Kotila, Penelope Majeske, Mary F. Minock, James Michels, Daphne W. Ntiri, David R. Stevenson, Saul Wineman

Degree Programs

BACHELOR OF GENERAL STUDIES

BACHELOR OF TECHNICAL AND GENERAL 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.

Television Classes 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 separately or in conjunction with workshops. Completion of each CLL television course earns three credits. Additionally, students may earn up to eight elective credits through independent study television courses developed by the International University Consortium and available for local viewing.

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 University Studies/Weekend College Program (US/WCP) 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 General Studies degree in three to five years or less, or for a Bachelor of Technical and General 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 General 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 Adult Degree Programs.

DEGREE REQUIREMENTS: Candidates for the Bachelor of General Studies degree must complete 120 credits including satisfaction of the University General Education Requirements (see below and page 21) and the credit distribution requirements as stated below. (See page 25 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 television 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.

credits

GIS 203—Orientation to Interdisciplinary Studies: Concepts & Methods	2
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 Foundations of Knowledge 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.

Foundations of Knowledge (GIS)	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. Fifteen of these credits must be earned at the 300 level or above.

No more than twenty-nine semester credits in course work taken through the School of Business Administration may be applied toward the B.G.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 General Studies degree must complete 128 credits (forty of which must be earned as CLL resident credit), with a maximum of sixty-four credits transferable from the associate degree level. Transfer credit may be allowed for requirements in social science, humanities, and science/technology, 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 21) and the following distribution requirements. (See page 25 for special requirements for students enrolled prior to Fall Term 1987.)

Capstone Program Credit Distribution Requirements

ASSOCIATE DEGREE TRANSFER CREDIT (Sixty-four Credits)

INTERDISCIPLINARY STUDIES (Forty Credits)	credits
GIS 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
Foundations of Knowledge Sequence (GIS)	7
AGS 492—Senior Capstone Essay/Project	4

ELECTIVES (Twenty-four Credits): Students must have a total of at least thirty-two credits of upper division course work, thus, seventeen of these elective credits must be at the 300 level or above. 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 General 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 21) and the credit distribution requirements cited above under the Bachelor of General 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. Seventeen of these credits must be at the 300 level or above.

College of Lifelong Learning Courses Satisfying General Education Requirements

The following US/WCP courses have been approved to fulfill the University General Education Requirements:

Competency Requirements

Basic Composition	GIS 151
Intermediate Composition	AGS 491, GIS 351
Writing-Intensive Course	AGS 492, AGS 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	GSS 271
American Society/Institutions	GSS 151
Foreign Culture	GIS 341, GIS 343
Visual and Performing Arts	GUH 273
Philosophy and Letters	GUH 271

Academic Regulations

Fees: Students in the US/WCP pay tuition according to the regular University fee schedule (see page 17).

Registration: Each student must register prior to attending class. Toward the end of each semester, counselors visit US/WCP 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 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 General Studies or Bachelor of Technical and General Studies must complete at least forty credits in University Studies/Weekend College 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 a US/WCP 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 US/WCP 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 US/WCP office, or the University Office of Scholarships and Financial Aids, 2 East, Helen Newberry Joy Student Services Center.

UNDERGRADUATE COURSES

The following courses, numbered 090-699, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 433.

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)

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**
Meets General Education Laboratory Requirement when elected for 4 credits. Material fee as indicated in *Schedule of Classes*. Prereq: successful completion of English Proficiency Examination or equiv. Telecourse and laboratory. Introduction to key biological concepts, including: definition of life, evolution, cellular organization, instincts, heredity, chemistry of life, the genetic code, the nature of science (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. **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. Must be taken in conjunction with GST 242. (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. 3**
Video-assisted historical introduction to key concepts in astronomy and physics; emphasis on scientific ideas and methods. Lectures, videotapes, laboratory demonstrations, home experiments included. (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)

211. Native American Cultures and Current Social Issues. Cr. 4
Social issues overview specific to Native American cultures; emphasis on urbanization and enculturation processes; poverty, health, education, law. (Y)

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)

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. 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 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)

231. Modes of Perception. Cr. 4
Study of a variety of art forms, analytical approaches and activities; workshop exploration of modes of human perception or ways of knowing. (W)

233. Critical Perspectives of Everyday Life. Cr. 3
Semester-long course with periodic weekend sessions. Ethical and philosophical themes critical to the modern world. The exploration involves a review of artistic expressions of these themes, as well as a survey of analytical treatments. Topics and dates announced each semester. (W)

242. Paper Tiger: Information and Images in the Printed Media. Cr. 3
Television course examines messages contained in the printed media. Analysis of newspapers, news magazines, and popular journals to explore information and images that shape our social and symbolic environment. (W)

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)

GENERAL INTERDISCIPLINARY STUDIES (GIS)

026. Learning to Learn: Strategies and Applications. Cr. 2
Open only to non-matriculated students. No degree credit. Offered for S and U grades only. Introduction to systematic thinking strategies, logical patterns of thought, and learning processes applicable to higher education curricula. Information mapping for comparison and analysis, problem solving, diagram interpretation, task management, and scheduling. (F,W)

051. Developmental Reading and Writing. Cr. 3
Prereq: open only to Weekend College students. No degree credit. Offered for S and U grades only. Preliminary course designed to improve reading and writing skills of underprepared students. Emphasis on reading comprehension, grammar, spelling, vocabulary, and paragraph development and organization. (Y)

151. (BC) Written Communication Skills. Cr. 4 (Max. 8)
Must be taken in first 36 credits in US/WC Program. General language awareness and written communication skills emphasized; writers

learn to participate imaginatively in the universe of human discourse. (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. Orientation to Interdisciplinary Studies: Concepts and Methods. Cr. 2
Required of all entering Weekend College students; exceptions require consent of director. Semester-long course with periodic weekend sessions. Historical development of academic disciplines. Disciplinary and interdisciplinary concepts and methods contrasted. Sources and philosophy of Weekend College curriculum described. (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 utility and limitations of this approach, compared with traditional 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)

341. (FC) The Africans: A Triple Heritage. 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)

343. (FC) The Chinese: Adapting The Past, Building the Future. Cr. 3
Prereq: upper division standing. Lecture-tv-discussion; examination of Chinese culture, social institutions, and political structures; some historical background. (W)

351. (IC) Intermediate Reading and Writing. Cr. 4
Prereq: GIS 151 or equiv. Intermediate communications course that will teach analytical reading, writing (and revision) and research, stressing discourse in the humanities, sciences and social science. (T)

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)

ADVANCED GENERAL STUDIES (AGS)

306. (IC) 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, especially 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 U.S. constitutional development and 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 directed 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 propositions and their practical application in study of the 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 to teach reading and composition skills; focus is 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. Directed study supervised by a 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: Comparative Civilizations. Cr. 4

Prereq: upper division standing. A seminar on topics determined by the upper division faculty is designed to draw together and reassess fundamental values and themes underlying the USWCP 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 in which student completes a major research paper; semester-long process of synthesis and analysis, writing, oral presentation, and consultation with 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 General Studies-Capstone and Bachelor of Technical Studies students. Research for and development of essay or project on topic by directing faculty adviser. Satisfies Writing Intensive requirement of General Education Requirements. (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)

**AMERICAN HUMANICS PROGRAM —
SERVICE AGENCY ADMINISTRATION (SAA)**

300. Human 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)

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)

450. Human Service Administration Internship. Cr. 4-8

Prereq: SAA 300; 350 or 450. Professionally supervised work experience in the field of human service administration. (T)



SCHOOL OF MEDICINE

DEAN: Robert Sokol

Foreword

The primary mission of the School of Medicine is to improve the health of the community through its combined educational, research and service programs.

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 two hundred fifty students are enrolled in Ph.D. or Master's degree study in thirteen program areas, predominantly in the basic medical sciences. More than seven hundred fifty 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 thirty 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. It was originally called The Detroit Medical College and 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. The year 1933 saw 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, to whom the British surrendered this region in 1796. It was in 1956 that Wayne University became a State institution.

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 the Lafayette Clinic, a State-operated psychiatric hospital; 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-one 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;

Harper Hospital, a division of Harper-Grace Hospitals, 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: Faith Van Toll

Librarians: John Coffey, Lora Robbins, Ruth Taylor

Hours

Monday – Thursday 8:00 a.m. – 11:00 p.m.

Friday 8:00 a.m. – 6:00 p.m.

Saturday 9:00 a.m. – 5:00 p.m.

Sunday 12:00 n. – 7:00 p.m.

The School of Medicine Library is located in the Vera Parshall Shiffman Medical Library Building. The structure houses the University Libraries' medical collection consisting of some 199,600 volumes and including over 2,900 current journal subscriptions.

Library services, including circulation and the card catalog, are automated using NOTIS software. In addition to the usual circulation, reference assistance, library instruction and computerized database services to the School of Medicine faculty, students and staff, the library borrows materials through interlibrary loan as needed, for this clientele.

A special feature of the library is the Computer Resources Laboratory. The Lab supports the computer literacy, medical decision-making and medical information aspects of the School of Medicine's curriculum. Two IBM XT computers and Macintosh SE computers are housed in the Lab. Software in the areas of tutorials, clinical decision making, case simulations and reprint file management is also provided.

Shiffman Medical Library participates as a resource library within the Greater Midwest Regional Library Network. This organization is composed of twenty-four major biomedical libraries within a ten-state area and supported in part by federal funds through the National Library of Medicine. The Regional Medical Library's function is to provide health professionals access to the nation's biomedical information resources. The library furnishes material to other institutions through interlibrary loan, requests for which number approximately 17,000 per year.

Office of Student Affairs

Assistant Dean for Student Affairs: Robert Frank M.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.

Study Skills Counseling: A study-skills specialist in techniques designed for the medical curriculum is available to students experiencing academic difficulty. Arrangements are made through the Counseling Office.

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*

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

SCHOOL DIRECTORY

Dean	1241 Scott Hall; 577-1335
Administration and Finance	1241 Scott Hall; 577-1048
Alumni Affairs and Development	1132 Scott Hall; 577-1495
Continuing Medical Education ..	4H Univ. Health Center; 577-1180
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	1261 Scott Hall; 577-1463
Financial Aid	1374 Scott Hall; 577-1039
Records and Registration	1272 Scott Hall; 577-1470
Ph.D. and M.S. Programs	1253 Scott Hall; 577-1455
Public Affairs	1281 Scott Hall; 577-1429
Research	1253 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



COLLEGE OF NURSING

DEAN: Gloria R. Smith

Foreword

Nursing is a service profession and an academic discipline. As a profession, nursing uses knowledge creatively in response to the health care needs of society. Experience in a variety of clinical settings is the primary mode for the development of practical competencies, and the faculty affirms the necessity and value of clinical practice as part of the nursing program.

As a discipline, nursing develops a body of knowledge, and the College of Nursing, functioning within the context of Wayne State University, supports liberal arts education, in the belief that knowledge acquisition and the capacity for critical inquiry, reflection and decision making prepare learners to respond to issues that will confront them as professionals. Accordingly, the faculty believes that nursing programs must be composed of the intellectual, social and technical components of both a liberal and a professional education.

Learners from diverse backgrounds enter the College to begin or continue their nursing education. The diverse characteristics of students add to the richness of the learning experience. As self-directed participants in the learning process, students develop personal goals and values significant to the nursing profession. Consequently, the programs of the College seek to accommodate these goals, special needs, and abilities, and the faculty supports the right of students to question, challenge and debate within the context of inquiry as an essential ingredient to their development.

The handbooks of the College of Nursing, available from the College, provide more specific information regarding the history, philosophy, goals and objectives of the undergraduate and graduate programs.

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 clinical foci in*

- advanced medical surgical nursing
- adult psychiatric-mental health nursing
- child and adolescent psychiatric-mental health nursing
- community health nursing
- nursing, parenting and families
- primary care nursing — adult

**POST-MASTER'S SPECIALIST CERTIFICATE in Nursing Administration*

**GRADUATE CERTIFICATE in Nursing Education*

**DOCTOR OF PHILOSOPHY with a major in nursing*

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

FACULTY

Offices: 5557 and 5454 Cass Avenue

Professors

Madeline Leininger, Barbara McArthur, Darlene Mood, Gloria Smith

Associate Professors

Arnold Bellinger, Jacquelyn Campbell, Mary Denyes, Judith Floyd, Effie Hanchett, Ingvarda Hanson, Marjorie Isenberg, June Kuczynski, Kathlene Monahan, Marilyn Oermann, Barbara Pieper, Jeannette Poindexter, Virginia Rice, Fredericka Shea, Dawn Zagomik

Assistant Professors

Nancy Artinian, Frances R. Board, Elizabeth Burki, Joette Clark, Marsha Cohen, Chandice Covington, Geraldine Flaherty, Judith Fouladbakhsh, Marie Luise Friedemann, Judith Fry-McComish, Hertha Gast, Lois Hunt, Mary Jirovec, Carolyn Lindgren, Laurel Northouse, Olivia Washington

Senior Lecturer

Virginia McBride

Lecturers

Patricia Carney, Margaret Cassey, Debra Fifield, Rosalie Greenwood, Diane Hischke, Patricia Jarosz, Faithy Justin, Kimberly Madison, Kaye McDonald, June Miller, Linda Miller, Margie Miller, Daphne Nedd, Karen Olsen, Jeanette Pack, Sukhta Pradatsundarasar, Evelyn Sims, Carol Walls, Diane Warren

Part-Time Faculty

Elaine Beane, Diane Burgermeister, Janice Dietrich, Deborah Durn, Lois Gerber, Michelle Kluka, Beverly Kober, Laura Pittiglio, Jo Anna Risk, Kathryn Smith, Linda Weglicki

Academic Staff

Onalee Frost, Jane Helinski, Carilee Hogan, Randall Mosby, Arden Sargeant, Larry Zimmerman

COLLEGE OF NURSING DIRECTORY

Dean	230 Cohn; 577-4070
Administrative Officer	244 Cohn; 577-4086
Associate Dean for Academic Affairs	344 Cohn; 577-4138
	and: 1-800-544-3890
Assistant Dean for Student Affairs	10 Cohn; 577-4082
Coordinators:	
Undergraduate Studies	252 Cohn; 577-4188
Graduate Studies	344 Cohn; 577-4138
Center for Health Research	315 Cohn; 577-4134
Learning Resource Center	15 Cohn; 577-4097
Office of Student Services	10 Cohn; 577-4082
Physical Assessment	
Learning Laboratory	30 Cohn; 577-4197

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. Depending upon the level of preparedness, students are admitted with different standing, and accordingly may pursue different programs. Students should anticipate enrollment predicated on their status in one of the following admissions categories.

Admission Requirements

Generic Students: High school graduates (not Registered Nurses) are admitted to the College of Liberal Arts for *preprofessional* study (see University undergraduate admission requirements, page 14). Applicants for undergraduate study in the College of Nursing are admitted in the sophomore year, after having completed at least thirty credits including specified prerequisite courses (see below) with high scholastic achievement.

Merit Scholars: W.S.U. Merit Scholars are admitted directly to the College of Nursing as freshmen or transfer students. Merit Scholars must satisfactorily complete all prerequisite courses (see below) prior to progressing to sophomore year (fall term) and must maintain Merit Scholarship standards, including an honor point average of 3.0 or above.

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 curriculums as determined by the Associate Dean of Academic Affairs and upon available space in the program in upper division courses. The College determines transfer credit applicable to the B.S.N. degree.

Collaborative Degree Students (Second Bachelor's Degree): Upon completion of specific prerequisite courses, students with a baccalaureate degree in a discipline other than nursing are admitted directly to the College of Nursing. Students must complete at least thirty credits at Wayne State University beyond the first bachelor's degree.

Registered Nurse Students (B.S.N. Completion Program): Licensed R.N. students are admitted directly to the College of Nursing in a non-degree granting category. Upon completion of all prerequisite courses and requirements (see page 351), the R.N. student may progress to the senior year in the College of Nursing.

Registered Nurse Students (Accelerated Bachelor's and Master's Degree Programs): Licensed R.N. students are admitted directly to the College of Nursing. Students must have completed an associate degree in nursing or diploma program and thirty liberal arts credits with a honor point average of 3.3 or better. Other requirements include a minimum of one year's experience as a registered nurse and professional competence as documented by references. Students may apply for admission to the Graduate Program after completion of baccalaureate degree.

Application

All students must file an Application for Admission or Re-entry Application including transcripts to the College of Nursing by the specified deadline dates. Students may elect to submit information included in the optional section of the application form for review by the faculty committee. All materials submitted to the College by the applicant or on the applicant's behalf will be evaluated. The College

reserves the right to solicit additional information from the applicant for purposes of determining eligibility to the College.

The College has final jurisdiction in the selection of students. Inquiries regarding admission and readmission to the College of Nursing and specific information not listed in this Bulletin should be directed to the Office of Student Affairs, College of Nursing; telephone: 577-4082.

Admission to the College of Nursing

Prerequisites for Generic Students: Prior to admission to the nursing major, generic students (for definition, see above) must have completed a minimum of thirty credits including the following:

credits

BIO 105 or BIO 151	
—(LS) An Introduction to Life	4
—(LS) Basic Biology I	4
BIO 220 —Introduction to Microbiology (Laboratory)	4
CHM 102 —(PS) General Chemistry I	4
CHM 103 —General Chemistry II (Laboratory)	4
ENG 102 —(BC) Introductory College Writing	4
PSY 101 —(LS) Introductory Psychology	4
SOC 200 or ANT 210	
—(SS) Understanding Human Society	3
—(SS) Introduction to Anthropology	3
PSY 240 —Developmental Psychology	4
UGE 100 —(GE) The University and its Libraries	1
Satisfaction of University Proficiency Requirements in Mathematics	

Students must achieve a grade of 'C' or better in all prerequisite courses.

Admission to Nursing Courses

Prerequisites for All Students:

1. **Admission** to the College of Nursing or approval of the Associate Dean for Academic Affairs.

2. **Health Status Report:** Students admitted to the College are required to have a *Health Clearance Form* on file in the Office of Undergraduate Studies. The health clearance must indicate that the student is in good health and free from communicable disease. Specific health examinations 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 members 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. **BLS-C Certification:** All students must have the equivalent of BLS-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 students access to clinical experiences if students cannot present proof of current health clearance, BLS-C certification, and malpractice insurance.

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 the Senior Year

Progression of the Registered Nurse to senior year status 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, within three years of beginning senior clinical courses.

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 105 or BIO 151	
—(LS) An Introduction to Life	4
—(LS) Basic Biology I	4
BIO 220 —Introduction to Microbiology (Laboratory)	4
BIO 287 —Anatomy and Physiology	5
CHM 102 —(PS) General Chemistry I	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 & Physical Examination	3
NUR 330 —Pathophysiology Related to Nursing	2
NUR 340 —Introduction to Research	2
Satisfaction of University Proficiency Requirements in English and Mathematics (see pages 22-22)	

Students admitted to Wayne State University for the first time in the Fall Semester 1987 and thereafter will be required to have satisfied the remaining University General Education Requirements (see page 21):

UGE 100 —(GE) The University and its Libraries	1
Demonstrable competency in critical thinking	
One course in computer literacy (recommended: NUR 111 —2 cr.)	
One course in foreign culture (recommended: NUR 480 —3 cr.)	

Degree Requirements

Candidates for the Bachelor of Science in Nursing must complete 126 credits in course work in accordance with the academic procedures of the University and the College; see pages 14-39 and 356-357, respectively. The credit distribution for the degree is predicated on the date of first time admission to the University: before, or beginning and after Fall Semester 1987. General Education Requirements as well as professional nursing requirements for each group (shown as sample curricular patterns) are cited below. The last thirty credits of the degree must be taken at Wayne State.

General Education Requirements for All Students Enrolled Prior to Fall 1987

A minimum of sixty-three credits including:

Communication: English composition and the writing of a research paper, or intermediate writing course.

Natural Sciences: General biology, human nutrition, anatomy, physiology and pathophysiology, microbiology, inorganic and organic chemistry, biochemistry, introductory and developmental psychology. (Biology and chemistry courses must include a laboratory.)

Social Sciences: A minimum of three courses including: principles of American government or equivalent (see page 25), introductory sociology or anthropology, and one advanced course in the social sciences or psychology. Advanced courses are at the 400-600 level and therefore may not be transferred from community colleges.

Humanities: A minimum of two courses including at least one course in American or English literature.

Other: Electives to complete the sixty-three credits as well as sufficient preparation to pass the University-required proficiency examinations in mathematics and English (to be completed by the time sixty credits have been earned toward the baccalaureate degree; see page 25).

Professional Education Requirements for Generic Students Enrolled Prior to Fall 1987

A minimum of sixty-three credits in nursing courses is required for the B.S.N. degree.

GENERIC CURRICULUM PATTERN (Sample)

Sophomore Year

First Semester	credits
NUR 200 —Conceptual Basis of Professional Nursing Practice	2
NUR 211 —The Nurse and the Individual I	6
HIS 310 —Basic Mechanisms of Human Disease I	5
Liberal Arts Course	4

Second Semester

NUR 212 —The Nurse and the Individual II	6
NUR 221 —Nursing Implications of Drug Administration	2
NUR 554 —Assessment: History Taking & Physical Examination	1
HIS 320 —Basic Mechanisms of Disease II	5
HIS 321 —Basic Mechanisms of Disease: Laboratory	1
Liberal Arts Course	4

Junior Year

First Semester

NUR 311 —The Nurse and the Individual Within the Family I	10
NUR 554 —Assessment: History Taking & Physical Examination	1
ENG 303 —(IC) Writing the Research Paper	3

Second Semester

NUR 312 —The Nurse and the Individual Within the Family II	9
NUR 554 —Assessment: History Taking & Physical Examination	1
NFS 221 —Human Nutrition	3
NUR 340 —Introduction to Research	2

Senior Year

First Semester

NUR 411 —Nursing Within a Microsystem	7
<i>and/or</i>	
NUR 435 —Seminar in Process and Dynamics of Groups *	2
<i>and/or</i>	
One Senior Elective (NUR 419, 420, 422, 426, 427, 428, or 429)	2-4

Second Semester

NUR 412 —Nursing Within a Macrosystem	7
<i>and/or</i>	
NUR 435 —Seminar in Process and Dynamics of Groups *	2
<i>and/or</i>	
One Senior Elective (NUR 419, 420, 422, 426, 427, 428, or 429)	2-4
<i>and</i>	
NUR 450 —Perspectives in Nursing	3

Professional and General Education Requirements for Generic Students

The following curriculum outlines the total 126 credits required for the Bachelor of Science in Nursing, including sixty-one credits in nursing major courses and sixty-five credits in general education courses. The last thirty credits of the degree must be taken at Wayne State.

Freshman Year

First Semester

	<i>credits</i>
ENG 102 —(BC) Introductory College Writing	4
BIO 105 or BIO 151	4
—(LS) An Introduction to Life	4
—(LS) Basic Biology I	4
CHM 102 —(PS) General Chemistry I	4
PSY 101 —(LS) Introductory Psychology	4
UGE 100 —(GE) The University and Its Libraries	1
Total:	17

Second Semester

PSY 240 —Developmental Psychology	4
BIO 220 —Introductory Microbiology	4
CHM 103 —General Chemistry II	4
SOC 200 or ANT 210	4
—(SS) Understanding Human Society	3
—(SS) Introduction to Anthropology	3
Satisfaction of Mathematics Proficiency Requirement	3
Total:	15

Sophomore Year

First Semester

BIO 287 —Anatomy and Physiology	5
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 & Physical Examination	2
Total:	12-17

* Course no longer offered; student will take equivalent course.

Second Semester

NUR 212 —Foundations of Nursing Care in Illness	5
NUR 221 —Nursing Implications of Drug Administration	2
NUR 300 —Assessment: History Taking & Physical Examination	1
NFS 221 —Human Nutrition	3
NUR 330 —Pathophysiology Related to Nursing Practice	2
Oral Communication (OC) proficiency	0-2
Total:	13-15

Junior Year

First Semester

NUR 312 —Nursing Care of Adults with Complex Health Needs	10
ENG 301 or ENG 303	3
—(IC) Intermediate Writing	3
—(IC) Writing the Research Paper	3
NUR 340 —Introduction to Research	2
Total:	15

Second Semester

Philosophy and Letters (PL)	3
Historical Studies (HS)	3
NUR 321 —Nursing Care of Childbearing Families	5
NUR 322 —Nursing Care of Childrearing Families	5
Total:	16

Senior Year

First Semester

American Society and Institutions (AI)	3
Visual and Performing Arts (VP)	3
NUR 411 —Psychiatric/Mental Health Nursing	6
NUR 450 —Perspectives in Nursing	3
Total:	15

Second Semester

Foreign Culture (FC) (NUR 480 recommended)	3
NUR 412 —(W) Community Focused Nursing Practice	6
Nursing elective	3
NUR 422 —Leadership and Management in Nursing Practice	4
Total:	16
Total B.S.N. Credits	126

Professional and General Education Requirements for Registered Nurses

Registered nurses transfer credit into the RN-BSN program for many freshman and sophomore courses. All required introductory nursing courses, NLN Mobility Profile II examinations, University proficiency requirements, and liberal arts prerequisites must be completed before enrollment in senior level clinical nursing courses.

REGISTERED NURSE CURRICULUM PATTERN: BSN Completion Program (Sample)

The student may elect full-time or part-time study on campus or in the Outreach curriculum. The on-campus curriculum provides a means for completion of the senior year nursing content in TWO consecutive semesters of FULL-TIME study (this content may also be taken part-time); the Outreach curriculum provides a means for completion of the senior year content in THREE consecutive semesters of PART-TIME study. The Outreach Program is open only to Registered Nurses.

GENERAL EDUCATION REQUIREMENTS

Semester I

	<i>credits</i>
BIO 105 or BIO 151	
— (LS) An Introduction to Life	4
— (LS) Basic Biology I	4
ENG 102 — (BC) Introductory College Writing	4
CHM 102 — (PS) General Chemistry I	4
PSY 101 — (LS) Introductory Psychology	4
Mathematics Proficiency Examination	0
Total:	16

Semester II

BIO 220 — (LS) Introductory Microbiology	4
CHM 103 — General Chemistry II	4
SOC 200 or ANT 210	
— (SS) Understanding Human Society	3
— (SS) Introduction to Anthropology	3
Computer Literacy	0-2
Total:	11-13

Semester III

Oral Communication	0-3
BIO 287 — Anatomy and Physiology	5
PSY 240 — Developmental Psychology	4
American Society and Institutions (AI) course	3
English Proficiency Examination	0
Total:	12-15

Semester IV

Mobility Profile II NLN Examinations	
Philosophy and Letters (PL) course	3
ENG 301 or ENG 303	
— (IC) Intermediate Writing	3
— (IC) Writing the Research Paper	3
Visual and Performing Arts (VP) course	3
Historical Studies (HS) course	3
Critical and Analytic Thinking	0-3
Total:	12-15

NURSING REQUIREMENTS

Semester V

NUR 200 — Conceptual Basis of Professional Nursing Practice	2
NUR 300 — Assessment: History Taking and Physical Examination	2
NUR 330 — Pathophysiology Related to Nursing Practice	2
NUR 340 — Introduction to Research	2
General Education Requirement Elective	3
Total:	12

Semester VI

NUR 400 — Introduction to Nursing Practice with Groups	3
NUR 412 — (W) Community Focused Nursing Practice	6
NUR 450 — Perspectives in Nursing	3
Advanced Placement credit granted *	
Total:	12

* Advanced Placement credit granted for NLN Mobility Profile II Examinations: 33 credits.

Semester VII

NUR 422 — Leadership Management in Nursing	4
Nursing elective	3
Foreign Culture (FC) course	3
Total:	10

Professional Education Requirements for Registered Nurses Admitted Prior to Fall 1991

The curriculum for students holding Registered Nurse Licensure and pursuing a baccalaureate degree in nursing is divided into Phases I and II.

Phase I: Students may be admitted to the University and to the College in a non-degree granting status during which they complete all College admission prerequisites including liberal arts courses and testing requirements; see preceding section. Nursing courses which may be taken in Phase I and which are prerequisites for admission to Phase II are as follows:

	<i>credits</i>
NUR 200 — Conceptual Basis of Nursing Practice	2
NUR 300 — Assessment: History Taking & Physical Examination	3
NUR 330 — Pathophysiology Related to Nursing Practice	2
NUR 340 — Introduction to Research	2

The following course may also be taken in Phase I depending on completion of prerequisites and available space:

NUR 450 — Perspectives in Nursing	3
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Phase II: Students apply for admission to senior year courses after having completed all prerequisites, testing, and having met all application deadlines (see above). The student may elect full-time or part-time study on campus or in the Outreach curriculum. The on-campus curriculum provides a means for completion of the senior year nursing content in TWO consecutive semesters of FULL-TIME study (this content may also be taken part-time); the Outreach curriculum provides a means for completion of the senior year content in FOUR consecutive semesters of PART-TIME study.

ON-CAMPUS SENIOR YEAR CURRICULUM (Sample)

Fall Semester

	<i>credits</i>
NUR 400 — Introduction to Nursing Practice with Groups	3
NUR 412 — (W) Community Focused Nursing Practice	6
NUR 450 — Perspectives in Nursing	3

Winter Semester

NUR 422 — Leadership and Management in Nursing	4
Nursing elective	3
Upper-level Social Science course	3

Plus: All of the remaining courses listed above which were not completed in the Fall semester, to include: NUR 450: Perspectives.

Students may register for full-time (minimum twelve credits) or part-time study in which less than twelve credits are elected per semester.

OUTREACH SENIOR YEAR CURRICULUM (Sample)

Fall Semester

NUR 400 — Introduction to Nursing Practice with Groups and Aggregates	3
Nursing elective	3

Winter Semester

NUR 412 — (W) Community Focused Nursing Practice	6
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(R.N. students entering in the Winter Semester will take NUR 412.)

Summer Semester

NUR 422 — Leadership and Management in Nursing	4
NUR 450 — Perspectives in Nursing	3

Professional Education Requirements for Collaborative Degree Students (Second Bachelor's Degree)

These courses or equivalent courses must be completed *prior to admission*:

BIO 105 or BIO 151	
— (LS) An Introduction to Life	4
— (LS) Basic Biology I	4
BIO 220 — (LS) Introductory Microbiology	4
BIO 287 — Anatomy and Physiology	5
CHM 102 — (PS) General Chemistry I	4
CHM 103 — General Chemistry II	4
PSY 240 — Developmental Psychology	4

First Semester

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	2
NUR 330 — Pathophysiology Related to Nursing Practice	2
NFS 221 — Human Nutrition	3
Total:	19

Second Semester

NUR 300 — Assessment: History Taking and Physical Examination	1
NUR 312 — Nursing Care of Adults With Complex Health Needs	10
NUR 321 — Nursing Care of Childbearing Families	5
NUR 322 — Nursing Care of Childrearing Families	5
Total:	21

Third Semester

NUR 340 — Introduction to Research	2
NUR 411 — Psychiatric/Mental Health Nursing	6
NUR 412 — (WI) Community Focused Nursing Practice	6
NUR 450 — Perspectives in Nursing	3
Total:	17

Fourth Semester

NUR 422 — Leadership and Management in Nursing Practice	4
Nursing elective	3
Total:	7

Credits from first degree	37
Total B.S.N. credits	126

Accelerated Bachelor's and Master's Degree Program in Nursing — Professional and General Education Requirements

Accelerated bachelor's and master's degree students complete University General Education Requirements as specified in Registered Nurse Curriculum Pattern: BSN Completion Program, above. In the Accelerated Bachelor's and Master's Degree Program curriculum, students may take up to fifteen graduate credits while completing their undergraduate degree. These credits will meet both undergraduate and undergraduate degree requirements.

Required Undergraduate Nursing Courses:

NUR 200 — Conceptual Basis of Professional Nursing Practice	2
NUR 300 — Assessment: History Taking and Physical Examination	3
NUR 412 — (WI) Community Focused Nursing Practice	6
NUR 422 — Leadership and Management in Nursing Practice	4
NLN Mobility Profile II Examinations (33 nursing credits granted for advanced placement)	

Courses Applicable Toward BSN and MSN Program:

NUR 701 — Research in Nursing	3
Cognate course (different for each major)	3
Clinical course (different for each major)	3
NUR 710 — Theoretical Foundations of Nursing Practice	3
NUR 719 — Nursing Care of Groups and Families	3

Additional Graduate Courses to Complete the MSN Program:

Clinical Area Sequence:	
NUR 651 — Nursing and the Health Care Environment	3
(Alternate required for Psychiatric/Mental Health Nursing Major)	
Remaining Clinical Courses in Major	6
NUR 711 — Responses and Experiences in Health and Illness	3

Cognate Sequence: one course	3
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Research Sequence:	
NUR 700 — Statistical Methods in Nursing Research	4
And one of the following:	
NUR 796 — Research Practicum	3
NUR 798 — Field Study	3
NUR 899 — Master's Thesis Research and Direction	8

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.

Attendance

Regularity in attendance and scholastic performance is necessary for success. Students are expected to abide by attendance requirements and to assume responsibility for seeking guidance and direction as needed. Students are responsible for all information presented in class, including all—College announcements and instructions. Absence from field practice must be reported prior to the scheduled time both to the agency and faculty.

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 courses (nursing only).
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 repeat a nursing course, as space is available, only once to raise the grade to the 2.00 level or above.
5. Students may repeat a maximum of three nursing courses within the program.
6. No nursing course for which a student has received a passing grade may be repeated without written approval of the Associate Dean for Undergraduate Studies.
7. A student receiving an '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 repeat it before progressing to the next clinical core course.
8. Grades of 'I' received in course(s) prerequisite to courses in the subsequent semester must be completed within one year. Continuance in the nursing program is subject to progression policy.
9. Students must achieve at least a grade of 'C' in Biology 287 (Anatomy and Physiology) or equivalent prior to entry in any course for which this is a prerequisite.

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. The final grade report will carry official notice of academic probation.
2. A student is placed on professional probation if he/she does not maintain a minimum honor point average of 2.00 in the nursing courses. The Office of Undergraduate Studies notifies the student of professional probation.
3. An honor point average must be returned to a minimum of 2.00 to remove probationary status. Probationary status must be removed by the time the student has earned thirty credits subsequent to having been put on probation.
4. Students on probation are not eligible to represent the College in any student activity.

Exclusion

1. A student who fails to satisfactorily complete a nursing course after two attempts will be excluded from the College.
2. A student will be excluded if he/she has had to repeat more than three nursing courses.
3. A student who fails to remove probationary status following thirty semester credits will be excluded.
4. A student may be excluded from the College at any time, without having been previously warned or placed on probation, for irresponsible attendance and/or irresponsible performance in field practice assignments.

Graduation Residency Requirement

The last thirty credits of the degree must be taken as resident credit at Wayne State University.

Graduation With Distinction

A candidate eligible for the bachelor's degree may receive a special diploma with *Cum Laude*, *Magna Cum Laude*, or *Summa Cum Laude* indicated. For the University guidelines regarding these distinctions, see page 39.

Dean's List and Honors List

Students completing twelve semester credits in study at Wayne State University are eligible for appointment each semester. The semester 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 37.

College of Lifelong Learning

The College of Nursing, through the College of Lifelong Learning (CLL), offers courses for credit in various locations throughout the greater Detroit metropolitan area. Students who are regularly admitted or who have not yet been admitted to the College of Nursing may register for selected courses through CLL. *When students are admitted to a degree program in the College of Nursing, they may petition for acceptance of these course credits as part of their degree requirement.*

Financial Assistance

The University Office of Scholarships and Financial Aids, 2 East, Helen Newberry Joy Student Services Center (see page 20), administers scholarships, grants, loans and emergency funds available to all University students and funds provided especially for College of Nursing students. Early application is encouraged.

Among the private funding available to nursing students are the Helen Newberry Joy Fund, the College of Nursing Alumni Fund, the Golda Krolik Fund, the John Helfman Fund; and the Rosso, Colquhoun, Wandelt, and Dean's Scholarships. These funds provide limited assistance for financially and academically qualified students. Most awards are in the form of no interest loans and are usually for no more than one semester's tuition. For information about these and other resources, the student should consult the Office of Undergraduate Studies, College of Nursing.

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.

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 433.

090. Cooperative Nursing. Cr. 0

Prereq: admission to Henry Ford Hospital collaborative degree program; freshman standing; BCLS certification; physical exam. Offered for S and U grades only. No degree credit. Introduction of basic clinical skills to the Co-op nursing student; basic level of mastery. Co-op student provides comfort measures to hospitalized person with basic health care needs. (T)

099. Cooperative Nursing Work Experience. Cr. 0

Prereq: admission to Henry Ford Hospital collaborative degree program; physical exam; BCLS certification; NUR 090. Offered for S and U grades only. No degree credit. Participation by the Cooperative Nursing Education student after successful completion of NUR 090 is required each semester. Students work part-time, 8-16 hours per week, at Henry Ford Hospital, while enrolled full-time. A seminar/discussion is held two or three times each semester to review practical experience resulting from Co-op work. (T)

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; coreq: NUR 200, BIO 287, one credit in NUR 300, PSY 240. BLS-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, BIO 287; coreq: NUR 221, 330, two credits in 300. BLS-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. (F)

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. 1-3

Prereq: admission to College of Nursing and/or R.N. licensure in Michigan. Offered for S and U grades only. Material fee as indicated in *Schedule of Classes*. Individualized self-paced modular approach to learning assessment skills. Content and activities related to all body regions and systems. Course completion requires three credits: 1 cr. (modules 1-4); 1 cr. (modules 5-8); 1 cr. (modules 9-12). (T)

321. Nursing Care of Childbearing Families. Cr. 5

Prereq: NUR 300, 311, 340. BLS-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)

322. Nursing Care of Childrearing Families. Cr. 5

Prereq: NUR 300, 311, 340. BLS-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)

330. Pathophysiology Related to Nursing Practice. Cr. 2

Prereq: an anatomy and a physiology course, including laboratory or equiv. No credit after IHS 310 and IHS 320. Pathophysiologic process as related to normal physiology, signs and symptoms of disease, laboratory tests. Biophysical component of individual as used in the nursing process. (T)

340. Introduction to Research. Cr. 2

Prereq: NUR 200, 212, computer literacy or NUR 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; CPR 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, BLS-C certification, liability insurance, health clearance. 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. BLS-C certification, liability insurance, health clearance required. Analysis of role of professional nurse in community settings: caring for individuals and aggregates at any stage of development, on any point of the health-illness continuum, and as they may have evolved from diverse cultural backgrounds. (W,S)

419. Nurse Externship in Clinical Nursing Practice. Cr. 2-4

Prereq: senior standing. Expanded theory and professional development of the student nurse in class and clinical setting; student is employed concurrently in same clinical setting. Application of theory to practice with groups of clients within work environment. (S)

420. Special Topics in Care of the Physically Ill Adult. Cr. 2-4(4 req.)

Prereq: senior standing. BLS-C certification, liability insurance, health clearance required. Student selects one of the following topics for in-depth study: oncology nursing; nursing management of groups of physically ill adults in a hospital setting; patients in acute psychobiological crises; pharmacology for nurses; patients experiencing surgical intervention; general medical-surgical nursing; emergency nursing; rehabilitative aspects of nursing; cardiovascular nursing care; legal and/or ethical issues in nursing practice. (T)

422. Leadership and Management in Nursing Practice. Cr. 2-4(4 req.)

Prereq: senior standing, NUR 411, 412. BLS-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)

427. Special Topics in Maternal and Child Nursing. Cr. 2-4(4 req.)

Prereq: senior standing. BLS-C certification, health clearance, liability insurance required. Advanced study in specialized clinical areas related to the nursing care of women and children. Topics include: high-risk mother and infant, nursing of children, family centered care in maternity nursing, nursing management of reproductive health problems in women. (Y)

428. Special Topics in Psychiatric Mental Health Nursing. Cr. 1-4

Prereq: senior standing. BLS-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. BLS-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: admission to College of Nursing or consent of instructor. Historical development underlying current trends in nursing practice, education and research. Analysis of current issues in the profession of nursing. (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 undergraduate studies. (T)

491. Directed Study for International Students. Cr. 1-12

Prereq: consent of instructor and graduate officer. Open only to special international students. Special topics in nursing and health care. (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)

600. Transcultural Health and Life Cycle. (ANT 641). Cr. 3-5

Comparative theoretical and research focus on cognitive and symbolic health care beliefs and practices of selected Western and non-Western cultures, related to the life cycle: infancy, childhood, adolescence and adulthood. (W)

651. Nursing and the Health Care Environment. Cr. 3

Exploration of the health care system in the United States in terms of: interaction and impact of the health care environment, technology, health policy, economics, and ethics on the role of the clinical nurse specialist in the health care delivery system. (F,W)

**COLLEGE OF PHARMACY and ALLIED
HEALTH PROFESSIONS**

DEAN: George C. Fuller

Foreword

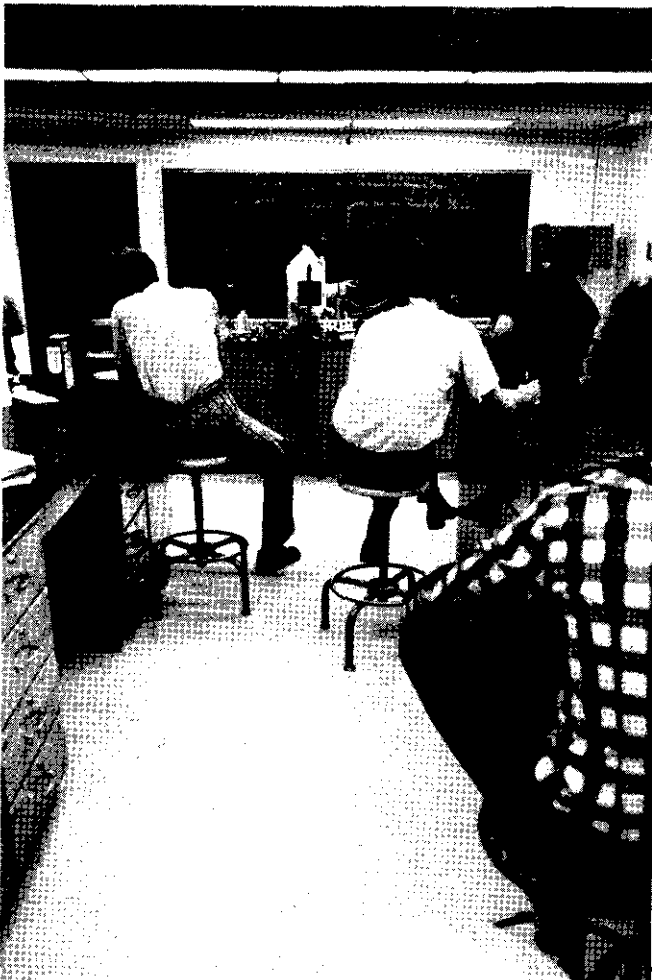
The College of Pharmacy and Allied Health Professions is a unit of the University formed by the administrative affiliation of the College of Pharmacy and the Division of Allied Health Professions of the School of Medicine. The academic programs of the two units maintain autonomous admission requirements, 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 bodies or 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 Medical Technology

BACHELOR OF SCIENCE in Medical Technology
—Cytotechnology Concentration

BACHELOR OF SCIENCE in Mortuary Science

CERTIFICATE in Mortuary Science

BACHELOR OF SCIENCE in Occupational Therapy

BACHELOR OF SCIENCE in Pathologist Assistant

CERTIFICATE in Occupational Therapy

BACHELOR OF SCIENCE in Pharmacy

BACHELOR OF SCIENCE in Physical Therapy

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 Medical Technology*
with specialization in

Clinical Laboratory Instrumentation

Education/Management

Hematology

**MASTER OF SCIENCE in Occupational 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

Deputy Dean of Allied Health Professions:

Dorothy M. Skinner 428 Shapero Hall; 577-1368

Associate Dean:

W. Dale Walls 103 Shapero Hall; 577-1708

Assistant Dean:

Gary D. Fenn 121 Shapero Hall; 577-0820

Wynefred H. Schumann 143 Shapero Hall; 577-1719

Assistant to the Dean:

Billie L. Brown 127 Shapero Hall; 577-1574

Business Manager:

Mary R. Mistaleski 101 Shapero Hall; 577-1576

Graduate Officer:

Gary D. Fenn 121 Shapero Hall; 577-0820

Continuing Education Programs:

Paul J. Munzenberger 337 Shapero Hall; 577-5384

Minority Recruitment and Retention:

T. Delores Clark 145 Shapero Hall; 577-4814

Registrar:

Richard H. Schell 139 Shapero Hall; 577-1716

Student Affairs:

Wynefred H. Schumann 143 Shapero Hall; 577-1719

Faculty of Pharmacy

Pharmaceutical Sciences:

Hanley N. Abramson 528 Shapero Hall; 577-1737

Pharmacy Practice:

Richard L. Slaughter 328 Shapero Hall; 577-0824

Faculty of Allied Health Professions

Anesthesia:

Prudentia A. Worth . 2V-4, Detroit Receiving Hospital; 745-3610

Medical Technology:

Dorothy M. Skinner 233 Shapero Hall; 577-1384

Mortuary Science:

Gordon W. Rose 102 Mortuary Science; 577-2050

Occupational and Environmental Health:

207 Shapero Annex; 577-1551

Occupational Therapy:

Miriam C. Freeling 309 Shapero Hall; 577-1435

Physical Therapy:

Mable B. Sharp 439 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 48201.

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 five 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 services.
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 much broader scope than could possibly be realized from

casual contact with any particular place in which a pharmacist may practice his/her profession. 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 employment 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, practice of pharmacy means a health service, the clinical application of which includes the assurance of safety and efficacy in the prescribing, dispensing, administering, and use of drugs and related articles for the prevention of illness, and the maintenance and management of health.

The great majority of students who complete the professional programs in pharmacy enter community or hospital practice.

Graduate programs are available to exceptional students who aspire to careers in academia, research, and specialized pharmacy practice.

The Faculty of Pharmacy works energetically to encourage 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 opportunities of wide variety, 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.

PHARMACY PRACTICE

Office: 328 Shapero Hall; 577-0824

Chairperson: Richard L. Slaughter

Professor

Richard L. Slaughter

Associate Professors

David J. Edwards, Gary D. Fenn, Paul J. Munzenberger, Michael J. Rybak, Wynefred H. Schumann, Jesse C. Vivian

Adjunct Associate Professors

Michael R. Alexander, Brack A. Bivins, Kenneth H. Fish, Donald P. Levine, Richard L. Lucarotti, Percy R. McClain, Douglas A. Miller, Michael F. Powell, Larry K. Shoup, David K. Solomon, Ronald T. Turnbull, Gregory S. Umstead, Barbara J. Zarowitz

Assistant Professors

Steven R. Erickson, Susan C. Fagan, Linda A. Jaber, David R. Rutledge, Geralynn B. Smith, Maureen A. Smythe, Mary Sudekum, James E. Tisdale

Adjunct Assistant Professors

Mona Abul-Husn, J.V. Anandan, Daniel M. Ashby, David S. Bach, Richard C. Berchou, Julie R. Berman, Roger D. Blevins, Christine M. Brettfeld, Thomas G. Burnakis, Paul W. Bush, Pranatharthi H. Chandrasekar, Daniel M. Colaluca, Thomas D. Constance, William A. Comelis, Simon M. Cronin, Brian W. Dennis, Cynthia G. Derouin, Gerald L. Emmer, Frank P. Facione, Cynthia L. Gillespie, Joseph A. Harris, Richard H. Jennings, Matthew H. Johnson, Barry M. Karath, David B. Levy, Ronald H. Lukasiewicz, Martha J. Miller, John F. Mitchell, Susan A. MonPetite, William C. Porter, Michael A. Preuss, Stephanie A. Rybak, Randy F. Schad, Cynthia K. Schnaar, Janice M. Shier, Diana L. Twyman, Bruce E. Vinson, Paul C. Walker, Ilona L. Wozniak, David B. Wright

Adjunct Instructors

Maudestine Bell, Marija G. Brandoline, Lawrence Cantor, E. Philip Cole, John S. Dryps, Ervin A. Galecki, Dennis B. Halstead, Rayne A. Henderson, David L. Jakubowski, Thomas R. Jantz, Kevin L. Kaufmann, Beverly P. Kershaw, Thomas R. Kochis, G. Richard Krieger, Jack Kutnick, Anne E. Laginess, William W. MacDonald, Ronald A. McEachen, Linda S. McIntyre, Julius S. Megyesi, Thomas P. Michalski, Jerome D. Mills, Zdzislaw J. Miloboszewski, Mark E. Mlynarek, Leonard W. Ptak, Alan Rogalski, Thomas F. Rolands, David Ruta, Barbara A. Salmela, Bernard A. Schiff, Deborah H. Schweyen, Richard Shore, Elizabeth A. Simpson, Laurence M. Sirois, Richard T. Smolarek, Martha K. Sorrentino, Robert T. Stankiewicz, Joseph A. Stark, Lawrence M. Stein, Edward G. Szandzik, Cheryl A. Szof, Steven J. Tebay, Mary C. Thorsby, Bernard J. Victor, Karl W. Widak, James E. Williams, Christopher Witting, Joseph Wolf, Alison Q. Wolfson, Moses C. Wu

PHARMACEUTICAL SCIENCES

Office: 528 Shapero Hall; 577-1737
Chairperson: Hanley N. Abramson

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, Willis E. Moore (Emeritus), Janardan B. Nagwekar, Henry C. Wornser

Associate Professors

Randall L. Commissaris, William J. Lindblad, Richard K. Mulvey (Emeritus)

Adjunct Associate Professors

Merlin E. Ekstrom, Bhupendra R. Hajratwala, Eun W. Lee, Joel G. Pounds, Alice M. Young

Assistant Professors

David K. Pitts, Craig K. Svensson, Patrick M. Woster

Adjunct Assistant Professors

Francis R. Gerbasi, John J. Nagelhout

Instructor

Cecelia N. Turczynski (Emeritus)

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

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 at least two years of acceptable pre-professional work at non-pharmacy colleges such as the University's College of Liberal Arts, a community College, etc., 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. 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 admission office.

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 should be 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 liberal arts credits (from the total of seventy-three required for the B.S. degree) including the core courses listed below.
2. Completion of each of the following core courses (or their equivalents) with the grade of 'C' or better.

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

First and Second Years — Preprofessional Core

	credits
BIO 151 —(LS) Basic Biology I (lab required)	4
BIO 220 —Introduction to 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
CSC 101 —(CL) Introduction to Computing	3
ECO 100 —(SS) Survey of Economics	4
ENG 102 —(BC) Introductory College Writing	4
ENG 301 —(C) Intermediate Writing	3
MAT 201 —(MC) 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

These requirements *must* be completed by the end of the Spring/Summer semester 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 elect additional liberal arts courses, including fulfillment of the University General Education Requirements (see below, and page 21), for a minimum total of seventy-three credits. The following requirements apply to students who do not have bachelor's degrees from accredited colleges.

General Education Requirements: see page 21. Some pre-pharmacy courses, indicated by parenthetical prefixes to course titles in the list 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):

	credits
Oral Communication (OC) *	2
Critical Thinking (CT) *	3
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

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 May 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.

1. Core honor point average (h.p.a.) of 2.0 (4 point system) that is calculated from the final grades earned in the required pre-profession courses listed above.

2. Two completed professional recommendations must accompany the completed applications form. The student is encouraged to solicit the recommendations from two faculty members or one faculty member and one employer.

3. All applicants must write a biographical essay as part of the application to the College of Pharmacy and Allied Health Professions.

4. All applicants must complete the Wayne State University English Proficiency Requirement.

5. A personal interview with a member of the Faculty of Pharmacy Admissions and Honors Committee is offered and may be required.

Students from Another College Within Wayne State: Those students currently enrolled at another college within Wayne State University must also obtain an *Application for Change of Undergraduate College Within Wayne State University* in addition to the Application for the College of Pharmacy and Allied Health Professions.

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 April 1.

Post-Degree Students: Students having at least 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 dates for such applications are the same as those for regular admission to the University.

Degree Requirements

The Bachelor of Science in Pharmacy program consists of a total of five years of academic study and a minimum of 170 credits: seventy-three credits in preprofessional courses and ninety-seven credits in professional courses. These include the core curriculum required in the pre-pharmacy program (see above, page 364), 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 366). All course work must be done in compliance with the academic procedures of the University (see pages 14–39) and the College (see page 370–371) 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.

* Can be waived by passing a competency examination; Oral communication requirement may also be waived by specific high school preparation.

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

<i>Fall Semester</i>	<i>credits</i>
IHS 310 —Basic Mechanisms of Human Disease I	5
PPR 300 —Pharmaceutical Calculations	1
PPR 305 —Orientation to Pharmacy	1
PPR 310 —Jurisprudence and Ethics	3
PSC 310 —Pharmaceutics	5
PSC 330 —Pharmaceutical Biochemistry I	2
Total:	17

Winter Semester

IHS 320 —Basic Mechanisms of Human Disease II	5
IHS 321 —Basic Mechanisms of Human Disease: Laboratory	1
PPR 320 —Pharmaceutical Compounding and Dispensing	4
PPR 340 —Non-Prescription Medication	4
PSC 340 —Pharmaceutical Biochemistry II	3
Total:	17

Second Professional Year

Fall Semester

PPR 430 —Techniques in Patient Counseling and Education	2
PPR 450 —Pathophysiology and Therapeutics I	4
PSC 410 —Pharmacology I	5
PSC 423 —Principles of Pharmacokinetics and Biopharmaceutics	3
PSC 430 —Medicinal Chemistry I	3
Total:	17

Winter Semester

PPR 400 —Statistics in Drug Literature Evaluation	2
PPR 410 —Pharmacy Practice and the Health Care System	2
PPR 460 —Pathophysiology and Therapeutics II	5
PPR 467 —Applied Pharmacokinetics	2
PSC 420 —Pharmacology II	4
PSC 440 —Medicinal Chemistry II	2
Total:	17

Last Professional Year

In one semester of the last professional year, one half of the class must complete the required credits in pharmacy externship which consist of two required rotations (no other course work may be taken during this term):

Clinical Pharmacy Clerkship Rotation	2
PPR 512 —Hospital Pharmacy Externship	7
PPR 513 —Community Pharmacy Externship	4
Total:	15

In the other semester students must select one of the three options below and enroll for the courses indicated. Professional electives are chosen from other undergraduate offerings of the Faculty of Pharmacy, including those courses required in other options.

Community Practice Option

<i>Fall Semester</i>	<i>credits</i>
PPR 550 —Community Pharmacy Management	3
PPR 570 —Special Topics in Community Pharmacy Practice	2
PPR 670 —Home Health Care	3
Professional Electives	6
Total:	14

Pre-Graduate Study Option

<i>Fall Semester</i>	<i>credits</i>
PSC 600 —Fundamentals of Drug Design	2
PSC 680 —Introduction to Research	2
PSC 58x —Seminar*	1
PSC 59x —Directed Study*	3
Professional Electives	6
Total:	14

Hospital/Institutional Practice Option

<i>Winter Semester</i>	<i>credits</i>
PPR 540 —Hospital and Institutional Practice Management	3
PPR 560 —Special Topics in Hospital Pharmacy Practice	3
PPR 581 —Intravenous Therapeutics	2
Professional Electives	6
Total:	14

Alternate Last Professional Year

Qualified undergraduate students who have been provisionally admitted to the Graduate Professional Program leading to the Doctor of Pharmacy (Pharm.D.) will elect the following program for their last professional year, beginning in the Spring/Summer semester immediately following the second professional year. This program meets the requirements for the bachelor's degree, fulfills the prerequisite coursework for the Pharm.D. program and includes six of the thirty-five graduate semester credits (taken under Senior Rule) required for the Pharm.D. The successful applicant will then proceed directly into the second year of the Pharm.D. program and complete requirements in one calendar year after the bachelor's degree.

Spring/Summer Semester

PPR 519 —Pre-Pharm.D. Externship/Clerkship	15
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Fall Semester

PPR 5xx —Pharmacy Professional Elective	2
PPR 590 —Directed Study	3
PPR 660 —Biostatistics	3
PPR 661 —DP&T 1: Immunology/Cardiology**	3
PPR 662 —DP&T 2: Pulmonary/Infectious Disease	2
PPR 663 —DP&T 3: Hematology/Oncology	2
Total:	15

Winter Semester

PPR 664 —DP&T 4: Psychiatry/Neurology**	2
PPR 665 —DP&T 5: Gastroenterology/Endocrinology	2
PPR 666 —DP&T 6: Nephrology/Fluid & Electro	3
PPR 667 —DP&T 7: Rheumatology/Pediatrics & Patient Assess	2
PPR 760 —Introduction to Clinical Research***	2
PPR 767 —Applied Pharmacokinetics: Advanced***	4
PPR 784 —Seminar in Clinical Pharmacy	2
Total:	17

* Selected from: medicinal chemistry; pharmaceutical administration, pharmaceutics, or pharmacology.

** Disease Processes and Therapeutics.

*** Graduate credit under Senior Rule.

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 graduating 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 is expected to 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 are eligible for licensure as interns 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, O'Hare Corporate Center, 1300 Higgins Road, Suite 103, Park Ridge, Illinois 60068.



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 433.

INTERDISCIPLINARY HEALTH SCIENCES (IHS)

200. Introduction to Health Careers. Cr. 1-3

Offered for S and U grades only. Members of health professions introduce students to the functions performed by each profession in the maintenance or restoration of health. (F,W)

310. Basic Mechanisms of Human Disease I. Cr. 5

Prereq: admission to professional program in allied health or pharmacy. 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)

310. Pharmaceutics. Cr. 5

Prereq: admission to professional curriculum. Physico-chemical principles which form the basis for pharmaceutical dosage forms. (Formerly PHA 310) (F)

330. 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 M C 330) (F)

340. Pharmaceutical Biochemistry II. Cr. 3

Prereq: PSC 330. Continuation of PSC 330. (Formerly M C 340)(W)

410. Pharmacology I. Cr. 5

Prereq: IHS 320; coreq: PSC 430. General principles of pharmacology and toxicology; influence of drugs on the autonomic, cardiovascular and excretory systems. (Formerly PCL 410) (F)

420. Pharmacology II. Cr. 4

Prereq: PSC 410; coreq: 440. Material fee as indicated in *Schedule of Classes*. Action of drugs on the central nervous system (such as stimulants, psychotropics, analgesics, general anesthetics); local anesthetics. Endocrine products and synthetics used as medicinal

agents; influence of drugs on endocrine secretions. Drugs influencing the gastrointestinal tract and lungs. (Formerly PCL 420) (W)

423. Principles of Pharmacokinetics and Biopharmaceutics. Cr. 3

Prereq: PSC 310, PPR 320. Material fee as indicated in *Schedule of Classes*. Pharmacokinetics of drug absorption, distribution, metabolism and excretion and applications of pharmacokinetic principles in understanding drug dose response relationship, drug bioavailability from pharmaceutical dosage forms, drug dosage regimen design, and possible drug-drug interaction in patients. (Formerly PHA 423) (F)

430. Medicinal Chemistry I. Cr. 3

Prereq: PSC 340. Discussion of organic medicinals within the framework of the physical and chemical properties of the compounds; significance of these for pharmacological actions, for stability and storage. Structure-activity relationships. (Formerly M C 410) (F)

440. Medicinal Chemistry II. Cr. 2

Prereq: PSC 430. Continuation of PSC 430. (Formerly M C 420)(W)

520. Qualitative Drug Analysis. Cr. 2

Prereq: consent of instructor. Open only to undergraduates. Spectral and chromatographic techniques used in identification of medicinal agents. Operation of infrared, ultraviolet and nuclear magnetic resonance spectrometers. (Formerly M C 520) (Y)

530. Fundamentals of Controlled Release Drug Delivery Systems. Cr. 2

Prereq: PSC 423. 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)

576. Pharmaceutical Manufacturing. Cr. 2

Prereq: last year professional standing. The procedures employed in the manufacture of pharmaceuticals. (Formerly PHA 576) (I)

585. Seminar in Medicinal Chemistry. Cr. 1(Max. 2)

Prereq: consent of instructor. Open only to undergraduates in good academic standing. Reports and discussions of current literature and recent advances in the field. Assigned topics presented by students. (Formerly M C 589) (T)

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. (Formerly M C 600) (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)

673. Quantitative Drug Analysis. Cr. 3

Prereq: admission to pharmaceutical sciences graduate program or consent of instructor. Lecture and laboratory on general principles of sample collection and handling for drug analysis; utilization of analytical technology in the quantitation of drugs. (Formerly PHA 673) (I)

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. (Formerly PCL 689) (Y)

PHARMACY PRACTICE (PPR)

300. 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. (F)

305. Orientation to Pharmacy. Cr. 1

Prereq: admission to professional curriculum. Offered for S and U grades only. Background history, literature, professional organizations, education, career opportunities in pharmacy profession. (F)

310. Jurisprudence and Ethics. Cr. 3

Prereq: P S 101; admission to professional curriculum. Material fee as indicated in *Schedule of Classes*. Various state and federal laws and regulations affecting pharmacy practice and drug control. Introduction to ethical principles guiding professional practice and conduct. (F)

320. Pharmaceutical Compounding and Dispensing. Cr. 4
Prereq: PSC 310, PPR 300, PPR 305, 310. Material fee as indicated in *Schedule of Classes*. Elements of compounding and dispensing. (W)

340. Non-Prescription Medication. Cr. 4
Prereq: admission to professional curriculum. 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. (W)

400. Statistics In Drug Literature Evaluation. Cr. 2
Prereq: fourth year standing. Emphasis on statistics principles needed in analysis of medical and therapeutic literature. (W)

410. Pharmacy Practice and the Health Care System. Cr. 2
Prereq: PPR 310; fourth year standing. 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)

430. Techniques In Patient Counseling and Education. Cr. 2
Prereq: fourth-year standing. Communication techniques, oral and written patient counseling, medication compliance, and patient education techniques. Modes of instruction include: lectures, discussions, and workshops. (F)

450. Pathophysiology and Therapeutics I. Cr. 4
Prereq: fourth year standing; coreq: PSC 410, PSC 430. Material fee as indicated in *Schedule of Classes*. Major disease states; emphasis on drug therapy of choice and appropriate therapeutic monitoring. (F)

460. Pathophysiology and Therapeutics II. Cr. 5
Prereq: fourth year standing, PSC 420, PSC 440. Material fee as indicated in *Schedule of Classes*. (W)

467. Applied Pharmacokinetics. Cr. 2
Prereq: PSC 423. Material fee as indicated in *Schedule of Classes*. Utilization of pharmacokinetic theory in the interpretation and evaluation of clinical literature. Application of these principles in drug therapy. Lectures, library research and discussion. (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)

511. Clinical Pharmacy Clerkship. Cr. 4-7
Prereq: last professional year standing. Major disease entities; emphasis on drug therapy and methodology of choice. Participation in patient rounds, case reviews, and provision of clinical pharmacy services. (Y)

512. (W) Hospital Pharmacy Externship. Cr. 4-7
Prereq: last professional year standing. 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: last professional year standing. 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)

514. Pediatric Pharmacy Externship. Cr. 4
Prereq: last professional year standing. Practicum experience in provision of pharmaceutical services to pediatric patients. (F,W)

515. Psychiatry/Neurology Pharmacy Externship. Cr. 4
Prereq: last professional year standing. Practicum experience in neurology and psychiatry. Students receive clinical experience in monitoring therapy, participation in patient-care conferences. (F,W)

516. Ambulatory Pharmacy Externship. Cr. 4
Prereq: last professional year standing. Practicum experience designed to familiarize the student with the provision of primary care/ambulatory pharmacy services. (F,W)

518. Geriatric Pharmacy Externship. Cr. 4
Prereq: last professional year standing. Practicum experience in the provision of patient-oriented pharmaceutical services to geriatric patients. (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)

520. Critical Care Pharmacy Externship. Cr. 4
Prereq: last professional year standing, consent of instructor. Exposure to and experience in managing critically ill patients. Evaluation and management of fluid and electrolyte abnormalities, CV support, treatment of infectious complications and control of pain. (F,W)

521. Clinical Pharmacokinetic Externship. Cr. 4
Prereq: last professional year standing, consent of instructor. Practicum experience in provision of clinical pharmacokinetic services in health care facilities. (F,W)

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 subject to departmental review of program and time commitment. (T)

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)

573. Drug-Induced Diseases. Cr. 3
Prereq: fifth year standing. Material fee as indicated in *Schedule of Classes*. Elective on pathology produced by administration of drugs; how therapeutic agents may injure different organ systems. (Y)

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)

581. Intravenous Therapeutics. Cr. 2

Prereq: last professional year 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)

588. Seminar in Pharmaceutical Administration.

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 P A 589) (T)

590. Directed Study In Pharmacy Practice. Cr. 1-3(Max. 3)

Prereq: consent of instructor. Open only to undergraduates in good academic standing. (T)

591. Directed Study in Pharmaceutical Administration.

Cr. 1-3(Max. 3)

Prereq: consent of instructor. Open only to undergraduate students in good academic standing. (Formerly P A 590) (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)

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:
Immunology/Cardiology. Cr. 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: immunology and cardiology. (Y)

**662. Disease Processes and Therapeutics II:
Pulmonary/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: pulmonary and infectious diseases. (Y)

**663. Diseases 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. 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)

670. Home Health Care. Cr. 3

Prereq: last professional year, 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)

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)



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 1989 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. **Unsatisfactory grade** means a grade of 'D,' 'E' or 'U,' 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.'

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 reviews student performance regularly and makes decisions concerning probationary status. A student may be excluded 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.

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, or the Dean.

The Faculty of Pharmacy will not accept in the professional curriculum a professional course taken out of normal curriculum sequencing and concurrence, as published in this bulletin (with the exception of professional electives available in more than one curricular track), unless such an offering has been approved by the Faculty of Pharmacy in advance.

Withdrawal and Leaves of Absence

A leave of absence may, and should, be requested by a student when personal circumstances interfere with the student's ability to devote sufficient time to academic pursuits to assure reasonable expectations of success. A leave of absence is requested from and granted by the Dean in consultation with the Committee on Academic and Professional Progress.

Students may *not* withdraw from an individual course unless the withdrawal is approved by the Committee on Academic and Professional Progress, the Faculty, or the Dean. If a student requests and is granted an immediate leave of absence during a term, the

student must effect a complete withdrawal from all courses as a matter of policy.

A student who takes an unauthorized leave of absence will be considered to have voluntarily withdrawn from the program and will *not* be eligible to return.

Time Limitations

The program must be completed within four calendar years of admission unless an extension is granted by the Dean or his designee (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 Committee on Academic and Professional Progress in consultation with appropriate faculty.

Minimum Grade Requirement

Any unsatisfactory grade earned in a professional course must be repeated with a satisfactory grade *before* the student is allowed to continue in the program. Undergraduate pharmacy students, with the exception of guests and post degree students, may not register to audit a course or for Pass/Not Pass grading.

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 excluded 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.

Exclusion from the Program

A student *will* be excluded from the program for the following reasons:

- A. Failing to earn a satisfactory grade upon repetition of a professional course.
- B. Earning in professional courses in a single semester a total of any one of the following:
 1. two or more grades of 'E' and/or 'U';
 2. three or more grades of 'D';
 3. one 'E' or 'U' and two 'D' grades.
- C. Earning in professional courses a cumulative total of any one of the following, irrespective of grades earned upon repetition of unsatisfactory marks:
 1. three or more grades of 'E' and/or 'U';
 2. four or more grades of 'D';
 3. two 'E' and/or 'U' and two 'D' grades;
 4. one 'E' and/or 'U' and three 'D' grades.
- D. Failing to meet any special conditions imposed by the Committee, the Faculty, or the Dean for the student's continuation in the program.

Appeal Process

Decisions of the Committee on Academic and Professional Progress may be appealed to the Committee by the student involved, if it is believed that the decision was based on incorrect information or that these regulations were not appropriately applied. Personal circumstances form a basis for a leave of absence (see above) and are *not* grounds for appeal of actions taken under these regulations. Any appeal should be in the form of a letter explaining clearly the student's reason(s) for appeal.

If this petition is denied by the Committee, the student may pursue the following line of appeal: The Faculty of Pharmacy, the Dean, and, ultimately, the University Provost.

Readmission

Following Academic Dismissal

Applications for readmission from students who have been excluded from the program for academic reasons will only be considered when the applicant has earned a B.S. or higher degree in one of the physical or life sciences subsequent to the exclusion.

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.

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.

Dean's List of Honor Students

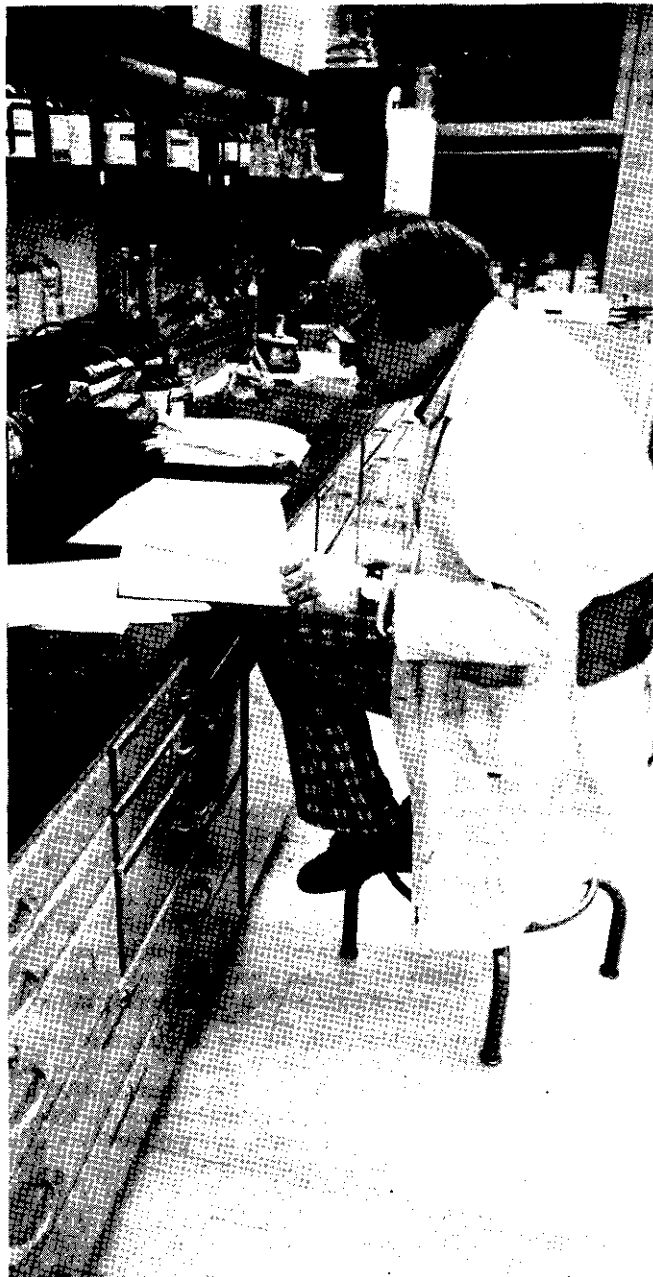
A regular undergraduate student who achieves an honor point average of 3.7 or more for at least twelve credits of course work in a given semester is notified by the Dean of his/her citation for distinguished scholarship and professional progress. The student's name is placed on the Dean's List of Honor 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 39.

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.



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 representatives from 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 facilities, and recreational facilities.

Lambda Kappa Sigma is an international professional fraternity for women in pharmacy that also helps to promote professionalism within the College. Through publications, meetings and conventions, members maintain the ties of good fellowship and understanding.

Phi Delta Chi Pharmacy Fraternity the only coeducational national professional 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 for the purpose of advancing pharmacy programs of the College, fostering a professional spirit and promoting mutual improvement among alumni, and supporting College endeavors through contributions, seminars, scholarships, and tutorial programs offered to students.

FINANCIAL AIDS, SCHOLARSHIPS and AWARDS

Students in good 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 has a limited amount of funds available for students who were denied funding from the University office. These funds are designed primarily for students who need short-term assistance. Students in good standing enrolled in the pharmacy curriculum of the College may apply for these funds by completing the Pharmacy Financial Assistance Application form which can be obtained from the Office of Student Affairs, 143 Shapero Hall.

Scholarships

Based on recommendations from faculty and students and criteria determined by the contributors, pharmacy scholarships are awarded to pharmacy students in good standing who are continuing their professional education.

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 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: A \$100 check 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.

Paul C. and Nettie Deutch Scholarship: A check in the approximate amount of \$1,000 is awarded to a pharmacy student who has 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. If two students are eligible, the one with the greater financial need is given priority; if their need is equal the scholarship may be divided into two awards of approximately \$500 each.

Bernard Thomas Downs Pharmacy Scholarship: This fund 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.

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 scholarship support for pharmacy students.

K mart Corporation Pharmacy Scholarship: Each year the K mart Corporation presents a scholarship to a fourth or fifth professional year student in good academic standing who has demonstrated interest in the community practice of pharmacy.

Jack Kutnick Pharmacy Scholarship: This annual scholarship for fourth-year pharmacy students was established by alumnus Jack

Kutnick to provide a \$1000 scholarship to a pharmacy student who has demonstrated financial need and scholastic achievement.

Maple Drug Stores, Inc., Scholarship: A check for \$100 is presented by Maple Drug Stores to a fourth- or fifth-year student in good standing with interest in community pharmacy practice. Consideration is given to students who have successfully completed an externship/internship at one of the Maple Drug Stores.

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.

Frank O. Taylor WSU Pharmacy Scholarship: An endowment fund has been established by the estate of Frank O. Taylor to provide 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 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 Pharmacist 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 College of 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 core h.p.a. of at least 2.8. The student must have demonstrated leadership in professional activities.

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.

Loans

Based on recommendations from faculty and students and criteria determined by the donor, emergency student loans are awarded to pharmacy students in good standing. The student is usually obligated to repay the loan before graduation from the College.

Sidney Barthwell Pharmacy Loan: This fund is established to provide financial assistance primarily for Afro-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.

Burroughs Wellcome Co. Pharmacy Education Program Loans: These student loan funds have been established as a result of the Burroughs Wellcome Pharmacy Education Program in the name of the following pharmacy graduates and friends of the pharmacy program: Martin Barr, Louis Bloch, Earl Cheresch, G. Oliver Daniel, Eugene

Dembicki, Ronald E. Mankowski, Leo Pikstein, Linda Ringer, Albert C. Rizzo, Lloyd V. Suey

Concord/Wrigley Drugs, Inc., Pharmacy 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 Loan: This fund was established by the family of G. Oliver Daniel for the benefit of Afro-American pharmacy students in good standing. The loan is intended primarily for fees, books, and supplies, for not more than two academic semesters.

Robert L. Fleischer Memorial Student Loan Fund: 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 Student Loan Fund: 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 standing and need financial assistance for fees, books, and supplies.

Roland T. Lakey Student Loan Fund: 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 Student Loan Fund: This fund established in memory of Mr. Levin, a pharmacy graduate of Detroit Institute of Technology, provides financial assistance to pharmacy students in good standing for fees, books and supplies.

Minnie and Max Millman Memorial Student Loan Fund: 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 standing for fees, books and supplies.

Oakland County Pharmacists Association Loan Fund: The members of the Oakland County Pharmacists Association have established funds to provide emergency financial assistance to pharmacy students in good standing.

Perry Drug Stores, Inc., Loan Fund: Perry Drug Stores, Inc., has established funds to provide emergency financial assistance to pharmacy students in good standing.

Burton J. Platt Student Loan Fund: This loan was established as a memorial to Mr. Burton J. Platt in February 1975 and is available to students in good standing in the Pharmacy program.

Morris Rogoff Student Loan Fund: The family and friends of Mr. Morris Rogoff, a dedicated alumnus of the College, have established a loan fund in his memory. These funds will 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 are given to pharmacy students in either the baccalaureate or Doctor of Pharmacy program

American Pharmaceutical Association Certificate: A certificate of commendation is issued annually by the American Pharmaceutical Association to the graduating student who has contributed most in developing membership and encouraging participation in the activities of the student chapter of the College.

American Society of Hospital Pharmacists Student Leadership Award:

This certificate is given to a fourth-year pharmacy student who has demonstrated unusual personal and professional development as has strong involvement in professional organizations.

Arbor Drug Award: A \$100 check and plaque is awarded annually to a graduating student in recognition of superior achievement in community pharmacy practice.

Asklepios Key Award: A distinctive recognition key is presented annually by Mu Omicron Pi Chapter of Kappa Psi Pharmaceutical Fraternity, to the member who has been most active in the interests of the fraternity.

Martin Barr Michigan Pharmacists Association Award: This annual award is presented to the graduating student selected by the Dean as most likely to achieve leadership in pharmacy practice and advance the ethics and standards of the profession of pharmacy.

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.

Burroughs Wellcome Co. Doctor of Pharmacy Scholarship Award: An annual award of \$500 is presented by Burroughs Wellcome Co. to a student enrolled in the first year of the Doctor of Pharmacy program, on the basis of academic achievement and demonstration of financial need.

Melvin F. Dunker Award: A distinctive plaque and a check for \$100.00 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.

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.

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.

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 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 a \$50 check 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: Upon recommendation of the faculty, Martec Pharmaceuticals, Inc., awards a plaque and \$150 to a student in the second professional year who has demonstrated academic achievement and leadership in professional and co-curricular affairs.

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.

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:

1. To the graduating student attaining the highest average in the overall pharmacy program;
2. To the graduating student attaining the highest average in pharmacology courses;
3. To the graduating student attaining the 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.

Mylan Pharmaceuticals Excellence in Pharmacy Award: A distinctive certificate as well as 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: A \$100 check 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 such eligible 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 a check for \$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 senior student in recognition of superior achievement in clinical pharmacy practice.

The Upjohn Award: Awarded annually to the graduating senior who, in the judgment of the faculty, has been most active in off-campus public service activities.

The Upjohn Pharmacy Research Award: Upon recommendation of the practice faculty, the Upjohn Company presents a plaque and \$250 to the graduating doctor of pharmacy candidate, resident, or fellow who has demonstrated excellence in research. The research project must have been completed or published within the previous two years.

Faculty Awards

Syntex Laboratories Preceptor of the Year Award: Upon recommendation of the practice faculty, 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 Award of the Year: Upon recommendation and selection by the graduating class, one faculty member receives 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.

FACULTY of ALLIED HEALTH PROFESSIONS

Programs

Anesthesia, medical technology, 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.

Medical Technology:* Students in medical technology 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 medical technologist 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 medical technology—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 to practice in a health-care profession which strives to enable people, despite disease, disability or physical handicap, to function as contributing members of society. 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. Physical therapy graduates have the opportunity to initiate and influence social change by establishing close relationships with people in a wide variety of settings.

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.

Pathologist Assistant: The pathologist 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 medical technology, mortuary science, occupational therapy, physical therapy and radiation therapy technology are taken in the College of Liberal Arts 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 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 January or March preceding entry into the professional programs. Application forms and detailed information can be obtained from the Registrar's Office, 139 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.

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

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 Shapero 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 378-392). Following are general College and University policies governing baccalaureate programs.

University General Education Requirements

For complete description, see pages 21-26.

University Requirement in American Government—see pages 24, 25.

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 21–26.

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.

Outside Employment

The undergraduate curriculum has been arranged with the presumption that students will devote full time and energy to their college and university experience. Students are encouraged to limit their outside employment in order to benefit from the full complement of academic and cultural opportunities that are a vital part of higher education.

Requirements for Graduation

In addition to the formal academic requirements for graduation, students in the Allied Health Professions must demonstrate traits of character, stamina and emotional stability appropriate for work in a health-care field. Students may be required to withdraw from the College when, in the judgment of a committee of the faculty, they are deficient in these qualities so as to make them unsuitable for their chosen profession.

Graduation with Distinction: See page 39.

MEDICAL TECHNOLOGY

Office: 233 Shapero Hall; 577-1384

Chairperson and Deputy Dean of Allied Health Professions: Dorothy M. Skinner

Associate Professor

Dorothy M. Skinner

Assistant Professors

Janet Brown Castillo, Nina Parker, Ann Wallace

Adjunct Professors

A. William Shafer, Joseph Wiener

Adjunct Associate Professors

Barbara Jenkins, Aaron Lupovich, Gerald Mandell

Adjunct Assistant Professors

James Adams, Mara Christiansen, Jean Garza, Grace Hill, Deanna Klosinski, Joyce Salancy, Shobha Shah

Adjunct Instructors

Ross LaVoie, Sheila Finch, Kathleen Hay, Carol Hillman

Cooperating Faculty

L. McCoy, M. Pak, D. Walz

Degree Programs

BACHELOR OF SCIENCE in Medical Technology

BACHELOR OF SCIENCE in Medical Technology with a concentration in cytotechnology

**MASTER OF SCIENCE in Medical Technology with specializations in clinical laboratory instrumentation, education management, and hematology*

Medical technology 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 Medical Technology Program at Wayne State University provides the interested student with the technical knowledge and specialized skills necessary to the profession. The work of the medical technologist involves:

1. Provision of accurate diagnostic information to the physician through performance of a vast array of laboratory tests.
2. Comparative evaluation and utilization of the best possible methods of performance of these tests.
3. Operation of sophisticated laboratory equipment.
4. Effective teaching and supervision of students and auxiliary laboratory personnel.

While the majority of medical technologists 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 medical technology education.

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

The programs offered by the Department of Medical Technology utilize the facilities of the College of Liberal Arts, the Faculty of Allied Health Professions and the pathology departments and clinical laboratories of hospitals affiliated with the Department of Medical Technology.

Bachelor of Science in Medical Technology

The program leading to the Bachelor of Science degree in Medical Technology fulfills the requirements for medical technology education of the Committee on Allied Health Education and Accreditation. A graduate from Wayne State University with this Bachelor of Science degree is eligible to take a national certification examination in medical technology. 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.

The junior year begins the professional program and is taught by the faculty of the Department of Medical Technology 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 14. High school prerequisites for applicants pursuing the Bachelor of Science in Medical Technology are:

high school units

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 Liberal Arts does not offer course work in the first unit of algebra, some mathematics deficiencies can be eliminated by taking Mathematics 090 (see page 285). 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 Liberal Arts:

First Year

	credits
BIO 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) Introduction to Computing	3
ENG 102 —(BC) Introductory College Writing	4
M T 208 —Medical Technology Seminar	1
MAT 180 —(MC) 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
CHM 312 —Analytical Chemistry	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
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 Medical Technology by April 15 of the year one wishes to enter the professional program.

The Admissions Committee is composed of medical technologists on the faculty and adjunct faculty of the Department of Medical Technology. 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. Will have completed all preprofessional courses (see above) by the end of the summer semester prior to admission to the professional program.

3. 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).

4. 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 medical technology 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 Medical Technology, College of Pharmacy and Allied Health Professions.

Degree Requirements

Candidates for the Bachelor of Science in Medical Technology must complete 132 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 Medical Technology 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 Lecture	2
I M 550 —Principles of Immunology	2
I M 551 —Bacteriology, Virology and Mycology	5
M T 300 — Introduction to Clinical Laboratory methods	2
M T 302 —Hematology I	2
M T 304 —Immunohematology	2
M T 305 —Hematology II	2
M T 306 —Serology	2
M T 307 —Urinalysis/Hemostasis	3
M T 308 —Principles of Clinical Lab. Instrumental Methods I	3
M T 309 —Medical Technology Professional Seminar	1
M T 310 —(W) Medical Technology Parasitology	3
M T 312 —Hematology I: Laboratory	2
M T 314 —Immunohematology Laboratory	2
M T 315 —Hematology II: Laboratory	2
M T 318 —Clinical Instrumentation Laboratory	1
M T 328 —Introduction to Clinical Chemistry	4
M T 404 —Laboratory Administration	2

Fourth Year

M T 400 —Clinical Hematology	6
M T 401 —Clinical Chemistry	9
M T 402 —Clinical Blood Bank	4
M T 403 —Clinical Microbiology	7
M T 406 —Clinical Serology	2
M T 507 —Clinical Pathology Correlation	2

Medical Technology 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.

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) year course is automatically dismissed from the program.

Students who have been dismissed for academic reasons and wish to be readmitted to the medical technology professional curriculum will have the opportunity to do so only once. 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 medical technology 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 378.

Time Limitation: See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 378.

Bachelor of Science in Medical Technology 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 Liberal Arts (or equivalent courses at another accredited institution). The junior year begins the professional curriculum and is taught by the faculties of the Department of Medical Technology, the College of Liberal Arts, 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 Medical Technology 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 Medical Technology 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 Liberal Arts should refer to the admission requirements of the University as stated on page 14. High school prerequisites for applicants pursuing the Bachelor of Science in Medical Technology with a concentration in cytotechnology are:

high school units

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 Liberal Arts does not offer course work in the first unit of algebra, some mathematics deficiencies can be made up by taking MAT 090 (see page 285). 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 Liberal Arts. *Students must pass the required preprofessional courses with a grade of 'C' or better.*

First Year	Credits
BIO 151 —(LS) Basic Biology I	4
BIO 287 —Anatomy and Physiology	5
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 —(MC) Elementary Functions	4
PHI 105 —(CT) Critical Thinking **	3
SOC 200 —(SS) Understanding Human Society **	3
SPB 101 —(OC) Oral Communication: Basic Speech	2
UGB 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 152 —Basic Biology II	4
BIO 220 —Introduction Microbiology	4
BIO 271 —Comparative Vertebrate Zoology	4
CHM 224 —Organic Chemistry I	4
ENG 301 —(IC) Intermediate Writing	3
HIS 110 —(HC) The Ancient World **	3
P S 101 —(AI) American Government **	3
Humanities (VP,PC) Electives	6
Foreign Culture (FC) Elective	3

Residence: See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 378.

Time Limitation: See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 378.

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 Medical Technology 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 Medical Technology; see page 379. For further information, write: Department of Medical Technology, College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, Michigan 48202.

Degree Requirements

Candidates for the medical technology degree Bachelor of Science with a concentration in cytotechnology must complete 130 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 Medical Technology in cooperation with the College of Liberal Arts and the staff of the affiliated clinical institutions. The third year begins **ONLY** in September.

Third Year

	credits
BIO 340 —Principles of Physiology	3
BIO 305 or 507	
— Human Heredity	3
— Genetics	4
BIO 563 —Histology	4
BIO 564 —Cancer Biology	3
CSC 100 —(CL) Introduction to Computer Science	3
M T 302 —Hematology I	2
M T 312 —Hematology I Laboratory	2
M T 305 —Hematology II	2
M T 315 —Hematology II Laboratory	2
M T 310 —(WI) Medical Technology Parasitology	3
M T 449 —Cytotechnology Technique: Female Genital Tract	4
EER 763 —Fundamentals of Statistics	3
Electives	3

Fourth Year

M T 450 —Cytotechnology Non-Gynecological Technique I	13
M T 451 —Cytotechnology Non-Gynecological Technique II	18

** Preferred course to satisfy University General Education requirement.

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 380.

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.

In addition, the Michigan Society of Medical Technologists 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 medical technology; they include: the Medical Technology Student Loan Fund, and the W. K. Kellogg Foundation Loan Fund.

Medical Technology Alumni Association

Organized in 1978, the Medical Technology Alumni Association was established for the purpose of developing and maintaining rapport between the graduates and faculty of the Department of Medical Technology. 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 Medical Technology Department.

Student Professional Activities: All students may participate in the local, state and national organizations of the American Society for Medical Technology. All students may participate in the local, state and national organizations of the American Society for Medical Technology.

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 433.

BIOCHEMISTRY (BCH)

501. General Biochemistry Lectures. Cr. 2

Prereq: quantitative analysis. Structural biochemistry, metabolism of carbohydrates; lipids, proteins and nucleic acids. (F,W)

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)

MEDICAL TECHNOLOGY (M T)

101. Introduction to Medical Conditions of Community Concern: A Laboratory Perspective. Cr. 2–3

Variety of medical conditions presented from perspective of laboratory tests required for diagnosis. Brief description of the condition and its mechanism of action; presentation of laboratory tests; indication of test results. (F)

208. Medical Technology Seminar. Cr. 1

Offered for S and U grades only. Introduction to medical technology, its opportunities and responsibilities. (F,W)

290. Preprofessional Directed Study. Cr. 1–3

Prereq: enrollment in pre-medical technology program. Offered for S and U grades only. Independent study under faculty supervision. (F,S)

300. Introduction to Clinical Laboratory Methods. Cr. 2

Prereq: Junior in medical technology or consent of instructor. Basic concepts used in clinical laboratory including laboratory safety, specimen collection and processing; pipetting, spectrophotometer usage, laboratory mathematics, and quality assurance. (F)

302. Hematology I. Cr. 1–2

Prereq: junior in medical technology 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 medical technology 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: M T 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 medical technology 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 medical technology 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. Principles of Clinical Laboratory Instrumental Methods. Cr. 3–4

Prereq: junior standing in medical technology program 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, fluorometric, electroanalytical, and chromatographic methods to the clinical laboratory. (W)

309. Medical Technology Professional Seminar. Cr. 1

Prereq: junior in medical technology program. Weekly group discussion on medical technology matters. Medical ethics and professionalism. (W)

310. Medical Technology Parasitology. Cr. 3

Prereq: registration in medical technology 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 medical technology 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. Immunohematology Laboratory. Cr. 2

Prereq: junior in medical technology 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: M T 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 Instrumentation Laboratory. Cr. 1

Prereq: M T 308. Material fee as indicated in *Schedule of Classes*. Introduction to the function and use of clinical laboratory instruments. (S)

328. Introduction to Clinical Chemistry. Cr. 4

Prereq: M T 318. Material fee as indicated in *Schedule of Classes*. Methodologies and interpretations of results of clinical chemistry diagnostic tests. (S)

400. Clinical Hematology. Cr. 6

Prereq: senior standing in medical technology 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 medical technology 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 medical technology 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 medical technology program. 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 medical technology program. 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. (W,S)

406. Clinical Serology. Cr. 2

Prereq: senior standing in medical technology program. 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 medical technology program, 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 medical technology program, 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,S)

451. Cytotechnology Non-Gynecologic Technique II. Cr. 1-16

Prereq: M T 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 medical technology program. Offered for S and U grades only. Independent study under faculty supervision. (T)

507. (W) Clinical Pathology Correlation. Cr. 1-2

Prereq: senior standing in medical technology program or consent of instructor. Correlation of laboratory data and clinical history through the analysis of case studies. (W,S)



MORTUARY SCIENCE

Office: 627 W. Alexandrine; 577-2050

Chairman: Gordon W. Rose

Professor

Gordon W. Rose

Assistant Professors

Gerald P. Cavellier, Mary Louise M. Williams

Adjunct Associate Professor

Edward J. Kerfoot

Certificate and Degree Programs

THREE-YEAR CERTIFICATE in Mortuary Science

BACHELOR OF SCIENCE in Mortuary Science

BACHELOR OF SCIENCE in Pathology Assistant

Wayne State University offers a professional program in funeral service education. A student may earn a three-year certificate in Mortuary Science; or may qualify for the Bachelor of Science in Mortuary Science by completing an additional fifteen credits in course work during the fourth year. Both the three-year certification and the four-year degree programs meet or exceed the educational requirements for licensure in Michigan and most other states.

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 program offers the enrollee extensive opportunity to participate in clinical/practicum training in the mortuary arts. Prospective students should direct inquiries to: Department of Mortuary Science, 627 W. Alexandrine, Detroit, Michigan 48201; telephone: 577-2050.

Accreditation: The three-year certificate and the four year degree program in mortuary science are accredited by:

- (1) The American Board of Funeral Service Education; and
- (2) The Michigan State Board of Examiners in Mortuary Science.

THREE-YEAR CERTIFICATE PROGRAM

The fundamental objectives of the program are:

- a. To teach and encourage the highest standards of ethical and professional conduct and practices through the coordination of in-depth course content and curriculum planning.
- b. To provide the theoretic and practical capabilities to an individual, who, as a health practitioner, will assure the public of professional service in the preparation and disposition of human remains.
- c. To offer professional and functional courses in the biologic and physical sciences, behavioral sciences, mortuary arts, and management/administration that will provide the community with a person who is effectively responsive to the needs of the bereaved.

The educational program in mortuary science covers three academic years of college work. Two of these years are devoted to pre-professional studies which must be taken in the College of Liberal Arts of Wayne State University or at any regionally accredited college or university. For the third or professional year, the student registers in the Department of Mortuary Science. The program of professional

study is offered during the University's regular academic year, which extends from early September to late August. On satisfactory completion of the full three-year program the student is awarded a Certificate of Graduation in Mortuary Science.

Admission

Preprofessional Program: Students entering as freshmen and intending to pursue either an undergraduate certificate or degree in mortuary science must complete the preprofessional program (see below) offered by the College of Liberal Arts. The admission requirements for that college are those for regular undergraduate admission to the University; see page 14.

Students must pass the required preprofessional courses (indicated by an asterisk) with a grade of 'C' or better.

PREPROFESSIONAL PROGRAM

<i>First Semester</i>	<i>credits</i>
BIO 151—(LS) Basic Biology I *	4
MAT 180—(MC) Elementary Functions	4
ECO 101—(SS) Principles of Macroeconomics	4
ENG 102—(BC) Introductory College Writing *	4
UGE 100—(GE) The University and Its Libraries	1
Total:	17

Second Semester

BIO 152—Basic Biology II *	4
PSY 101 or PSY 102	
—(LS) Introductory Psychology *	4
—(LS) Elements of Psychology *	3
ENG 301 or ENG 303	
—(IC) Intermediate Writing *	3
—(IC) Writing the Research Paper *	3
ECO 102—(SS) Principles of Microeconomics	4
Total:	15

Third Semester

CHM 102 — (PS) General Chemistry I *	4
ACC 301—Elementary Financial Accounting Theory *	3
PSY 260 — Psychology of Social Behavior *	4
HIS 110 or HIS 120	
— (HS) The Ancient World	4
— (HS) The Medieval World	4
CSC 101 — (CL) Introduction to Computing *	3
Total:	18

Fourth Semester

CHM 103—General Chemistry II *	4
SPB 101—(OC) Oral Communication: Basic Speech *	3
ACC 302 — Elementary Managerial Accounting Theory *	3
PHI 105 —(CT) Critical Thinking	3
P S 101—(AI) American Government	4
Total:	17

Professional Program Admission: To be considered for admission to the third (or professional) year of the program, applicants must have completed the preprofessional program (see above) under one of the following conditions:

1. Completion of required courses at an accredited collegiate institution with an overall grade average of 'C' or better.
2. Completion of required courses at a recognized but unaccredited collegiate institution with a cumulative average of 'B' or better, or

While only fifty-two credits in pre-professional college work are required for admission to the Professional Program, sixty credits in preprofessional college work are required for graduation. Students who do not have the full sixty credits will not be granted the Certificate

in Mortuary Science until after this deficiency is removed. The granting of preprofessional course credit in mortuary science by examination only (e.g., CLEP) is not acceptable in lieu of formal course registration and satisfactory completion of course requirements (e.g., lecture and laboratory).

Conditional/Probationary Admission: Applicants to the professional program in mortuary science with an honor point average of less than 2.0 may, at the discretion of the Departmental admissions committee, be admitted on a part-time, conditional basis for the semester of initial registration and enrollment.

Part-time, conditional registration for the initial or any subsequent semester will be limited to ten credits in course work. The conditional registrant must earn a minimum honor point average of 2.0 to qualify for registration(s) in subsequent semesters of professional program course offerings.

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 of Mortuary Science. A health evaluation report, issued by the University physician or designee, must be presented prior to admission to departmental classes.

Outside Employment: The professional 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.

Certificate Requirements

To receive a Certificate in Mortuary Science, a student must have presented evidence of satisfactory completion of sixty credits in pre-professional college work including the preprofessional courses required for admission (above), and must have satisfactorily completed fifty credits in professional mortuary science courses as described below.

Time Limitation: Full-time and/or part-time registration in the professional program is limited to a maximum of six consecutive semesters. Any exception to this policy must have prior written approval of the departmental director or his designee.

PROFESSIONAL PROGRAM

Third Year

Fifth Semester

	<i>Credits</i>
M S 310—Chemistry	3
M S 350—Embalming I	3
M S 360—Restorative Art and Modeling I	2
M S 380—Mortuary Management I	4
M S 390—Psychology of Funeral Service	3
M S 405—Human Anatomy and Physiology	3

Total: 18

Sixth Semester

M S 351—Embalming II	3
M S 361—Restorative Art and Modeling II	2
M S 376—Past and Future Trends in Funeral Service Practices	3
M S 381—Mortuary Management II	3
M S 391—Psychosocial Aspects of Funeral Service Practice	3
M S 425—Microbiology	3

Total: 17

Seventh Semester

M S 340—Mortuary Law	4
M S 375—Mortuary Accounting	3
M S 382—Computer Science Applications to Funeral Service Practices	3
M S 430—(WI) Medical Science	2
M S 435—Dynamics of Grief Counseling	3

Total: 15

Michigan State Licensure

To become a licensed mortician in the State of Michigan one must:

1. Complete two academic years (60 semester credits) of instruction at any regionally accredited or recognized collegiate institution, with grades of C or better, and include required courses as determined by the State Board;
2. Graduate from a regionally approved program of mortuary science. Applicants for a Michigan license must register with the State Board of Mortuary Science before entering a mortuary science college;
3. Complete one year of resident training under the personal supervision of a licensed mortician. The Board may waive up to one year of the required resident training interval if the applicant has completed a sufficient number of post-certification credits. Special application must be made to the Board for waiver of resident training;
4. Pass examinations as determined by the State Board;
5. Be at least eighteen years of age, a resident of Michigan, a citizen of the United States, and of good moral character. For further information, address: State Board of Mortuary Science, P.O. Box 30018, Lansing, Michigan 48909.

Bachelor of Science in Mortuary Science

Admission: The Bachelor of Science degree in mortuary science is based on the same two years of preprofessional course work and third year of professional course work which constitutes the Three-Year Certificate Program. For preprofessional admission and professional admission applicable to the degree program, see above.

DEGREE REQUIREMENTS: The candidate for the degree of Bachelor of Science in Mortuary Science must satisfactorily complete the following 125 credits with an honor point average of at least 2.00:

a. Two-Year Preprofessional Program (see above)	60 credits
b. Third-Year Professional Program (see above)	50 credits
c. Senior year (see below)	15 credits

Completion of this program satisfies all Departmental subject area group requirements as well as the University General Education Requirements.

Bachelor of Science Senior Year

Eighth Semester

	<i>credits</i>
ANT 211—(LS) Introduction to Physical Anthropology	4
PHI 232—(PL) Introduction to Ethics	3
M S 596—Senior Seminar	2
HUM 101—(VP) Introduction to Art & Music in Western Civilization	4
One Course in Foreign Culture (FC)	3

Total: 16

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 376, 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 practicum assignments.

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 may appeal the objection to the Departmental Faculty Committee during a regularly scheduled meeting. The appellate procedure should be initiated by directing a letter of request for such a review to the Chairperson, Department of Mortuary Science.

Fees—Professional Program

Mortuary Science fees are the same as Graduate School fees and are subject to change at any time by action of the Board of Governors.

Resident \$50.00 plus \$104.75 per credit.

Non-Resident \$50.00 plus \$227.50 per credit.

Financial Aids

Students in the Department of Mortuary Science are eligible for scholarships and loans available to all University students. Inquiries should be directed to the University Office of Scholarships and Financial Aids, 2 East, Helen Newberry Joy Student Services Center.

In addition, students enrolled in the third or professional year of the mortuary science program are eligible to apply for loans made available by the Michigan Mortuary Science Foundation. Inquiries should be directed to the Executive Director, Michigan Funeral Directors' Association.

Scholarships are also 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 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 profession. Students are assisted in securing part-time employment in funeral homes upon request.

Bachelor of Science — Pathology Assistant Program

The Pathology Assistant program trains personnel to assist the pathologist in the performance of postmortem examinations and in the preparation of surgical specimens for study, as well as to take responsibility for certain tasks delegated by supervising pathologists such as budgetary, superintending, and teaching duties.

ADMISSION

Preprofessional Program: Students seeking admission to the program in the College of Liberal Arts should refer to the admissions requirements of the University as stated on page 14. Courses in this program are taken under the guidance of the College of Liberal Arts. Students must pass the required pre-professional courses with a grade of 'C' or better.

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.

The Admissions Committee is composed of Faculty of the Mortuary Science Department. 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 taken the English Proficiency Examination (see page 22);
- 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, official transcripts from all former undergraduate schools must be included.

Interested parties should direct inquiries to: Director of Pathology Assistant Program, Department of Mortuary Science, 627 W. Alexandrine, Detroit, MI 48201.

DEGREE REQUIREMENTS: The candidate for the degree of Bachelor of Science — Pathology Assistant Program must satisfactorily complete the pre-professional 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.

First Year

credits

BIO 151 — (LS) Basic Biology I	4
BIO 152 — Basic Biology II	4
CHM 102 — General Chemistry I	4
CHM 103 — General Chemistry II	4
ENG 102 — (PS) Introductory College Writing	4
MAT 180 — (MC) Elementary Functions	4
PHI 105 — (CT) Critical Thinking	3
SPB 101 — (OC) Oral Communication: Basic Speech	3
UGE 100 — (GE) The University and its Libraries	1

Second Year

BIO 220 — Introductory Microbiology	4
CSC 101 — (CL) Introduction to Computing	3
ENG 305 — (IC) Technical Communication I	3
HIS 110 or HIS 120	
— (HS) The Ancient World	4
— (HS) The Medieval World	4
M S 405 — Human Anatomy and Physiology	4
PSL 322 — Fundamentals of Human Physiology	4
P S 101 — (AI) American Government	4

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 Liberal Arts. The third year begins *only* in September.

Third Year

APH 240 — Introductory Photography	3
BIO 563 — Histology	4
BIO 561 — Vertebrate Embryology	4
SOC 200 — (SS) Understanding Human Society	3
PHI 232 — (PL) Introduction to Ethics	3
PTH 500 — Pathology	2
SOC 536 — Introduction to Medical Sociology	3
M S 415 — Histochemistry	3
CRJ 515 — Introduction to Forensic Science	3
PHI 111 — Ethical Issues in health Care	3
M S 430 — (WI) Medical Science	2
Foreign Culture (FC) elective (to be taken during Spring/Summer Term)	3

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 hospitals affiliated with the College of Pharmacy and Allied Health Professions.

Attendance/Exclusion: Students in the Pathology Assistant program must adhere to the Mortuary Science Department Attendance Policy outlined above, under 'Academic Regulations.' In addition, students in this program 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 a faculty committee, they fail to maintain appropriate standards of conduct and practice.

Outside Employment: The professional 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.

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 University Health Center. A health evaluation report, issued by the University physician or designee, must be presented prior to admission to rotation.

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.

Students dismissed for academic reasons seeking readmission to the Pathology 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 433.

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)

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. (S)

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. (F)

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. (W)

375. Mortuary Accounting. Cr. 3

Basic accounting principles and practices; development of systematic accounting records for funeral service practices; preparation and interpretation of financial statements. (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. (W)

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)

382. Computer Science Applications to Funeral Service Practices. Cr. 3

Prereq: CSC 101 or CSC 102. Programming, spreadsheet programs, input preparation, data structures, storage methods, and data base methods as applicable to funeral service practices. (S)

390. Psychology of Funeral Service. 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)

391. Psychosocial Aspects of Funeral Service Practices. 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 four credits to Pathology Assistant students only. Material fee as indicated in *Schedule of Classes*. Lecture-demonstration; laboratory dissection; regional and systemic study of anatomy and physiology; emphasis on vascular anatomy and adjacent structural relationships; anatomic guides; topographic anatomy and terminology. (F)

415. Histochemistry. Cr. 3

Prereq: M S 405; coreq: BIO 563. Study of techniques involved in the preparation of tissues prior to microscopic examination. (W)

425. 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) Medical Science. Cr. 2

Study of infectious and chronic diseases; body defense mechanisms; etiology of disease as related to handling and preparation of human remains; autopsy procedures. (S)

435. Dynamics of Grief Counseling for the Allied Health Professional Practitioner. 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)

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. (F,W)

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. (F,W)

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. (F,W)

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. (F,W)

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. (F,W)

480. Clinical Photography. Cr. 2

Prereq: senior standing in pathologist assistant program. Techniques required to photographically record gross and microscopic specimens. (F,W)

485. Clinical Laboratory Management. Cr. 4

Prereq: senior standing in pathologist assistant program. Knowledge and skills required for efficient and effective laboratory management. (F,W)

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. (W)



OCCUPATIONAL THERAPY

Office: 311 Shapero Hall; 577-1435

Chairperson: Miriam C. Freeling

Professor

H. Barbara Jewett (Emerita)

Associate Professor

Suesetta McCree

Assistant Professors

Karmen Brown, Miriam Freeling, Nancy J. Powell

Instructor

Carel Reshan

Lecturer

Georgiana Herzberg

Part-Time Faculty

Linda Lutze, Kathleen Reynolds-Lynch

Cooperating Faculty

Fred Attebury, Robin Barraco, Merlin Ekstrom, Rita Granda, Linda Hill, Eberhard Mammen, Jerry Mitchell, Howard Nomile, Robert Pohl, Martha Rodin, Thomas Sullivan

Michigan Field Work Supervisors

Deborah Allen, Karen Allen, Robin Alley, Diane Ardent, Kathy Anderson, Mary Audia-Vallier, Annette Babinski, Marian Baker, Mary Barclay, Cindy Batts, Angie Bayci, Margo Beauregard, Bonnie Bell, Kathy Berman, Pat Bernier, Hope Brucki, Donna Byrd, Ann Campbell, Sandra Carr, Ann Carson, Fred Cavataio, Janet Chalmers, Phyllis Clemens, Sherrie Coaster, Gerri Conti, Sharon Costa, Tanya Cotton, JoAnne Crain, Cynthia 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 Eakins, Tamara Eisenhardt, Renee Ettinger, Kathy Fedon, Joyce Fluegge, Louise Fragnoli, Gail Gala, Cheryl Garnett, Cynthia Gaudy, Ann Gildea, Marilyn Gilin, Matt Goetz, Jenifer Hallman, Cheryl Hawkins, Gay Heidt, 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 Koziattek, Sue Kosub, Sharon Last, Sherry Lewis, Christopher Licavoli, Jane Lingo, Donna Mack, Sheila Mack, Sue Mack, Sue Maddux, Dawn McDuffy, Debbie McMahan, Loretta Meach, Gary Messano, Suzanne Meyer, Lori Meyers, Florence Monnier, Linda Netzel, Patty Obyrut, 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, Jerri Richards-Jackson, Susan Robson, Jacqueline Row, Beverly Sabolewski, Linda Schmidt, Barbara Schriber, Suzanne Schultz, Denise Seidl, Sally Shimp, Susan Smith, Ester Soffa, Donna Sokoly, Kathleen Stadwick, Judy Stearn, Linda Steigerwald, Joan Stofflet, Lucretia Taylor, Rebecca Taylor, Mary Theeck, Sandy Thom, Jill Titus, Toni Thompkins, D' Ane Ventimiglia, Marietta Washington, Cheryl Watkins, Mary Weigand, Jean Whicker, Kathy Wilkerson, Camelia Williams

Degree Programs

BACHELOR OF SCIENCE in Occupational Therapy

POST-BACHELOR CERTIFICATE in Occupational Therapy

**MASTER OF SCIENCE in Occupational Therapy*

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 selective adaptive equipment; using specifically designed crafts 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 all 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 Committee on Allied Health Education and Accreditation of the American Medical Association in collaboration with 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 14.

The following curriculum is required of all degree candidates for subsequent admission to professional study in the Department of Occupational Therapy.

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

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 213 —(PS) General Physics	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 February 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 213.
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. participate in and receive a passing score in a group interview conducted by Wayne State University occupational therapy faculty. (Special arrangements can be made for applicants who live a great distance from the Detroit area and cannot attend the interview session.)

Degree Requirements

The Bachelor of Science degree requires 136 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	2
O T 300 —Introduction to Occupational Therapy	3
O T 310 —Clinical Psychiatry	4
O T 325 —Therapeutic Use of Occupation	1
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	1
O T 435 —(WI) Occupational Therapy Seminar	3
O T 450 —Social and Organizational Aspects of Health Care	2
O T 460 —Group Process as an Occupational Therapy Modality	1
O T 498 —Field Work I (see below)	5
O T 499 —Field Work II (see below)	5
PSY 241 —Human Development and Health	3
Total:	69

Courses required if not completed as preprofessional program electives:

O T 205 —Therapeutic Activities	2
O T 320 —Life Tasks	2
AED 526 —Methods and Material: Woods, 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 (O T 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.

Post Bachelor Certificate 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:

	<i>credits</i>
BIO 105 —(LS) An Introduction to Life	4
BIO 287 —Anatomy and Physiology	5
CHM 102 —(PS) General Chemistry I	4
PHY 213 —(PS) General Physics	4
PSY 102 —(LS) Elements of Psychology	3

CERTIFICATE REQUIREMENTS: Candidates for the certificate must complete seventy-six credits of course work as outlined in the professional program for the Bachelor's degree; see above. Upon completion of the program, including six months field work, the student will be granted a Post-Bachelor Certificate in Occupational Therapy from Wayne State University. The graduate is then eligible for the examination and certification procedures of the American Occupational Therapy Certification Board.

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 Occupational Therapy Chairman's Awards are presented to those senior students who, while in the professional program, demonstrated outstanding accomplishments in occupational therapy scholarship, leadership, or professional interest.

The 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.

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 Minority 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 fraternity. 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 433.

201. Survey of Occupational Therapy. Cr. 2
Overview of the services provided through occupational therapy in the health care delivery system. Field observations in organized occupational therapy departments. (F,W)

205. Therapeutic Activities. 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)

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. (F,S)

325. Therapeutic Use of Occupation. Cr. 1
Prereq: consent of adviser. Theories of the use of purposeful occupation; meaning and dynamics of occupation. Analysis, adaptation and application of occupation as therapeutic intervention. (W)

330. Concepts in Kinesiology 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. (Y)

435. (W) 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. (W,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 and resources available. (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)

651. Philosophy and Practice of Rehabilitation. Cr. 4
Prereq: completion of all professional courses except O T 498, 499; consent of instructor. Introduction to rehabilitation for selected students who elect a special unit in work programming. History, organization, elements of vocational rehabilitation in Michigan. (F)

652. Community Rehabilitation Services. Cr. 4
Prereq: completion of all professional courses except O T 498, 499; consent of instructor. Information and experiences related to rehabilitation services in community agencies providing work and independent living programming. Explanation and demonstration of role of occupational therapist in such agencies. (F)

653. Work Programming in Occupational Therapy. Cr. 4
Prereq: completion of all professional courses except O T 498, 499; consent of instructor. Experiences in occupational therapy work programming theory and practice, and independent living skills. Clinical evaluation tools and techniques and intervention procedures for clients with severe disabilities. (F)

654. Practicum In Work Programming Seminar. Cr. 1
Prereq: completion of all professional courses except O T 498, 499; consent of instructor. Weekly seminar designed to accompany O T 499, the Level II Fieldwork course in work programming. Students share experiences gained in practicum setting. (W)

661. Clinical and Experimental Biomechanics. (P T 504) (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)

PHYSICAL THERAPY

Office: 439 Shapero Hall; 577-1432

Chairperson: Mable B. Sharp

Assistant Professors

Roberta F. Cottman, Jacequeline Drouin, Heather Hamilton, Marsha Melnick, Mable B. Sharp

Part-Time Instructor

Barbara G. Rubenstein

Adjunct Assistant Professors

Peter Kovacek, Cornelia Kulig, James Pipp, Kathleen Vielhaber

Adjunct Instructors

Ronald Clinton, Paula Denison, Judith Marchwinski, Suzanne Portner

Cooperating Faculty

Maurice Castle, Rita Granda, Merlin Ekstrom, Voigt Hodgson, Felix Hong, Melissa Kaplan, Robert Louis-Ferdinand, Joseph Posch, John Wirth

Course Participants

Betty Jane Blossfeld, Loren DeVinney, Nancy Felcyn, Joanne Ickes, Karen Johnstone, Kathleen Kovacek, Stephen Kovich, Sharon Roy, Loois Sullivan, Kenneth Woodward

Center Coordinators of Clinical Education

Susan Allaben, Michelle Allen, Gita Amini, Lisa Anatos, George Andrews, Rose-Mary Atkinson, Rita Ball, Michael Beauvais, Suzanne Beckerich, Brenda Boerger, Ruth Boersma, Susan Bourque, Lynne Brenneman, Ron Brickey, Jan Brock, Donna Brugge, Marj Bryen, Christine Byington, Paulette Cebulski, Elizabeth Chape, Allen Colestock, Johan Comuth, Julie Corrin, Renee Cottrell, Nancy Cox, Doug Creighton, David Crowley, Steve Cygan, Marianne Damon, Dorie Day, Mary DeAngelo, Loren DeVinney, Eileen Dickenson, Cheryl Dix, Marylynne Drumheller, Bryan Durham, Fay Edsall, John Eggart, Sandy Ellery, Gloria Esse, Debra Fox, Lee Ganger, Elizabeth Garrad, Kristine Gasper, Judy Gibson, Michael Ginter, Mark Glover, Debra Goldsborough, Sue Greco, Jessie Gross, Janet Gruber, Debbie Guba, Karen Haney, Judith Harris, Glen Helfer, Kris Hendrickson, Barbara Henry, Stephanie Herrie, Walter Hylton, Sharyn Hyman, Sue Ievoli, Diann Inch, Sharon Jacob, Sue Johnson, Diane Kapelanski, Yvonne Katharopoulos, Barbara Kaye, Darrell Knick, Gerrit Kocky, Dorinda Kroymann, Faye Kwapis, Sharon Last, Hendrika Lietz, Nancy Lomax, Kathleen Lorenz, Christine Lorimer, James MacDonald, Laurie Manery, Carolyn McKee, Laurie Mercer, Karen Mihelich, Sharron Mizak-Schwein, Linda Moran, Melodie Mullins, Susan Munson, Elaine Nevelis, Bill Nowland, Cindy Osborn, Georgianne Palmer, Martha Papke, Julie Perkins, Janet Peticove, Karen Porter, Susan Quagliotto, Allison Reed, Patricia Richards, Neil Richardson, Lori Romeo, George Rowley, Renee Rozevink, Robert Sandison, Prem Sauboorah, Martha Schiller, Paul Schmidt, Chris Sepper, Virginia Shaw, Linda Simonsen, Johnny Smith, Ken Soave, Mary Souers, Stephen Stewart, Craig Strong, Peggy Suwinsky, Ralph Sweithelm, Marilyn Tibljas, Allan Trumbull, Edmond Turton, Ronald Vance, Kim Vasko-Hofer, Cathy Walters, Wendy Wexstein, Carolyn Mizak-Schwein, Maria Wilt, Jan Wohlgenuth, Donna Wolfe, Jan Zehms, Rose Ziaja

Degree Program

BACHELOR OF SCIENCE in Physical Therapy

The Physical Therapy Profession

Physical Therapy is a dynamic health profession which develops and utilizes selected knowledge, skills and techniques in planning, organizing, and directing programs for the care of individuals whose ability to function is impaired or threatened by disease or injury. This discipline focuses primarily on those individuals whose potential or actual impairment is related to neuro-musculoskeletal, pulmonary and cardiovascular systems. Physical therapy utilizes methods of evaluating the function of these systems and selects appropriate therapeutic procedures to prevent dysfunction, to maintain, and to improve or restore the function of these systems. Physical therapy incorporates a broad spectrum of activities such as direct patient care, consultation, administration, supervision, teaching and community service.

The physical therapy practitioner may choose employment in a wide variety of settings such as departments of physical therapy in general or specialized hospitals, schools and agencies for handicapped children, centers for rehabilitation and research, the offices of private physical therapists, sports clinics and home care. The practitioner may choose to teach in a college or university where a physical therapy education program exists. Bachelor of Science

Bachelor of Science in Physical Therapy

The program leading to the Bachelor of Science in Physical Therapy is offered by the College of Pharmacy and Allied Health Professions of Wayne State University in cooperation with the College of Liberal Arts and the School of Medicine. Students who already hold an undergraduate degree are eligible to receive a second bachelor's degree. The program of study in physical therapy is accredited by the Commission on Accreditation in Physical Therapy Education. Graduates of the Program are eligible to take physical therapy licensure examinations and for active membership in the American Physical Therapy Association.

Admission

Preprofessional Program: The first two years (pre-professional program) are taken in the College of Liberal Arts, the admission requirements of which are satisfied by admission to the University; see page 14. It is recommended that students interested in the professional program in physical therapy have the following high school courses: biology, chemistry, foreign language, physics, geometry and intermediate algebra. Freshmen and transfer students may obtain application forms for admission to the College of Liberal Arts from the University Office of Admissions.

PREPROFESSIONAL PROGRAM

First and Second Years

	<i>credits</i>
BIO 151 —(LS) Basic Biology I	4
BIO 152 —Basic Biology II	4
Advanced Biology (BIO 340 & 341 recommended), or BIO 271	5-6
CHM 107 or CHM 105	
—(PS) Principles of Chemistry I	4
—(PS) Introductory Principles of Chemistry	6
BCH 101 or CHM 103	
—Introductory Biochemistry (strongly recommended)	2
—General Chemistry II	4
ENG 102 —(BC) Introductory College Writing	4
ENG 301 or ENG 303	
—(IC) Intermediate Writing	3
—(IC) Writing the Research Paper	3
Humanities elective	3

MAT 180 —(MC) Elementary Functions	4
Introductory statistics (PSY 410 or EER 763 or PSL 767 or STA 102 suggested)	4
PHY 213 —(PS) General Physics	4
PHY 214 —General Physics	4
PSY 101 —(LS) Introductory Psychology	4
Psychology elective	4
Human development (PSY 240 or PSY 549)	3-4
Political Science (P S 101 or P S 103 or HIS 103, or HIS 204 and HIS 205, or HIS 516 and HIS 517)	4-8
Electives	3
Total: 63-73	

Professional Program Admission: Students interested in entering the professional program in physical therapy must contact the Department of Physical Therapy for information and application materials. Students applying to the professional program must have completed the preprofessional program as listed above, including University General Education Requirements, or their equivalent, by May of the year of which admission is sought; have a minimum honor point average of 2.8 in all course work and in prerequisite sciences; be in good health; and possess the personal qualifications necessary for the professional responsibilities of a physical therapist. Admission is competitive. Applications for the professional program must be received in the Department of Physical Therapy by January 15.

Reapplication: Students reapplying for the first time are encouraged to seek counseling from the Department. However, applicants reapplying subsequently are required to counsel with the Physical Therapy department before submitting a reapplication.

The professional program begins in the summer semester of each year. Thirty-six students are accepted. The professional program is two and one-half years in length.

All applicants to the professional program are required to take the Allied Health Professions Admission Test (AHPAT). University English and Mathematics Proficiency requirements must also be successfully completed.

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 may change because of professional entry into practice requirements which may be separate from academic requirements. It is the student's responsibility to obtain up-to-date information regarding the program from the Department of Physical Therapy, Wayne State University.

Degree Requirements

Candidates for the Bachelor of Science in Physical Therapy must complete 150 credits distributed between the preprofessional program (see above) and the following professional program. The professional program comprises seven and one-half semesters (ninety-two credits) of intense study in the field of physical therapy.

PROFESSIONAL PROGRAM

Third Year

	<i>credits</i>
ANA 303 —Anatomy	3
ANA 304 —Human Neuroanatomy and Neurophysiology	2
HIS 310 —Basic Mechanisms of Human Disease I	5
HIS 320 —Basic Mechanisms of Human Disease II	5
HIS 330 —Pharmacology for Allied Health Professions	1
PSY 242 —Applied Human Development: Laboratory	2

P T 310—Communications in Health Care	1
P T 312—Human Growth and Development	3
P T 320—Basic Evaluation Procedures	3
P T 322—Basic Therapeutic Procedures	3
P T 340—Clinical Medicine	4
P T 341—Special Topics in Clinical Medicine	1
P T 342—Kinesiology	4
P T 344—Fundamentals of Patient Care	2
P T 346—Integrated Physiology	2
P T 360—Orthotics	2
P T 380—Clinical Education I	1
Total: 44	

Fourth Year

P T 370—Principles of Investigation	2
P T 410—Psycho-Social Aspects of Health Care	2
P T 411—Organization and Management of Health Care Systems	3
P T 420—Physical Agents	4
P T 426—Management of Patients with Orthopedic Conditions I	3
P T 427—Management of Patients with Orthopedic Conditions II	2
P T 451—Assessment of Patients with Neurological Disorders	2
P T 452—Therapeutic Procedures for Patients with Neurological Disorders	4
P T 460—Rehabilitation Procedures I	2
P T 461—Rehabilitation Procedures II	3
P T 464—Management of Patients with Cardiopulmonary Disorders	2
P T 470—(W) Research Practicum	2
P T 480—Clinical Education II	2
P T 482—Clinical Decision Making in Physical Therapy	1
P T 484—Seminar in Physical Therapy	2
P T 486—Clinical Education III	9
Elective	2-4
Total: 47-49	

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

Liability Insurance: Clinical Education is provided throughout the professional program along with didactic courses. The final eighteen weeks of the program is comprised of three six-week clinical assignments in selected clinical facilities throughout the metropolitan Detroit area, Michigan and other parts of the country. The student is responsible for the cost of the clinical education portion of the program, including liability insurance which must be purchased prior to the start of P T 380, Clinical Education I.

Scholarship: The Department of Physical Therapy has strict regulations regarding probation and dismissal from the professional program. The student whose honor point average falls below 2.8 or who receives a 'D' in a course is placed on probation for the following semester. Probationary status must be removed by the end of that semester. Students are dismissed from the program upon receiving two 'Ds' or an 'E' in physical therapy courses.

University General Education Requirements: In addition to the professional course requirements, students must also complete the University General Education Requirements (see page 21) in order to receive the Bachelor of Science in Physical Therapy degree. Those requirements which are not part of the current professional program are listed below with Departmental course recommendations.

Recommended Courses and Topic Areas

SPB 101 – (OC) Oral Communication	2-3
UGE 100 – (GC) The University and its Libraries	1
Elective – Historical Studies	3
CSC 101 – (CL) Computer Literacy	3
PHI 105 – (CT) Critical Thinking	3
Elective – Foreign Culture	3
Elective – Visual and Performing Arts	3

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 433.

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.
- 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)

- 310. Communications in Health Care. Cr. 1**
Prereq: consent of adviser. Basic communication skills utilized in health care with application to the practice of physical therapy. Verbal and non-verbal behavior, physical therapy notes, observation skills and teaching techniques for the physical therapist. (S)
- 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 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: 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)

346. Integrated Physiology. Cr. 2

Prereq: IHS 320 and consent of adviser. Physiological effects of exercise, general and local heat and cold, pain and trauma in individuals in good health and with neurological, musculoskeletal, pulmonary or cardiovascular dysfunction. Laboratory. (S)

360. Orthotics. Cr. 2

Prereq: P T 342 or consent of adviser. Material fee as indicated in *Schedule of Classes*. Principles and techniques of orthotic function, component selection and application; includes upper and lower extremity and spinal devices, wheelchairs and ambulatory aids, assistive devices and environmental control systems. (W)

370. Principles of Investigation. Cr. 2

Prereq: consent of adviser. Student computer account required. Introduction to basic research principles including design, methodology, ethics, biostatistics and implications for physical therapy. Critical reading of research reports relevant to physical therapy. (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)

410. Psycho-Social Aspects of Health Care. Cr. 2

Prereq: consent of adviser. The supportive role of the physical therapist as a helping professional. The psychological and emotional reactions; social, moral and ethical implications; coping mechanisms and support systems of individuals experiencing stress, illness, disability or death. Self-analysis of personal attitudes and perceptions. (F)

411. Organization and Management of Health Care Systems. Cr. 3

Prereq: consent of adviser. Overview of health care systems, their organization and financing; various alternatives of health care. Physical therapy, services within systems: planning, organization, administration and evaluation; ethical and professional conduct, inter- and intra-professional relationships. (W)

414. Introduction to Pediatric Physical Therapy. Cr. 3

Prereq: P T 312, 451, 452, or consent of adviser. Material fee as indicated in *Schedule of Classes*. Basic theories, principles and techniques of evaluation and treatment of common pediatric problems as related to physical therapy. (S)

420. Physical Agents. Cr. 4

Prereq: P T 322, 346, ANA 304, or consent of adviser. Material fee as indicated in *Schedule of Classes*. Principles and practice of low-voltage current in therapeutic evaluation and treatment. Measurements of nerve conduction velocity and principles of electromyographic evaluation—biofeedback and transcutaneous nerve stimulation. Theory and application of superficial and deep heat, cold, infrared and ultraviolet radiation, and hydrotherapy. Laboratory and clinical experience. (F)

426. Management of Patients with Orthopedic Conditions I. Cr. 3

Prereq: P T 322 or consent of adviser. Material fee as indicated in *Schedule of Classes*. Theoretical aspects, principles and techniques of the management of patients with orthopedic problems and their application to the practice of physical therapy. Special exercise regimes, musculoskeletal evaluation techniques, orthopedic treatment and evaluation of peripheral joints, principles of athletic training and joint replacements. Laboratory. (F)

427. Management of Patients with Orthopedic Conditions II. Cr. 2

Prereq: P T 426 and consent of adviser. Material fee as indicated in *Schedule of Classes*. Theoretical aspects, principles and techniques of management of patients with orthopedic problems related to the spine; their applications to practice of physical therapy. Orthopedic evaluation and treatment of the spine; concepts of muscle energy techniques. Soft tissue mobilization and McKenzie techniques. Laboratory and clinical experience. (W)

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)

451. Assessment of Patients with Neurological Disorders. Cr. 2

Prereq: consent of adviser. Material fee as indicated in *Schedule of Classes*. Basic principles and techniques of assessing problems associated with neurological disorders including postural tone, sensation, superficial and developmental reflexes, quality of movement, perceptual-motor skills and functional mobility. Laboratory and clinical experience. (F)

452. Therapeutic Procedures for Patients with Neurological Disorders. Cr. 4

Prereq: P T 451 or consent of adviser. Material fee as indicated in *Schedule of Classes*. Theory, principles and application of the neurophysiologic approach to evaluation and treatment. Includes proprioceptive neuromuscular facilitation, neurodevelopmental treatment, sensory integration, sensory-motor approaches. Laboratory and clinical experiences. (W)

460. Rehabilitation Procedures I. Cr. 2

Prereq: P T 360, 340, 341, or consent of adviser; coreq: 452. Material fee as indicated in *Schedule of Classes*. Principles and techniques of prosthetic function, component selection and use training. Field trips. (F)

461. Rehabilitation Procedures II. Cr. 3

Prereq: P T 460 or consent of adviser. Material fee as indicated in *Schedule of Classes*. Continuation of P T 460. Program planning;

management of patients with spinal cord injuries and other selected chronic disabilities; team approach to patient care. (W)

464. Management of Patients with Cardiopulmonary Disorders. Cr. 2

Prereq: P T 346 or consent of adviser. Material fee as indicated in *Schedule of Classes*. Theory, principles and techniques utilized by the physical therapist in the management of medically- and surgically-related cardiopulmonary disorders; includes cardiac rehabilitation. Laboratory. (S)

470. (W) Research Practicum. Cr. 2

Prereq: P T 370 or consent of adviser. Student computer account required. Material fee as indicated in *Schedule of Classes*. Application of basic principles of investigation to design and implement a research project. Oral and written presentation required. (W)

480. Clinical Education II. Cr. 2

Prereq: P T 380, consent of adviser. Offered for S and U grades only. Continuation of P T 380. Part-time, supervised experience in clinical environments. Case study and activity reports required. (W)

482. Clinical Decision Making in Physical Therapy. Cr. 1

Prereq: consent of adviser. Offered for S and U grades only. Teaching/learning experiences to correlate didactic and clinical evaluation and management techniques in physical therapy. Focus on development of individual student competencies utilizing the problem-solving approach. (S)

484. Seminar in Physical Therapy. Cr. 2

Prereq: consent of adviser. Offered for S and U grades only. Exploration of contemporary issues in physical therapy and health care. Student application of principles of teaching and group dynamics. (S)

486. Clinical Education III. Cr. 3 (Max. 9)

Prereq: P T 480, consent of adviser. Offered for S and U grades only. Students must register for three sections. Continuation of P T 480. Supervised experiences in clinical environments. Three full-time, six-week experiences. Activity reports required. (S,F)

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 TECHNOLOGY

Office: 121 Shapero Annex; 577-1137

Chairperson: Diane K. Chadwell

Assistant Professor

Diane K. Chadwell

Lecturer

Adam F. Kempa

Medical Adviser

Carla A. Cook

Adjunct Assistant Professors

Rosann Keller, Carmen F. Mesina, James T. Spicka

Adjunct Instructors

Sheryl A. Janiec, Sharon Prokop, GERALYN A. QUICK, John C. Merrill, Catherine O. Warmelink

Cooperating Faculty

Janice M. Campbell, Merlin E. Ekstrom, Gary A. Ezzell, Colin G. Orton

Clinical Education Coordinator

Rosann Keller

Clinical Education Supervisors

Kathryn Finley, JoAnn Jones, Carolyn Mullins, 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

—Provide psychological 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 Committee on Allied Health Education and Accreditation of the American Medical Association in cooperation with the Joint Review Committee on Education in Radiologic Technology; it complies with the curriculum recommendations 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 Liberal Arts, the admission requirements of which are satisfied by admission to the University; see page 14. 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, 3 West, Helen Newberry Joy Student Services Center, regarding *course* selection. Students are urged to seek additional *career* advisement from the Department of Radiation 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 376.

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

	<i>credits</i>
BIO 151 —(LS) Basic Biology I	4
BIO 152 —Basic Biology II	4
BIO 271 —Comparative Vertebrate Zoology	5
CHM 102 —General Chemistry I	4
CHM 103 —(PS) General Chemistry II	4
ENG 102 —(BC) Introductory College Writing	4
ENG 301 —(IC) Intermediate Writing	3
MAT 180 —(MC) 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:	68

* 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: Chairperson, Department of Radiation Technology, 121 Shapero Annex, 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 a confidential Career Planning Interview at University Counseling Services, 583 Student Center; telephone: 577-3398. (Appointment is to be made no later than April 1.)
8. Completion of the Allied Health Professions Admissions Test (AHPAT). Application forms for this examination may be obtained from the University Advising Center, 3 West, Helen Newberry Joy Student Services Center, or from Testing and Evaluation Services, 583 Student Center. This test should be taken no later than March of the year in which admission is sought.
9. Submission of two reference forms (available from the Department): one from an employer/supervisor and one from a college professor/adviser.
10. Satisfaction of the University Requirements in English and Mathematics Proficiency (documentation is required).

The information requested in requirements 4, 8, 9 and 10, above, should be submitted to the Chairperson, Department of Radiation 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 Technology.

Application Deadline: *The deadline for applications is April 15.* Applications which are incomplete by April 15 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 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 Technology typically notifies each applicant of the final admission decision in June.

Degree Requirements

Candidates for the degree Bachelor of Science in Radiation Technology Therapy must complete a minimum of 131 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 Technology, Wayne State University; telephone: 577-1137.

PROFESSIONAL PROGRAM

Third Year

	credits
BIO 287 — Anatomy and Physiology	5
NUR 330 — Pathophysiology	2
IHS 321 — Basic Mechanisms of Human Disease: Laboratory	1
R T 300 — Clinical Care Procedures	2
R T 301 — Introductory Radiation Physics	3
R T 302 — Clinical Radiation Physics	4
R T 311 — Clinical Aspects of Radiation Therapy	3
R T 314 — Topographical Anatomy and Medical Imaging	2
R T 318 — Design & Construction of Treatment Accessories	1
R T 331 — Clinical Practicum I	3
R T 332 — Clinical Practicum II	4
R T 333 — Clinical Practicum III	4
Total:	34

Fourth Year

R T 411 — Clinical Radiation Oncology	4
R T 412 — Basic Clinical Dosimetry	3
R T 414 — Radiation Pathology	2
R T 415 — Radiobiology for the Technologist	2
R T 422 — Radionuclide Physics	3
R T 424 — Radiation Therapy Technology Seminar	4
R T 430 — Quality Assurance	2
R T 435 — Clinical Practicum IV	4
R T 436 — (W) Clinical Practicum V	4
R T 437 — Clinical Practicum VI	4
Elective	3
Total:	35

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 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 their 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 433.

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)

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. 4

Open only to radiation therapy technology students. Material fee as indicated in *Schedule of Classes*. Group discussion of professional topics as related to radiation therapy technology, including thanatology, patient communication and assessment, patient education, departmental administration, educational administration, and health care services. (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. (W) 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)



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, 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 School conducts special institutes and workshops for persons working in the field of social welfare. Continuing education in social work is also offered through the College of Lifelong Learning.

Information Meetings: The School holds information meetings each month 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*

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

SCHOOL OF SOCIAL WORK DIRECTORY

Dean 210 Thompson Home; Telephone: 577-4400

Associate Dean 224 Thompson Home; Telephone: 577-4404

General Information 135 Thompson Home; Telephone: 577-4409

Admissions and Student Services
135 Thompson Home; Telephone: 577-4409

Coordinator of Field Education
117 Thompson Home; Telephone: 577-4479

Recruitment of Minority Students
135 Thompson Home; Telephone: 577-4409

Student Organization
20 Thompson Home; Telephone: 577-1639

National Association of Black Social Work Students
20 Thompson Home; Telephone: 577-1639

Trabajadores de la Raza Estudiantil (T.R.E.)
20 Thompson Home; Telephone: 577-1639

Mailing address for all offices: School of Social Work, Wayne State University, Detroit, Michigan 48202.



FACULTY and ADMINISTRATION

Dean: Leon W. Chestang
Associate Dean: Phyllis I. Vroom
Chairperson of Admissions Committee: William H. Iverson
Director of Outreach Services: Cecille Y. Dumbrigue
Academic Services Officer: Vickie L. Radoye
Business Manager: Edrene R. Teahan
Accounting Assistant: Marilyn D. Jackson

Professors

Creigs C. Beverly, Leon W. Chestang, Kurt Spitzer

Associate Professors

Arthur E. Antisdel, Eddie Davis, Susan W. Downs, Alison Favorini, Theodore Goldberg, Carl Hartman, Kay Hoffman, Ronald L. Jirovec, Alice E. Lamont, Carol T. Mowbray, Thomas P. Melican, Melvyn C. Raider, Sue M. Smock, Mavis M. Spencer, Phyllis I. Vroom

Assistant Professors

Anita M. Gander, Sharen K. Garner (clinical), William H. Iverson, Jr., Susan M. Michaud (clinical), David P. Moxley, Carolyn B. Pryor, Hartford Smith, Jr., Shirley Thrasher

Instructors

Karen R. Currington, Marilyn H. Spurlock

Lecturers

Peggy O. Brunhofer, Lois J. Garriott, Sally Jo Large

Emeriti Professors

Sidney Dillick, Ruth L. Goldberg, Joseph P. Hourihan, Jacob I. Hurwitz, Charles N. Lebeaux, Leon Lucas, Maryann Mahaffey, Betty Rusnack, Betty L. Welsh, David Wineman

Emeriti Associate Professors

Helen Francis, Edna S. Harrison, 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, Erma L. Henderson, Paul A. Koonter, Thomas D. Watkins Jr., Robert M. Wills

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. During each year about two-thirds of the 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. A limited number of students are admitted in January to the full-time program leading to the degree of Bachelor of Social Work, beginning in the winter semester and continuing, 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*; (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 Chairperson of the Admissions Committee 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. 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 14 of this Bulletin for the University transfer policy.

Readmission: 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.

The two patterns outlined below are available through the College of Liberal Arts and the Weekend College 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)

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 21-26.

A. Social Sciences: The following distribution of courses is required.

1. (SS) Anthropology—3-4 credits
2. (SS) Economics—3 credits (Principles of Macroeconomics, ECO 101, 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.
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—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

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.

Pattern B (College of Lifelong Learning)

Some of the following courses and 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 21-26.

A. Social Sciences: The following distribution of courses is required.

credits

- | | |
|---|---|
| 1. (SS) GSS 271 —Selected Perspectives on Ethnicity | 4 |
| 2. GSS 272 —Culture, Community, and Identity | 3 |
| 3. GSS 201 —Problems in Work and Labor | 4 |
| 4. GSS 202 —Work and Society | 3 |
| 5. (AI) GSS 151 —American Political Development | 4 |

B. Natural Sciences: The following distribution of courses is required.

- | | |
|---|-----|
| 1. GST 201 —Life and the Environment | 3 |
| 2. (LS) GST 202 —Changing Life on Earth | 3 |
| 3. GST 231 — Living in the Environment | 4 |
| 4. (PS) GST 242 —Atoms and Stars | 3 |
| 5. Two courses in Psychology | 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. (PL) GUH 271 —Art and Aesthetics: Literature and Philosophy | 4 |
| 4. (VP) GUH 273 —Meaning in the Visual and Performing Arts | 3 |

D. English: The following distribution of courses is required.

- | | |
|--|---|
| 1. (BC) GIS 151 —Communication Skills | 4 |
| 2. (IC) English elective, 200 level or above | 3 |

E. Basic Speech:

- | | |
|---|---|
| 1. (OC) GIS 156 —Dimensions of Oral Communication | 4 |
|---|---|

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 21; 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, 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.

REQUIRED PROFESSIONAL CONTENT

Junior Year

<i>First Semester</i>	<i>credits</i>
S W 301 —Social Work Practice Method I	2
S W 351 —Human Development and Dysfunction	3
 <i>Second Semester</i>	
S W 302 —Social Work Practice Method II	3
S W 361 —Organizational and Community Change	2
S W 371 —Social Welfare & the Social Work Profession: History, Trends & Basic Concepts	2
S W 498 —Field Practice in Social Work	5

Senior Year

<i>First Semester</i>	
S W 401 —Social Work Practice Method III	3
S W 471 —(WI) 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
 <i>Second Semester</i>	
S W 402 —Social Work Practice Method IV	2
S W 452 —Social Functioning and the Effect of Stress	2
S W 497 — 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 at the 300 level or above, or by consent of the academic adviser.

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 433.

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 B.S.W. 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. (S)

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. (Y)

351. Human Development and Dysfunction. Cr. 3
Prereq: admission to the B.S.W. 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 B.S.W. program. Examination of social networks, neighborhoods, interorganizational and organizational behavior within a social work framework; study of change processes within these human communities. (W)

371. Social Welfare and the Social Work Profession: History, Trends and Basic Concepts. Cr. 2
Prereq: admission to the B.S.W. 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. (Y)

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. (Y)

471. (WI) 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. (Y)

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. (Y)

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. 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 method. Minimum of 15 credits must be taken over not less than 3 semesters; open only to junior and senior B.S.W. students. Offered for S, M, and U grades only. The ratio of clock hours to credits is 46 to 1. Practicum of B.S.W. 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)

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)

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. (Y)

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)

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. (Y)

691. Special Topics in Social Work. Cr. 2-4

Topics of current interest to be announced in *Schedule of Classes*. (I)

ACADEMIC REGULATIONS and FINANCIAL AIDS

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.

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.

Residency

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. The student who is working should limit registration in proportion to the amount of outside work after consultation with the adviser.

Attendance

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.

Student Liability Insurance

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.

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 a student in field education if the physical or mental health status of the student

indicates such action is warranted in order to safeguard clients, agencies, the student him/herself, 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.

Field Education Manual

The Field Education Manual is distributed to each student enrolled in S W 498, Field Practice in Social Work. This 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, all of which are detailed in the manual.

FINANCIAL AIDS

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 Aids 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 Aids, Wayne State University. Information on Guaranteed Student Loans may be obtained by contacting the Office of Scholarships and Financial Aids.

When financial aid is necessary, the School of Social Work will cooperate with the University Office of Scholarships and Financial Aids (see page 20) to develop the best possible student aid plan from the various scholarships, stipends, grants, or loans available. Such financial assistance will not be assigned or awarded until the student has confirmed his/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.

Scholarships and Awards

Fred and Freda Gentsch Scholarship. Awarded on the basis of merit and financial need.

Harold and Carolyn Robinson Scholarships. Awarded on the basis of academic achievement and financial need.

Mary Turner Scholarship. Awarded to women 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 within the School of Social Work are members of the Student Organization.

A student newspaper, bi-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 Wayne State University School of Social Work Chapter of the National Association of Black Social Work Students. 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.

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 social work needs with School resources, and to provide an Hispanic-related student forum in the University community.

T.R.E. is the student component of Trabajadores de la Raza (T.R.). The national T.R. organization has assisted the School's T.R.E. group formation and development. In working with the School, social work professional groups, the Hispanic community and concerned agencies, T.R.E. participates in the development of social work roles for Hispanics. Membership in T.R.E. is open to Hispanic and non-Hispanic students in the School of Social Work.

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 1989-1990:

ADULT WELL BEING SERVICES: John Kosik

ALTERNATIVES FOR GIRLS: Amy Goode

AURORA HOSPITAL: Sharon Blum, Audrey Minor, Valerie Silvers

BEAUMONT HOSPITAL - ROYAL OAK: Beverly Solomon

BEAUMONT HOSPITAL - TROY: Anne Carey, Robert Dale, Angel Ferreri

BIO-MEDICAL APPLICATION OF DETROIT: Barbara Hall

BLACK FAMILY DEVELOPMENT: Diane McMillan

BLOOMFIELD HILLS SCHOOLS: Julie Magulak

BON SECOURS HOSPITAL: Joanne Denison, Elise Hairston

BOYSVILLE OF MICHIGAN: Erik Erikson, Carole Hane, Ed Overstreet

BRIGHTMOOR COMMUNITY CENTER: Anne Harris, Dennis Muzzi

CAMP OAKLAND: Dave Ballenberger, Cassandra Bowers

CAREGIVERS: Ladora Barnett

CASS METHODIST CHURCH ACTIVITIES CENTER: Donald Portwood

CATHOLIC SOCIAL SERVICES OF FLINT: Yvonne Butler

CATHOLIC SOCIAL SERVICES OF MACOMB COUNTY: Robin Cronin

CATHOLIC SOCIAL SERVICES OF OAKLAND COUNTY: Wendy Karougian, Kathy Phillipi

CATHOLIC SOCIAL SERVICES OF ST. CLAIR COUNTY: Ivelisse Auffant

CATHOLIC SOCIAL SERVICES OF WAYNE COUNTY: Francis Dutoit, Sondra Forest, Charlie Geiger, Carol Quilliam, Jeanette Shallal, Nancy Stein, Kay Tulipman, Kathleen Walsh, Irene Will, Dorothy Zynda

CHILDREN'S AID SOCIETY: Gwendolyn Carmichael, Sarah Cobb, Phyllis Simpson

CHILDREN'S CENTER OF WAYNE COUNTY: Rosemary Bell, Grenae Dudley, Ellen Grummertz, Carl Herrell, Ellen Robey

CHILDREN'S VISITATION PROGRAM: Cecille Y. Dumbrigue

CHRIST CHILD HOUSE, THE: Julia Winston

CLARKSTON SCHOOLS: Jim Butzine

COMMON GROUND: Lynn Weber, Maryann Weingarden

COMMUNITY CARE SERVICES: Judith Andrews, Larry Graban, John Roxberry, John Schaupner, Sally Schwadron

COMMUNITY SERVICES OF OAKLAND: John Erich

COMPLETE HOME HEALTH CARE/COMPLETE HOSPICE CARE: Sharon Klein
COTTAGE HOSPITAL: Colleen Kelly, Lois Quig

CROSSROADS SOCIAL SERVICES: Jane Marten

DEARBORN HEIGHTS HUMAN RESOURCE CENTER: Gladys Klein

DETROIT COUNCILMEMBER MARYANN MAHAFFEY'S OFFICE: Geraldine Ellington, Sara Gleisher

DETROIT HEALTH DEPARTMENT: Janie Boyd, Lloyd Bridges, Jackie Carter, Gary Cook, Joan Fields, Leona Glover, Arletha Kerns, Matt Linn, Arlice Nobles, Patricia Soderberg, Joey Smith

DETROIT PSYCHIATRIC INSTITUTE: Edward Knitter, Elliot Rosen

DETROIT PUBLIC SCHOOLS: Ethel Burgess, Walter Terrel

DETROIT RECEIVING HOSPITAL: Barbara Chapman-Troy, Carl Currie, Cherrie Dye, Lee Garvin, Ken Kish, Paul Koonter, Jodi Putti, Ellen Risken, Alice Stevenson, Al Webb

DETROIT URBAN LEAGUE: Michael Cross, Cassandra Nelson

DETROIT - WAYNE COUNTY CMH BOARD: Myrna Salvador

DEVELOPMENT CENTERS: Jeanette Jackson, Sandra Jaffa

DIVERSIFIED YOUTH PROGRAM: Alice Thompson, Sheelah Treece

DOWNTOWN SENIOR CITIZENS CENTER: Barbara Starling

EAP, INC.: James Keener

EASTWOOD COMMUNITY CLINICS: Diane Bobcean, Linda Gold, Doug Snow

ENNIS CENTER FOR CHILDREN: Jackie Conn

FAMILY COUNSELING & MEDIATION: Mary Gibson, Ed Nowakowski

FAMILY SERVICE BUREAU OF ESSEX COUNTY, ONTARIO: Edwin Clark

FAMILY SERVICE OF DETROIT & WAYNE COUNTY: Jodi Lampton, Susan Truckly

FARMINGTON AREA ADVISORY COUNCIL, INC.: Shelley Rence, Kathy Schultz

FEDERATION OF GIRLS HOMES: Dolores May

FRANKLIN WRIGHT SETTLEMENTS: Karen Sumpter, Yvonne Willis-Dulin

GENERAL DYNAMICS - EAP: Carol Sheffield

HARPER-GRACE HOSPITAL: Donna Basala, Martha Martin, Geri Rhodes

HARPER HOSPITAL: Gregory Irey, Deborah McNamara, Elaine Rosenblat, Mary Smith

HARPER WOODS SCHOOLS: Elizabeth Parravano

HAVEN: Jill Cole, Nancy Schumacher

HAVENWYCK HOSPITAL: Mary Kramer

**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 new 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 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 Archives of Labor and Urban Affairs; and the University's Urban Professorship Program.

The major context of the new college's work is the urban setting of metropolitan Detroit. Utilizing an interdisciplinary and interdepartmental approach, the College will draw upon numerous departments in the University for its programs of study, research, and public service.

The College shall be responsible for the administration of the graduate programs in Geography, Industrial Relations, and Urban Planning; the Bachelor of Arts in Labor Studies; and the Co-Majors in Urban Studies and Chicano-Boricua Studies. Additional programs may be approved in the future. 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: Philip P. Mason

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
Director: Joseph B. Stulberg

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 255.)

**MASTER OF ARTS with a major in geography*

**MASTER OF ARTS in Industrial Relations*

**MASTER OF URBAN PLANNING*

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
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 21) and the College of Liberal Arts Group Requirements (see page 202). 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 25.

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 22-26.

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	Chamber Singers
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 38.

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 14.

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 205; 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% or 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 SCHOOL

Office of the Dean

Dean: Sue Marx Smock
3198 Faculty Administration Building 577-5071

Archives of Labor and Urban Affairs

Director: Philip P. Mason
231 Reuther Library 577-4003

Center for Chicano-Boricua Studies

Director: Jose Cuello
3324 Faculty Administration Building 577-4378

Center for Urban Studies

Director: Larry C. Ledebur
3043 Faculty Administration Building 577-2156

Department of Geography and Urban Planning

Chairperson: Robert D. Swartz
Director of Urban Planning Program: George J. Honzatko
225 State Hall 577-2701

Industrial Relations Program

Director: Joseph B. Stulberg
1262 Faculty Administration Building 577-4380

Labor Studies Center

Director: Hal Stack
300 Justice Building 577-2191

University Professors of Labor Studies

University Professor: Irving Bluestone
University Professor: Douglas Fraser

CHICANO-BORICUA STUDIES

Office: 3324 Faculty Administration Building; 577-4378

Director: Jose Cuello

Assistant Director for Counseling and Retention: Javier Garibay

Lecturer

Jorge Hernandez-Fujigaki

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 413 for instructions on declaring a major.

Freshman Year Special Access: The Center has a special access 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, and an interview with the Department's selection committee.

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 electives listed below with the prior approval of the director.

Required Core Courses (eighteen 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
ANT 651 — Latin American Prehistory	3
CBS 351 — Precolumbian Mesoamerican Cultures	3
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

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 (up to \$500 per semester). Applicants should contact the Department for further information.

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 433.

- 141. Chicano-Boricua Practicum. Cr. 1(Max. 2)**
Prereq: consent of instructor. Open only to students in Chicano-Boricua program. Developing academic skills. (F)
- 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. (F)
- 210. Chicano Literature and Culture. (SPA 240). Cr. 3**
Examination of Chicano literature. Themes and figures in a social and historical context. (Y)
- 211. Puerto Rican Literature and Culture. (SPA 250). Cr. 3**
Examination of Puerto Rican literature. Themes and figures in a social and historical context. (Y)
- 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. (Y)
- 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)
- 351. (ANT 551) Precolumbian 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-Colombian period to the present. (Y)

GEOGRAPHY and URBAN PLANNING

Office: 225 State Hall; 577-2701

Chairperson: Robert D. Swartz

Director of Urban Planning Program: George J. Honzatko

Professors

Fred E. Dohrs (Emeritus), Robert J. Goodman (Emeritus), George J. Honzatko, Robert Sinclair

Associate Professors

Eugene D. Perle, Gary Sands, Robert D. Swartz, Bryan Thompson

Degree Programs

BACHELOR OF ARTS with a major in geography

**MASTER OF ARTS with a major in geography*

**MASTER OF URBAN PLANNING*

Geography is concerned with analyses of environmental and social systems, their variations over the earth's surface and their interactions in different regions. The program has three major goals: (1) to prepare students for many occupations in which geographic understanding is essential, including industrial and retail locational analysis, community and regional development, resource conservation and management, cartography, urban and environmental planning, and numerous government positions; (2) to train students for advanced geographic research, and (3) to provide students with a basis for understanding local, regional and global scale problems and issues. 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 255). Master's degree programs in geography and in urban planning are offered by the College of Urban, Labor and Metropolitan Affairs; full descriptions of these programs may be found in the Wayne State University Graduate Bulletin.

UNDERGRADUATE COURSES (U P)

The following courses, numbered 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 433.

121. Understanding the Built Environment. Cr. 3
Elements that affect the shape of the built environment; emphasis on design and land development controls. (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)

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)

601. (GEG 613) Advanced Urban Geography. 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)

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. 4
Physical, social, and economic aspects of housing. Topics include new construction as well as the rehabilitation of existing housing stock. (Y)

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)

542. (GEG 615) Internal Structure of the City. 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. 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. 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)

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

582. (ECO 580) Urban and Regional Economics I. Cr. 3

Prereq: ECO 101, ECO 102. 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)

602. Readings in Land Use Planning. Cr. 3 or 4

Analysis of development plans for new and existing communities; selected topics. (B)

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)

632. Quantitative Techniques I. (GEG 642). Cr. 4

Statistical inference with emphasis on applications including control tendency, dispersion, hypothesis testing, correlation and regression. (Y)

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)

652. Transportation and Planning. Cr. 4

Introduction to the role of transportation in the planning process involving both regional and urban considerations. (Y)

682. (GEG 672) Computer Applications for Spatial Analysis. Cr. 4

Prereq: course in elementary statistics recommended. Introduction to computer software for spatial analysis, including spatial statistics, computer graphics, and computer cartography. (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)

605. Financial Aspects of Urban Planning. Cr. 3 or 4

Costs and revenues of urban development in relation to land uses. Study of financial impact evaluations and methods of financial analysis. (Y)

665. Land Use Controls. Cr. 2 or 3

Techniques available to guide land development. Concepts in zoning, subdivision regulations, timing and sequence of land development. (Y)

675. (ECO 552) State and Local Finance. Cr. 3

Prereq: ECO 102. 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.

111. Urban Community. (GEG 111). Cr. 3 or 4

Aspects of community growth and expansion, functions of cities, planning proposals, and social and physical development policy. (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)

610. Studies in Urban Planning. Cr. 2-4(Max. 6)

Individual problems in urban planning. (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)

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)



LABOR STUDIES

Office: 300 Justice Building

Director: Hal Stack

Administrative Committee

Edward Cushman, Political Science (Emeritus); Philip P. Mason, History; Cary M. Lichtman, Psychology; William Cooke, College of Urban, Labor and Metropolitan Affairs

Degree Program

BACHELOR OF ARTS with a major in Labor Studies

Labor Studies is an interdepartmental program offering an opportunity to study the organized labor movement, using the concepts and approaches of various academic disciplines. Students completing the program will receive a Bachelor of Arts degree in the College of Urban, Labor, and Metropolitan Affairs with a major in Labor Studies.

Bachelor of Arts with a Major in Labor Studies

The Labor Studies Program is administered by an interdepartmental committee. The prospective student should consult one of the members of this committee with regard to goals and requirements of the program before enrolling. Normally, the election of this major should occur at the end of the sophomore year, but interested students are urged to obtain advice with respect to required courses and breadth of experience as early as possible. The curriculum may be considered as preparatory to a career in the labor movement or as training for those already active in a union. It will also provide a suitable background for graduate study in this area; however, the committee recommends that students planning graduate study consult a committee member regarding graduate school requirements and consider a dual major including both labor studies and a related discipline such as economics, history, political science or sociology.

Admission Requirements for this program are satisfied by the general requirements for undergraduate admission to the University; see page 14.

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 202) and the University General Education Requirements (see page 21), 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 14-39 and 415-416, respectively.

REQUIRED CORE COURSES (Twenty-one Credits)

	<i>Credits</i>
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 — Industrial-Organizational Psychology	3
SOC 570 — Inequality and Social Class	3

Specialized and Applied Curriculum: Four courses (twelve credits) must be selected from the following lists:

SPECIALIZED CURRICULUM

	<i>credits</i>
HIS 563 — Socialism and the European Labor Movement	3
PCS 500 — Dispute Resolution (Crij 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
P S 557 — Marxist and Socialist Thought	4
PSY 554 — Motivation in the World of Work	3
PSY 656 — Psychology of Union-Management Relations	3

APPLIED CURRICULUM

A maximum of twelve credits in the following special topics may be earned under the general title 'Applied Labor Studies' as LBS 450:

Collective Bargaining	3
Labor Law	3
Labor Problems	3
Occupational Health and Safety	3
Quality of Work Life	3
Technological Change and Labor Relations	3
Union Organization and Administration	3

Students are referred to the program coordinator for information concerning courses in the applied curriculum which are under development and may be arranged through other colleges. To the extent that one or more of the topics may be unavailable, equivalent courses may be approved by the Administrative Committee. *The following courses are suggested electives in the Labor Studies program; however, this list is not restrictive. In consultation with the adviser, a student may elect others.*

	<i>credits</i>
BIO 103 —(LS) Human Environmental Biology	3
ENG 301 —(IC) Intermediate Writing	3
ECO 101 —(SS) Principles of Macroeconomics	4
ECO 102 —(SS) Principles of Microeconomics	4
HIS 340 — The Automobile and Society	3
HIS 562 —The Rise of the European Working Class: 1750-1850	3
MGT 574 —Collective Bargaining	3
MGT 674 —Administering the Labor Agreement	3
P S 231 —Introduction to Public Administration	4
PSY 563 — Group Dynamics	3
SOC 410 — (SS) Social Psychology	3
SOC 546 —Sex Roles: Being Men and Women	3
SOC 557 —Race Relations in Urban Society	3

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 433.

- 250. (HUM 250) Introduction to Labor Studies. Cr. 4**
Examination of the diverse images of labor in the popular arts (films, songs, stories and graphics) and exploration of the contrasting perspectives which shape these images. (T)
- 450. Applied Labor Studies. Cr. 3(Max. 12)**
Prereq: consent of instructor. Practical training in various labor relations specialties. Consult coordinator for 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)

URBAN STUDIES

Office: 225 State Hall; 577-0541

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 14) 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 14-39) and those of this college (see pages 415-416) 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 —Field Studies	3
U S 601 —Supervised Field Experience	3
U S 605 —Independent Field Study	2-4

Electives

The University offers a large number of urban-related courses suitable as electives. The following list is not exhaustive:

AFA 355 —The Consumer and the Market	3
ANT 506 —Urban Anthropology	3
ANT 570 —Applied Anthropology	3
BIO 105 —(LS) Introduction to Life	4
BIO 103 —(LS) Environmental Biology	3
BIO 120 —Microbes and Human Affairs	2
BIO 240 —Plants and Human Affairs	2
BIO 385 —Human Heredity	3
CLA 325 —Urban Study of Ancient Rome	4
ECO 580 —Urban and Regional Economics I	3
ENG 239 —(IC) Introduction to Afro-American Literature: Literature & Writing	4
ENG 542 —American Literature: 1865-1914	3
ENG 548 —Topics in Afro-American Literature (either Harlem Renaissance or Contemporary Black Writers)	3
ENG 549 —Topics in American Literature	3
ENG 567 —Topics in Folklore and Folklife	3
GEG 313 —(SS) Introductory Urban Geography	4
GEG 565 —Regions of Detroit	4
GEG 570 —Urban Canada	4
GEG 613 —Advanced Urban Geography	4

GEG 615—Internal Structure of the City	4
GEG 624—Industrial Geography	4
GEG 628—Marketing Geography	4
GEG 651—Urban and Regional Systems	4
HIS 579—Cities and Empires: European, Muslim, Chinese, and Russian	3
N E 303—Great Cities of the Near East	3
P S 224—(SS) Introduction to Urban Politics and Policy	4
P S 311—Politics and Local Justice	4
P S 522—Issues in Urban Public Policy and Management	4
P S 602—Intergovernmental Relations and American Federalism	3
PSY 260—Psychology of Social Behavior	4
PSY 350—Industrial-Organizational Psychology	3
PSY 467—Environmental Psychology	3
PSY 563—Group Dynamics	3
PSY 565—Psychological Aspects of Leadership	3
SOC 202—(SS) Social Problems	3
SOC 351—The Nature and Impact of Population on Society	3
SOC 382—Criminology: Society, Crime and the Criminal	3
SOC 550—Urban and Metropolitan Living	3
SOC 557—Race Relations in Urban Society	3
SOC 581—Law in Human Society	3
U P 511—Urban Planning Process	4
U P 631—Housing Development	4
U P 652—Transportation and Planning	4
U P 665—Land Use Controls	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 (U 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 433.

200. (SS) Introduction to Urban Studies. (SOC 250)(GEG 200)(HIS 200)(P S 200). Cr. 4

Prereq: sophomore standing. 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) Field Studies. Cr. 1–8(Max. 8)

Prereq: U S 401. Undergraduate credit only. Comprehensive internship program involving various criminal justice agencies. Placement may be made in court, corrections, police, juvenile justice, and other agencies at the state, county and local levels; opportunities include agency procedure and policy, patrol, case analysis, report writing and research. (T)

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. 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)

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)

ADDITIONAL ACADEMIC PROGRAMS

UNIVERSITY COUNSELING SERVICES

Office: 583 Student Center; 577-3398

Director: John E. Hechlik, Ph.D.

Associate Director, and Assistant Director for Assessment:
Thomas J. Wilhelm, M.Ed.

Assistant Director for Academic Development: Marie E. Byrnes, Ed.D.

Counselor, Career Development: Wayne H. Chubb, Ph.D.

Assistant Director for Program Services: Karen F. Davis, Ph.D.

Counselor, Academic Development: Deborah B. Daiek, M.A.

Coordinator, Minority Programs: Janice Green, M.A.

Coordinator, Women's Resource Center, and Re-Entry to Education Program: Kay A. Hartley, M.A.

Clinical Social Worker, Personal Development:
George T. Hunter, M.S.W.

Assistant Director for Personal and Career Development:
Marisa G. Keeney, Ph.D.

Counselor, Academic Development: Steven M. Matthews, M.Ed.

Coordinator, Life/Career Development Laboratory:
Elaine B. McCollum, M.A.

Assistant Director for Special Student Development:
Ruth R. Panagos, M.S.Ed.

Counselor, Personal Development: Debby Tseng, 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

The following courses are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 433.

READING EFFICIENCY (R E)

090. Learning Theory and Study Skills. Cr. 0

Offered for S and U grades only. No degree credit. Application of learning and memory theory for developing basic reading skills and effective study habits. Memory improvement, time scheduling, note-taking methods, textbook chapter reading and test-taking techniques. (T)

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 also 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. An analytical, developmental reading method designed to increase speed of reading comprehension; primary focus is on 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 and one-half years for navigators, and eleven 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. If cadets hold private pilot licenses of higher qualifications, the screening involved in this training is not necessary.

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 hour Leadership Laboratory with each of the eight terms.

UNDERGRADUATE COURSES (ASC)

The following courses are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 433.

101. Air Force Today I. Cr. 1

Prereq: admission to ROTC; consent of instructor. Growth and development of the U.S. Air Force; Presidential, Secretary of Defense, and Joint Chiefs of Staff roles in the defense posture and in national military strategic concepts; Air Force contribution to strategic offensive, defensive, and general purpose forces. U.S. military forces in general purpose role and national security posture. (F)

102. Air Force Today II. Cr. 1

Prereq: admission to ROTC; consent of instructor. Continuation of ASC 101. (W)

201. U.S. Aviation History and Air Power Development I. Cr. 1

Prereq: admission to ROTC; consent of instructor. Development of aviation from the eighteenth century to present; effect of technology on growth and development of air power; wartime use and development of air power through Vietnam conflict; employment in relief missions and civic action programs. (F)

202. U.S. Aviation History and Air Power Development II. Cr. 1

Prereq: admission to ROTC; consent of instructor. Continuation of ASC 201. (W)

310. Concepts of Leadership. Cr. 3

Prereq: admission to AFROTC and consent of instructor. Concepts, principles and techniques of leadership and human relations presented within a framework of behavioral theories. Leader, group, and situation: their interaction and organizational environment; methodological implications for military and other professions. (F)

311. Principles of Management. Cr. 3

Prereq: admission to AFROTC and consent of instructor. Historical overview of management theory development; impact of behavioral sciences on primary management functions. Problem solving and management; political and power relations in organizational setting. (W)

410. National Security Forces in Contemporary American Society I. Cr. 3

Prereq: admission to AFROTC and consent of instructor. The armed forces as an integral element of society. American civil-military relations and the environmental context of defense policy. Social attitudes towards the military; role of military leader-manager in democratic society; armed services' values and socialization process; national security requisites; political, economic, and social constraints on national defense structure; impact of technological and international developments. (F)

411. National Security Forces in Contemporary American Society II. Cr. 3

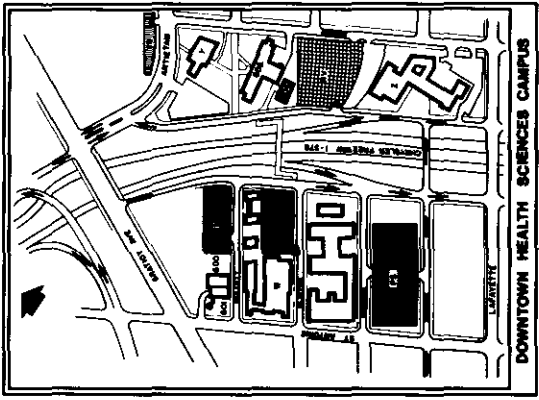
Prereq: admission to AFROTC and consent of instructor; ASC 410. Continuation of ASC 410. (W)

CAMPUS MAPS
SIGNS and ABBREVIATIONS
INDEX

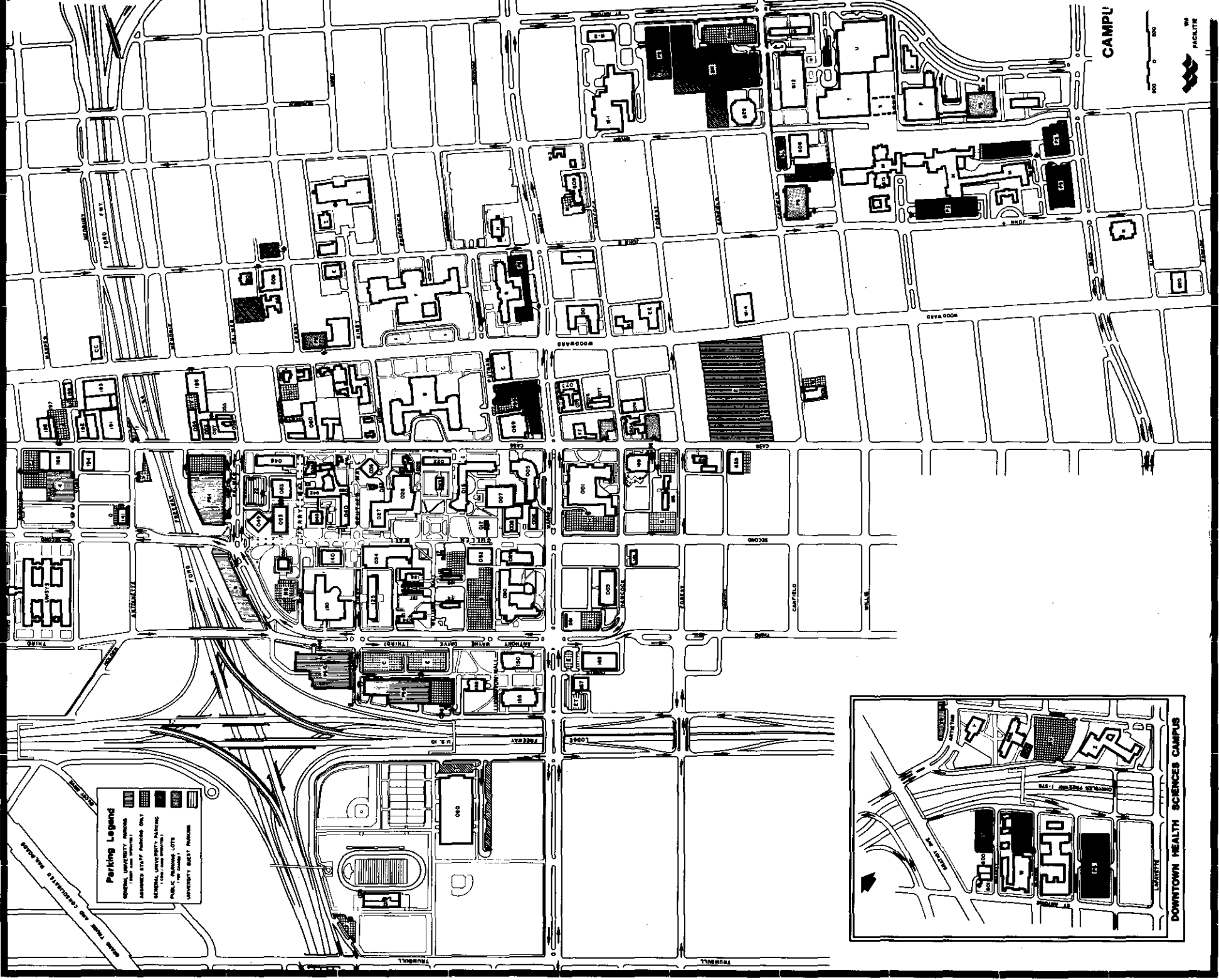
Parking Legend

[Symbol]	GENERAL UNIVERSITY PARKING
[Symbol]	GENERAL UNIVERSITY PARKING ONLY
[Symbol]	GENERAL UNIVERSITY PARKING ONLY (Over 6000 sq ft)
[Symbol]	UNIVERSITY GUEST PARKING

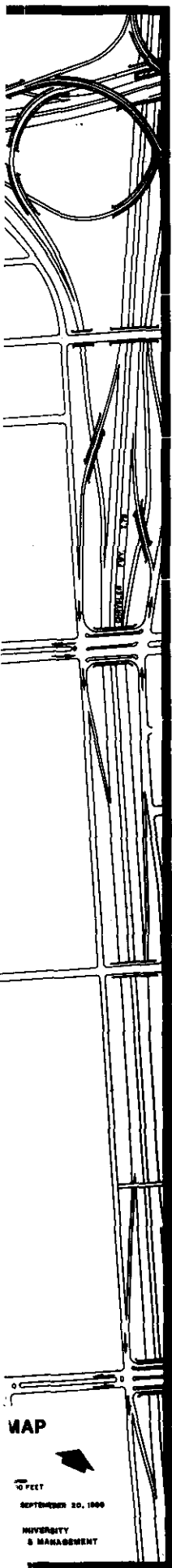
UNIVERSITY GUEST PARKING



CAMPUS



LEGEND OF UNIVERSITY AND ASSOCIATED BUILDINGS

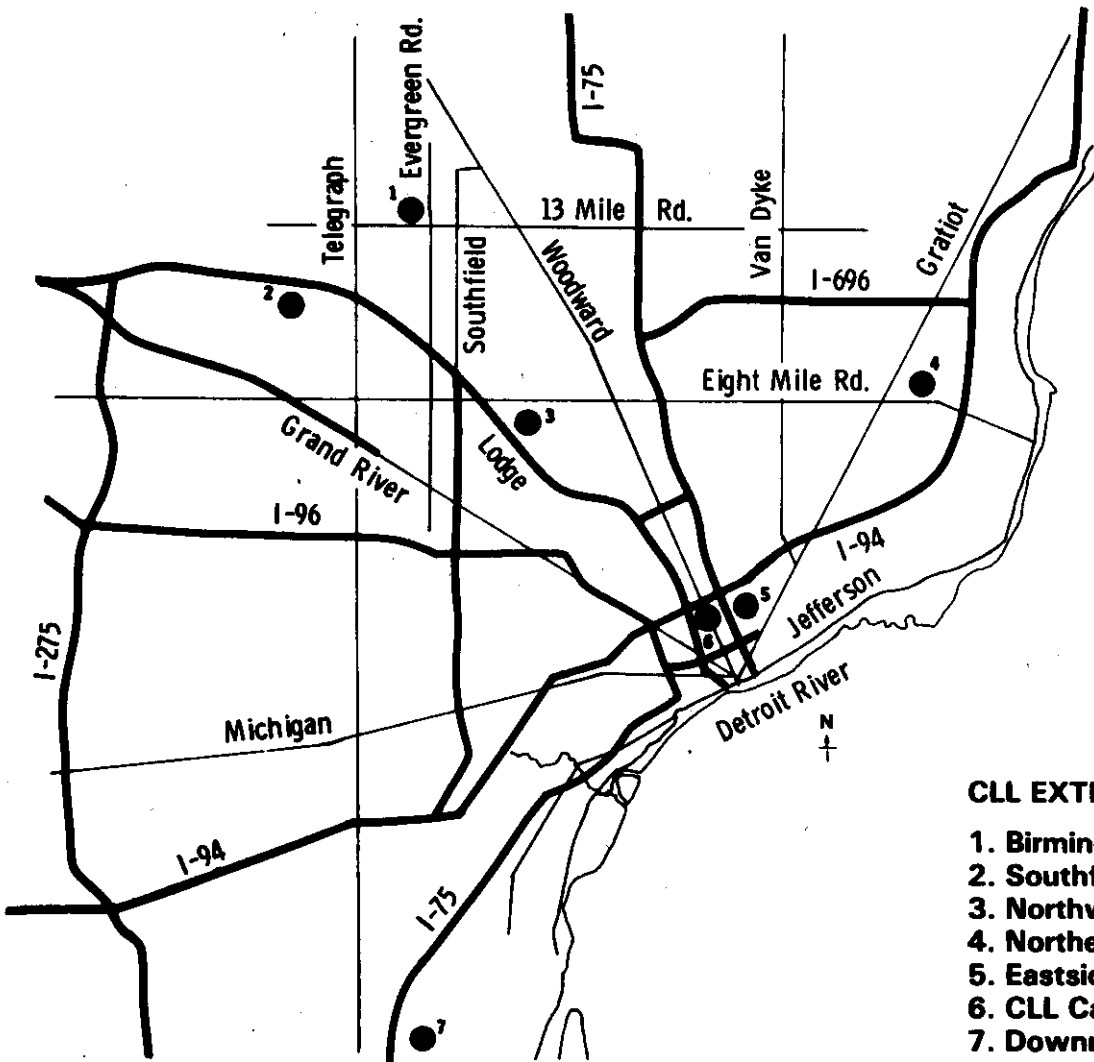
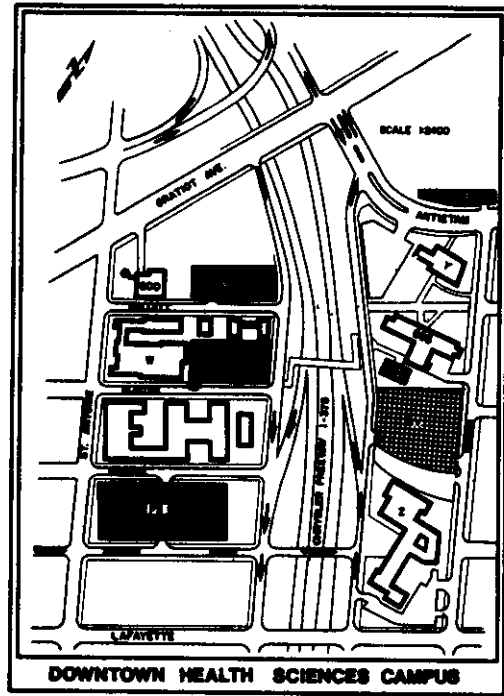


- 001 Old Main – 4841 Cass Ave.
- 003 Physics Building – 666 West Hancock Ave.
- 005 Science Hall – 5045 Cass Ave.
- 006 Life Science Building – 5000 Gullen Mall
- 007 Chemistry Building – 5101 Cass Ave.
- 008 Science & Engineering Library – 5048 Gullen Mall
- 016 State Hall – 5143 Cass Ave.
- 017 Frederick 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 – 89 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 Manogian 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
 10 FEET
 SEPTEMBER 20, 1999
 UNIVERSITY
 & MANAGEMENT

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

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.

... continued on next page

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

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.

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.

ACC	—Accounting	62	DE	—Driver Education	79
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AID	—Art – Industrial Design	165	ENG	—English	250
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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.

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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