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# Academic Calendar 1987-1989

## Spring/Summer — Term III, 1987

Term begins	Wed., May 6, 1987
Final registration	Tues., May 5 - Fri., May 8
Last day for filing degree applications	Fri., May 8
Classes begin	Mon., May 11
Memorial Day recess	Mon., May 25
Day scheduled as a Monday for Spring Session and Spring/Summer Term	Fri., May 29
Early/Mail registration for Fall Term	Fri., June 12 - Fri., July 10
Classes end for Spring Session	Fri., June 26
Examination period for Spring Session	Mon., June 29 - Tues., June 30
Summer Session begins	Wed., July 1
Independence Day recess	Fri., July 3 - Sat., July 4
Classes end for Spring/Summer Term	Fri., July 31
Examination week for Spring/Summer Term	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 III ends	Sat., Aug. 29, 1987

## Fall — Term I, 1987

† University year appointments begin	Sun., Aug. 30, 1987
Term begins	Sun., Aug. 30
Final registration	Sat., Aug. 29, Mon., Aug. 31 - Thur., Sept. 3
Last day for filing degree applications	Thurs., Sept. 3
Labor Day recess	Mon., Sept. 7
Classes begin	Tues., Sept. 8
Mail registration for Winter Term	Fri., Oct. 2 - Fri., Oct. 30
‡ Day scheduled as a Thursday	Tues., Nov. 24
‡ Day scheduled as a Friday	Wed., Nov. 25
Thanksgiving Day recess	Thurs., Nov. 26 - Sat., Nov. 28
Commencement	Tues., Dec. 15
Classes end	Wed., Dec. 16
Examination week	Thurs., Dec. 17 - Wed., Dec. 23
Holiday recess	Fri., Dec. 25, 1987 - Fri., Jan. 1, 1988
Term ends	Thurs., Dec. 31, 1987

## Winter — Term II, 1988

Term begins	Fri., Jan. 1, 1988
Final registration	Tues., Jan. 5 - Fri., Jan. 8
Last day for filing degree applications	Fri., Jan. 8
Classes begin	Mon., Jan. 11
Mail registration for Spring/Summer Term	Fri., Feb. 12 - Thurs., March 10
Spring recess	Mon., March 14 - Sat., March 19
Classes end	Sat., April 23
Examination week	Mon., April 25 - Sat., April 30
Term ends	Mon., May 2
Commencement	Thurs., May 5
† University year appointments end	Sun., May 29, 1988

## Spring/Summer — Term III, 1988

Term begins	Tues., May 3, 1988
Final registration	Tues., May 3 - Fri., May 6
Last day for filing degree applications	Fri., May 6
Classes begin	Mon., May 9
Day scheduled as a Monday for Spring and Spring/Summer Sessions	Fri., May 27
Memorial Day recess	Mon., May 30
Mail registration for Fall Term	Fri., June 10 - Fri., July 8
Classes end for Spring Session	Fri., June 24
Examination period for Spring Session	Mon., June 27 - Tues., June 28
Summer Session begins	Wed., June 29
Independence Day recess	Mon., July 4
Day scheduled as a Monday for Summer Session	Fri., July 15
Classes end for Spring/Summer Term	Fri., July 29
Examination week for Spring/Summer Term	Mon., Aug. 1 - Thurs., Aug. 4
Classes end for Summer Session	Tues., Aug. 16
Study Day for Summer Session	Wed., Aug. 17
Examination period for Summer Session	Thurs., Aug. 18 - Fri., Aug. 19
Spring/Summer Term ends	Sat., Aug. 27, 1988

## Fall — Term I, 1988\*

† University year appointments begin	Sun., Aug. 28, 1988
Term begins	Sun., Aug. 28
Final registration	Sat., Aug. 27, Mon., Aug. 29 - Thurs., Sept. 1
Last day for filing degree applications	Thurs., Sept. 1
Labor Day recess	Mon., Sept. 5
Classes begin	Tues., Sept. 6
Mail registration for Winter Term	Fri., Sept. 30 - Fri., Oct. 28
‡ Day scheduled as a Thursday	Tues., Nov. 22
‡ Day scheduled as a Friday	Wed., Nov. 23
Thanksgiving Day recess	Thurs., Nov. 24 - Sat., Nov. 26
Classes end	Wed., Dec. 14
Study Day	Thurs., Dec. 15
Commencement	Thurs., Dec. 15
Examination week	Fri., Dec. 16 - Thurs., Dec. 22
Holiday recess	Sun., Dec. 25, 1988 - Mon., Jan. 2, 1989
Term ends	Sat., Dec. 31, 1988

## Winter — Term II, 1989\*

Term begins	Sun., Jan. 1, 1989
Final registration	Tues., Jan. 3 - Fri., Jan. 6
Last day for filing degree applications	Fri., Jan. 6
Classes begin	Mon., Jan. 9
Mail registration for Spring/Summer Term	Fri., Feb. 10 - Thurs., March 9
Spring recess	Mon., March 13 - Sat., March 18
Classes end	Sat., April 22
Examination week	Mon., April 24 - Sat., April 29
Term ends	Mon., May 1
Commencement	Thurs., May 4
† University year appointments end	Sun., May 28, 1989

† University year appointments will begin on the first day of the Fall Term and be a full nine months in length. Individual service assignments are the responsibility of the appropriate Dean, or, by delegation, the Department Chairperson.

‡ An equal number of each day of the week is needed for some laboratory courses. To make up for days lost for Thanksgiving recess, these days have been designated as days scheduled for classes which normally meet on Thursday or Friday.

\* Tentative.

*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.*

## **General Information**

*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.*

# Foreword

## 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 146,000 living alumni. More than 110,000 of them live in the state and more than 97,000 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 College of the City of Detroit, became a separate college.
- 1946 The School of Business Administration, originating in the College of Liberal Arts, became the tenth academic unit in the University.
- 1956 Wayne University became Wayne State University by Act 183 of Michigan Public Acts of 1956.
- 1959 Monteith College was established.
- 1959 Wayne State University became a constitutionally established University by popularly adopted amendment to the Michigan Constitution.
- 1964 The Division of Urban Extension was established.
- 1973 The College of Lifelong Learning was established as successor to the Division of Urban Extension.
- 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 College of Fine and Performing Arts and the College of Urban, Labor and Metropolitan Affairs were established.

## Location

Over 100 buildings provide housing for the service, instructional and research needs of the University and its students and staff. Most academic and service units of the University are located on the main campus in the heart of Detroit, largely bounded by York Street on the north, Woodward Avenue on the East, Forest Avenue on the south and Trumbull Avenue on the west. The major classroom, laboratory, library and other academic buildings are located east of the Lodge Expressway while the athletic and recreational facilities are mostly on the west side of the Expressway. (For maps, see pages 424-428.)

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  
 School of Fine and Performing Arts

Graduate School  
 Division of Health and Physical Education  
 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 University Council.

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.

Credit courses are also offered by the Division of Health and Physical Education. 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.

Wayne State University is accredited as a doctoral degree-granting institution by the North Central Association of Colleges and Schools. In addition, some forty specific programs and curricula are accredited individually by the several professional accrediting associations. The courses, programs and degree requirements of the several units are described in this Bulletin.

Non-credit courses, seminars and programs are offered primarily through the following units:

College of Lifelong Learning  
 Center for Urban Studies  
 Institute for Continuing Legal Education'  
 Center for Black Studies  
 Center for Peace and Conflict Studies  
 Institute of Labor and Industrial Relations  
 Institute of Gerontology  
 Merrill-Palmer Institute for Family and Human Development

Sponsored jointly with the University of Michigan and the Michigan Bar Association.

## Equality of Opportunity

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

This policy embraces all persons regardless of race, 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, 1044 Mackenzie Hall, 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 38 for description of services available to disabled students.



# Academic Programs and Degrees

The following table lists the major academic programs and degrees offered by Wayne State University. Academic programs are defined as any combination of courses leading to a specialization, the designation of a major, or to a separate degree designation. An asterisk (\*) appended to a subject area indicates that an honors major is also available in that field at the undergraduate level. Detailed descriptions of the programs may be found in the appropriate sections of the Undergraduate or Graduate Bulletin. The following index identifies standard abbreviations for University degrees and certificates, and the columns (Roman numerals) in the table below indicating degree categories.

BA .....	Bachelor of Arts	MAT .....	Master of Arts in Teaching
BAS .....	Bachelor of Applied Studies	MBA .....	Master of Business Administration
BET .....	Bachelor of Engineering Technology	MD .....	Doctor of Medicine
BFA .....	Bachelor of Fine Arts	MEd.....	Master of Education
BGS .....	Bachelor of General Studies	MFA .....	Master of Fine Arts
BM .....	Bachelor of Music	MM.....	Master of Music
BPA .....	Bachelor of Public Affairs	MPA .....	Master of Public Administration
BS.....	Bachelor of Science	MS.....	Master of Science
BSMS .....	Bachelor of Science in Mortuary Science	MSLS .....	Master of Science in Library Science
BSN .....	Bachelor of Science in Nursing	MSN .....	Master of Science in Nursing
BSW.....	Bachelor of Social Work	MSW.....	Master of Social Work
BTGS .....	Bachelor of Technical & General Studies	MUP .....	Master of Urban Planning
EdD .....	Doctor of Education	PBC .....	Post-Baccalaureate Certificate
ESC .....	Education Specialist Certificate	PharmD .....	Doctor of Pharmacy
GC.....	Graduate Certificate	PhD .....	Doctor of Philosophy
JD .....	Juris Doctor	PMC .....	Post-Master Certificate
LLM .....	Master of Laws	SCP .....	Specialist Certificate Program
MA .....	Master of Arts	SPL.....	Specialist in Library Science
MAIR.....	Master of Arts in Industrial Relations	TC .....	Teaching Certificate
I .....	Baccalaureate or First Professional Degree	IV .....	Master's Degree
II .....	Post-Bachelor or Graduate Certificate	V .....	Specialist Certificate
III.....	Teaching Certificate	VI .....	Doctoral Degree

<i>School/College and Major</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>
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## School of Business Administration

Accounting .....	BA, BS.....	MBA
Finance and Business Economics .....	BA, BS.....	MBA
Management and Organizational Studies .....	BA, BS.....	MBA
Marketing.....	BA, BS.....	MBA

## 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	
Counselor Education .....	BS..... MA, MEd..... ESC.....	EdD, PhD
Curriculum and Instruction.....	EdD, PhD	
Curriculum and Instruction (Elementary) .....	ESC	
Curriculum and Instruction (Secondary).....	ESC	
Data Processing .....	BA, BS..... TC	
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 .....	BA, BS..... TC .....	MEd
General Administration and Supervision .....	ESC.....	EdD, PhD
General Education .....	EdD	
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.....	EdD, PhD
Leadership, Educational.....	MEd..... 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>
Mathematics Education.....	BA, BS		TC	MEd	ESC	
Music Education .....	BA		TC	MEd		
Nursery School Education .....	BA, BS		TC			
Pre-School and Parent Education .....				MEd		
Psychology, Educational .....				MEd	ESC	EdD, PhD
Psychology, School and Community .....				MA	ESC	EdD, PhD
Reading .....				MEd		
Science Education.....	BA, BS		TC	MEd	ESC	
Secondary Education .....				MAT, MEd	ESC	
Social Studies Education (Secondary) .....	BA, BS		TC	MEd	ESC	
Sociology, Educational .....				MEd	ESC	EdD, PhD
Special Education (Administration).....					ESC	EdD, PhD
Special Education .....	BA, BS		TC	MEd	ESC	EdD, PhD
Speech .....	BA, BS		TC			
Vocational and Applied Arts Education .....				MEd	ESC	EdD, PhD
Vocational and Rehabilitation Counseling .....				MA	ESC	

### 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 .....	BET					
Electronics and Computer Control Systems.....				MS		
Hazardous Waste Control.....		GC				
Industrial Engineering .....	BS			MS		PhD
Manufacturing/Industrial Engineering Technology.....	BET					
Mechanical Engineering .....	BS			MS		PhD
Mechanical Engineering Technology .....	BET					
Metallurgical Engineering .....	BS			MS		PhD
Operations Research.....				MS		PhD
Quality Control Technology.....	BET					

### School of Fine and Performing Arts

Art .....	BA			MA, MFA		
Art History .....	BA			MA		
Dance .....	BA		TC			
Design and Merchandising .....	BA			MA		
Fine Arts .....	BFA			MA, MFA		
Museum Practice .....						PMC
Music .....	BA, BM			MM		
Music, Choral Conduction.....				MM		
Music, Church .....	BM					
Music Composition.....	BM			MM		
Music Education .....	BM			MM		
Music Industry Management .....	BM					
Music, Jazz and Contemporary Media .....	BM					
Music Performance.....	BM			MM		
Music Theory .....	BM			MM		
Music Therapy .....	BM					
Theatre .....	BA, BFA			MFA		

### Graduate School

Archival Administration.....		GC				
Child and Family Studies .....		GC				
Industrial Relations.....				MAIR		
Library Science .....				MSLS		SPL

### Division of Health and Physical Education

Health Education .....			TC	MEd		
Health and Fitness Program Management.....		PBC				

*School/College and Major*

*I II III IV V VI*

Physical Education .....	BA, BS.....	TC.....	MEd.....		
Recreation and Park Service .....	BS.....		MA.....		
Sports Administration .....			MA.....		

**Law School**

Corporate Finance Law .....				LLM.....	
Joint JD/MA in Political Science.....	JD.....			MA.....	
Labor Law .....				LLM.....	
Law.....	JD.....				
Taxation.....				LLM.....	

**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.....
Chemistry* .....	BA, BS.....			MA, MS.....	PhD.....
Classical Civilization*.....	BA.....				
Classics*.....	BA.....			MA.....	
Comparative Literature.....				MA.....	
Computer Science* .....	BA, BS.....	PBC.....		MA, MS.....	PhD.....
Criminal Justice .....	BS.....			MA, MS, MPA.....	
Dietetics, Medical .....	BS.....				
East European Studies .....				MA.....	
Economics*.....	BA.....			MA.....	PhD.....
English* .....	BA.....			MA.....	PhD.....
English, Teaching College.....				MA.....	
Film Studies Program .....	BA.....				
French*.....	BA.....			MA.....	
Geography* .....	BA.....			MA.....	
Geology .....	BA, BS.....			MS.....	
German* .....	BA.....			MA.....	
Greek* .....	BA.....				
Hebrew .....	BA.....				
History*.....	BA.....			MA.....	PhD.....
Honors, College (Co-Major Program) .....	BA, BS.....				
Human Development.....	BA.....				
Humanities .....	BA.....			MA.....	
Information Sciences.....	BA.....				
International Studies (Co-Major Program) .....	BA.....				
Italian* .....	BA.....			MA.....	
Journalism* .....	BA.....				
Language, Modern Foreign .....					PhD.....
Latin*.....	BA.....			MA.....	
Linguistics .....	BA.....			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.....	
Peace and Conflict Studies (Co-Major Program) .....	BA.....				
Philosophy* .....	BA.....			MA.....	PhD.....
Physics and Astronomy .....	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.....				
Radio-TV* .....	BA.....				
Russian .....	BA.....			MA.....	

<i>School/College and Major</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>
Slavic.....	BA					
Sociology.....	BA, BAS			MA		PhD
Spanish*.....	BA			MA		
Speech*.....	BA			MA		PhD
Statistics.....				MA		
Urban Planning.....				MUP		
Women's Studies (Co-Major Program).....	BA					

**College of Lifelong Learning**

General Studies ..... BGS, BTGS

**School of Medicine**

Anatomy.....				MS		PhD, MD/PhD
Audiology.....				MS		
Biochemistry.....				MS		PhD, MD/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
Psychiatry.....				MS		
Radiology.....				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, Parenting and Families.....				MSN		

**College of Pharmacy and Allied Health Professions**

Medical Technology.....	BS			MS		
Mortuary Science - Three Year Certificate.....	BSMS					
Nurse Anesthesia.....				MS		
Occupational and Environmental Health.....				MS		
Occupational Therapy.....	BS	PBC		MS		
Pharmaceutical Sciences.....				MS		PhD
Pharmacy.....	BS					
Pharmacy, Clinical.....					PharmD	
Pharmacy, Hospital.....				MS		
Physical Therapy.....	BS					
Radiation Therapy.....	BS					

**School of Social Work**

Social Work ..... BSW ..... MSW

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

Black Studies (Co-Major Program).....	BA					
Chicano-Boricua Studies (Co-Major Program).....	BA					
Labor Studies.....	BA					
Urban Studies (Co-Major Program).....	BA					

# Undergraduate Admission

The Office of Undergraduate Admissions is located in HNJ Student Services Building, 3 East, 655 W. Kirby, Wayne State University, Detroit, Michigan 48202. Admissions counselors are available for personal conferences to aid the prospective student. Telephone: 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.

## 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 transcripts and any other records necessary for admissions consideration, must be in the Office of Admissions before final registration for the desired semester, to ensure adequate time for processing. Applications received in the four weeks prior to final registration will be processed as rapidly as possible, but no decision can be guaranteed.

## 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 good 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 overall 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 20) 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 40.

## 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.

## 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 a full year's 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.

## 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 is not admissible on the academic record, 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 20, 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.

**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.

A transfer student shall have the same opportunity as a native student to repeat, for replacement credit, a transfer course, with the earlier credit replaced by 'R' in the University transcript notation.

**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.

**General Distribution Requirements:** Transfer credits for courses which have a course-equivalence relationship to courses at Wayne State University that have been certified to meet native general distribution requirements will likewise contribute to satisfaction of general distribution requirements for non-native students. Courses of a traditional academic nature that lack equivalency may also contribute to satisfaction of general distribution requirements if they have been determined to have comparable subject matter equivalency to courses taken by native students.

## College Examination Program

The College Board sponsors the College-Level Examination Program 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 30.

## 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 47; *Education* — page 69; *Engineering* — page 98; *Engineering Technology* — page 127; *Lifelong Learning* — pages 329,334,335; *Nursing* — page 345; *Pharmacy and Allied Health Professions* — pages 359 and 372; *Social Work* — page 397.

## 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 School 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.



# 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.** Consult the official University *Schedule of Classes* published in advance of each term for Tuition and Fees in effect at the time of registration. 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** .....\$40.00 Registration Fee plus \$60.50 per credit.  
**Non-Resident** ..... \$40.00 Registration Fee plus \$135.75 per credit.

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

**Resident** .....\$40.00 Registration Fee plus \$71.25 per credit.  
**Non-Resident** ..... \$40.00 Registration Fee plus \$161.75 per credit.

## Other Fees

**Late Registration:** A \$30.00 non-refundable late registration fee is assessed for any registration after the Final Registration Period.

**Change of Elections (Drop/Add) Fee:** A \$10.00 non-refundable fee is assessed any student who files a Change of Elections (Drop/Add) Form after the second week of classes, which increases the number of credit hours scheduled.

**Course Materials Fee:** A course materials fee may be assessed for registration in certain courses where a relatively large portion of the instructional costs is due to the necessary use of consumable resources.

**Special Examination Fee:** The fee for a special examination taken to establish credit by examination is \$10.00 per credit; however, additional fees may be authorized by the Registrar in exceptional cases to cover costs for administering the examination.

Examinations are approved under provisions established by each school or college. The Special Examination Fee is not assessed when credit is granted on the basis of transcript entries from another institution.

**Music Fee:** A music fee is assessed students registering for music courses taken as private lessons. Students should consult the University Official *Schedule of Classes* for the particular courses that require payment of a music fee. In the event of withdrawal, the student will receive a refund of the difference between the tuition 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.

**Physical Education Fee:** The Division of Health and Physical Education rents a gymnasium uniform and/or lock and storage basket to any student who desires this privilege. For some activities, there is an additional charge for equipment rental or use of special facilities. Students should consult the University *Schedule of Classes* for rental fees and particular courses that require payment of a physical education fee.

**Application for Admission Fee:** Each application for admission to the University must be accompanied by a non-refundable application fee of \$20.00 for U.S. Citizens and \$30.00 for International Students.

**Late Payment Fee:** See 'Payment of Tuition and Fees' below.

**Graduation Fee:** A \$15.00 Graduation Fee must be paid before an application for graduation is filed.

## Payment of Tuition and Fees

Checks or money orders should be made payable to Wayne State University Master 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:

### *Early Registration*

Students must pay the \$40.00 Non-Refundable Registration Fee before registering. The tuition must be paid during the first week of classes. A \$25.00 Late Payment Fee is assessed for any balance after the first week of classes.

### *Final Registration*

Payment of the \$40.00 Non-Refundable Registration Fee *plus* tuition for four credit hours at the undergraduate credit hour rate for freshmen and sophomores, is required of students who register during Final Registration. Payment of any tuition balance is required by 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*

**First Week of Classes:** Payment of the \$40.00 Non-Refundable Registration Fee *and* \$30.00 Late Registration Fee *plus* tuition for four credit hours at the undergraduate credit hour rate for freshmen and sophomores is required of students who register during the first week of classes. Payment of any tuition balance is required by 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 fees by the end of the first week of classes.

**Second Week of Classes:** Payment of *full tuition* and the \$40.00 Non-Refundable Registration Fee *plus* a \$30.00 Late Registration Fee is required of students who register late during the second week of classes.

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 \$40.00 Non-Refundable Registration Fee is required on the date of registration or no later than the first class meeting date. A \$25.00 Late Registration Fee is assessed students paying their assessment after this date.

**Late Payment Fee:** (For registration in courses meeting fifteen weeks or more.) A \$25.00 Late Payment Fee is assessed students with a tuition and/or fee balance after the first week of classes. An additional \$25.00 Late Payment Fee is assessed students with a tuition and/or fee balance after the eighth week of classes.

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

## Residency

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

### — Regulations

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

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

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

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

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

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

(a) That of the parents or surviving parent;

(b) That of the parent to whom custody of the minor has been awarded by a divorce or other judicial decree; or

(c) That of the parent with whom the minor in fact makes his or her home, if there has been a separation without a judicial award of custody; or

(d) That of an adoptive parent, where there has been a legal adoption, even though the natural parents or parent may be living; or

(e) That of a 'natural' guardian, such as grandparent with whom the minor in fact makes his or her home, where the minor has permanently left his or her parental home and reasonable expectation of substantial financial support from the parents has been dissolved.

(f) If a Michigan resident parent or guardian of a minor moves his or her residence to another state, the minor shall remain eligible for resident tuition status as long as (s)he continues to attend school regularly in this state.

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

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

9. An alien student may apply for resident status under one or more of the following regulations in the same manner as a citizen, if he/she is in the United States for other than a temporary purpose. In order to demonstrate that he/she is here for other than a temporary purpose, the alien student must be either a permanent resident alien with an I-151 or I-551 Alien Receipt Card or an 'applicant for adjustment' to permanent resident alien status; 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 Ombudsman at any time, the student may particularly want to utilize the Ombudsman'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 shall become effective November 9, 1979.

## Transcript Request Policy

A fee of \$2.00 is charged for each *official* transcript that is sent via U.S. Mail. An additional fee of \$1.00 is charged for an official transcript issued directly to the student. A \$1.00 fee is charged for each *unofficial* transcript issued to the student.

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 at the Records Office and pay the appropriate fee at the Cashier's Office, Administrative Services Building. Requests by mail should be addressed to: 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, date of birth, last term of attendance, authorizing signature, and the name and address to which the

transcript is to be sent.

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

The tables for cancellation of tuition listed below are subject to change at any time without notice by action of the University Administration. For cancellation tables in effect at the time of registration, consult the University *Schedule of Classes*, published in advance of each term.

**The \$40.00 Registration Fee is non-refundable.** In cases of complete official withdrawal before or during the first two weeks of classes, 100% of the tuition assessment is cancelled/refunded. See Withdrawals and Changes of Program, page 29.

A student who officially withdraws or reduces the number of credits scheduled shall be entitled to a cancellation/refund of the *tuition* applicable to the portion of the number of credits dropped, as follows:

### *For Classes Meeting 28 or More Weeks* *Refund*

Withdrawal/drops through the sixth week of classes .....	100%
Thereafter .....	0%

### *For Classes Meeting 16 - 27 Weeks*

Withdrawal/drops through the third week of classes .....	100%
Thereafter .....	0%

### *For Classes Meeting 9 - 15 Weeks*

Withdrawal/drops through the second week of classes .....	100%
Thereafter .....	0%

### *For Classes Meeting 4 - 8 Weeks*

Withdrawal/drops through the first week of classes .....	100%
Thereafter .....	0%

### *For Classes Meeting Less Than 4 Weeks*

Withdrawal/drops on or before the first day of class for the term .....	100%
Thereafter .....	0%

For changes from one course-section to another having different beginning or ending dates, consult the University *Schedule of Classes* published in advance of each term.

*A Change of Elections (Drop/Add) Form* will be considered effective on the day it is received in the Registration Office. If a Change of Elections (Drop/Add) Form is duly authorized/completed and sent by mail, the postmark date will be considered the effective date, if legible, for the purpose of adjusting tuition. Saturday and Sunday postal cancellations are accepted as effective the preceding Friday. The date of receipt will be used when the postmark date is illegible.

**Special Tuition Assessment Adjustments:** The Registrar is authorized to make certain adjustments in the application of the tuition payment policy stated above when, in his/her judgment, unusual circumstances warrant such action. Circumstances which may warrant special consideration include the death or extreme personal illness of the student. A student who wishes to have his/her request reviewed for special consideration should submit a written application with supporting documentation to the Registrar before the conclusion of the term in which special consideration is sought.

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 both 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 literature, criticism, didactic writing, and/or technical 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: ENG 205, 210, 211, 212, 221, 231, 239, 257, 301, 303, 305; AGS 491, 496.

**English Proficiency Requirement (EP):** After completing forty-five credits, and 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.

**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. Currently, the mathematics proficiency requirements may be satisfied by one of the following means. Prior to the completion of thirty credits, all students must demonstrate competence in mathematics by:

a) 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

b) Achieving an acceptable test score on the quantitative or mathematics section of one of the following tests: ACT, SAT, AP-CEEB, or CLEP; OR

c) Achieving an acceptable score on the Placement (Screening) Examination for MAT 150 or MAT 180; OR

d) 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

e) 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.

**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, SPB 101, or GIS 156; 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: CSC 101, NUR 111, or GST 271; 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 seventy-five 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 particular 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.
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 two courses (a minimum of three credits each) in the natural sciences: one course in the physical sciences and one course in the life sciences as defined below. 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; PHY 101, 102, 104, 213, 217, and 310; GST 232.

**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 101, 103, 105; NFS 203; PSY 101, and 102; GST 202.

**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 these 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; HIS 110, 120, 130, 140, 150, 160, 161, 195, 287, 304, 335; N E 368, 369; P S 353; GIS 316.

**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

**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 as described in the University 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, please refer to the full descriptions of these programs in the University Undergraduate Bulletin.

Competency	High School courses	SAT or ACT score	AP score	CLEP Exam name: score	WSU Qualifying Exam	WSU Proficiency Exam
<b>A. Written Communication</b>						
1. Basic Composition	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 Course	N.A.	N.A.	4 or 5	N.A.	N.A.	N.A.
3. English Proficiency Exam	N.A.	N.A.	N.A.	N.A.	N.A.	Exam to be passed between completion of 45 and 75 credit hours
4. College/School/Department Requirement Writing Intensive Course	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>B. Mathematics Proficiency</b>						
	Four years High School math with overall "C" grade, including one year of algebra and one year of plane geometry	Quant Scores: SAT: 450 ACT: 16	2,3, 4, or 5	Genl Math: 487 Algebra/Trig: 50  Algebra: 50 and Trig: 50  Coll alg: 50 Coll Trig: 50 Calculus with Elementary Functions: 50	Pass Math Qualifying Exam at level of MAT 150 or MAT 180 or higher	Exam to be passed before completion of 30 hours unless requirement previously fulfilled by other means
<b>C. Oral Communication</b>						
	2 Semesters	N.A.	N.A.	N.A.	N.A.	Exam to be passed before completion of 90 hours unless requirement previously fulfilled by other means
<b>D. Computer Literacy</b>						
	1 Semester	N.A.	3, 4, or 5	Computers and Data Processing: 50	N.A.	Same as for Oral Communication, above
<b>E. Critical or Analytic Thinking</b>						
	N.A.	N.A.	N.A.	N.A.	N.A.	Exam to be passed before completion of 75 unless requirement previously fulfilled by other means

## Table Showing How General Education Group Requirements May be Met through Advanced Placement or College-Level Examination Program Examinations:

In general, students will fulfill Group Requirements by successfully completing specially designated Wayne State University courses or by transferring credit for equivalent courses taken at other collegiate institutions. However, Group Requirements may also be fulfilled by obtaining course credit for these courses through regular WSU Credit by Special Examination procedures or by obtaining course credit through Advanced Placement (AP) or College-Level Examination Program (CLEP) examinations as specified below. See elsewhere in this bulletin for complete 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	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	Biological Science	3, 4, or 5	4 - 8	General Biology (S)	50	3
				General Psychology (S)	50	3
				Natural Science (G)	489 or	4
				(or Biol Sci subscore)	(50)	4
Historical Studies	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	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	(none)			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	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	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	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.



## Dual Elections

**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 and by the professor teaching the course. This petition must be accepted by the Graduate School before the first meeting of the course. The approved petition must be presented at the time of registration.

**With Undergraduate Schools:** Graduate students may take undergraduate courses to be posted in 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.

**Under the Senior Rule:** A student in his/her senior year, who has a good academic record 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. For further information, see Senior Rule Admission, page 35.

**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 his/her own college and also the approval of the dean of his/her college prior to doing so. The election must also be approved by the department of the college which offers the course. Students desiring to participate in Wayne State University-University of Michigan dual elections should obtain the necessary forms from 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, Room 150, Administrative Services Building.

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, Withdrawal and Changes of Program

**Registering and Adding:** A student may not attend any class in which he/she is not officially registered. A student may register for courses through the last day of the second week of classes for fifteen-week courses. The tuition and/or fee payment required in advance of registration is dependent upon the date registration is completed. Students are urged to consult the *University Schedule of Classes*, published in advance of each term, for specific regulations pertaining to registration and the payment of tuition and fees.

A registered student may add a course through the last day of the fourth week of classes by submitting a completed Change of Elections (Drop/Add) Form to the Registration Office by the prescribed time. The Change of Elections Form must include the academic approval(s) specified in the *Schedule of Classes* published in advance of each term.

A \$10 Change of Elections (Drop/Add) Fee is assessed any student who files a Change of Elections Form after the second week of classes that increases the number of credits scheduled. A student may not change from one section of a course to another section of the same course after the fourth week of classes. Change of Elections (Drop/Add) Forms will be valid for ten calendar days from the date of the earliest signature of approval.

In courses other than those meeting for fifteen weeks, the above rules apply proportionately to the length of the course. The Registrar may approve exceptions to these policies when warranted by extenuating circumstances beyond the control of the student.

**Withdrawals:** Through the last day of the fourth week of fifteen-week classes, any student may withdraw from any class by notifying the Registration Office in writing. He/she may either make out and sign a Change of Elections (Drop/Add) Form and deliver it to the Registration Office, or write a letter specifying the class or classes to be dropped. The notice must be *received* in the Registration Office by the last day of the fourth week of classes. It is strongly recommended that students consult with the instructor about options before dropping a class after the second week of classes. The College of Pharmacy and Allied Health Professions requires approval of instructor and adviser to drop a course after the end of the second week of classes.

If a student files a formal withdrawal for a course not later than the last day of the fourth week of classes, that course will not appear on his/her record. The record of the student who has formally withdrawn from all of his/her courses by that date will bear the notation, 'complete withdrawal', for the semester. After the fourth week of classes, a mark of 'W', which will appear on the student's academic record, is assigned for each course from which the student withdraws.

If a student wishes to withdraw from a class after the end of the fourth week and through the twelfth week, he/she must seek the instructor's written approval. Notice of withdrawal reaching the Registration Office after Friday of the fourth week of classes, without the instructor's signature, will not be accepted. A student who wishes to withdraw from a course or courses after Friday of the twelfth week must obtain the written approval of his/her instructor and Dean.

A student may not change from one section of a course to another section of that course after the fourth week of classes. A student may not

drop any courses after the last day of the last week of classes, or, when the calendar includes study days, the last study day. A student may not drop any course for which a grade has been earned.

In courses other than those meeting fifteen weeks, the above rules apply proportionately to the length of the course. Drop/Add (Change of Elections) forms will be valid for ten days from the date of the earliest signature of approval. The Registrar may approve exceptions to these policies when warranted by extenuating circumstances beyond the control of the student. See the sections on Marks (page 31) and Fees (page 16) for additional information.

## 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 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 examination at one institution is infrequently accepted for transfer credit by another institution.

For Special Examination fee, see page 16.

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

## 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) allow students to examine written materials not returned within the semester (e.g., final examination, major term paper) and retain such materials for one academic semester in accordance with unit policy;
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 fulfill conscientiously all assignments and requirements of their courses;
2. To attend classes regularly and punctually;
3. To maintain a scholarly, courteous demeanor in class;
4. To uphold academic honesty in all activities;
5. To notify the instructor as early as possible if prevented from keeping an appointment or carrying out an assignment;
6. To discuss with the instructor any class-related problem and follow established procedures in the resolution of these problems;
7. 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 Ombudsman is not a direct part of the appeal process, students and faculty may consult the Ombudsman at any point during such proceedings.

## 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.

## 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.



# 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:

### Undergraduate Grades

- 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*<sup>1</sup> ..... 1 honor point per credit hour
- E *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 do not affect honor points but 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 used in the calculation of the honor point average.

### Marks

- F *Failure* ..... See note above.
- I *Incomplete* ..... See below for explanation of this mark.
- R *Repeated* ..... See page 29 for explanation of this mark.  
(this mark applies to undergraduate students only)
- W *Official Withdrawal* ..... See below for explanation of this mark.
- X *No grade reported.* ..... See below for explanation of this mark.
- Y *Deferred* ..... See below for explanation of this mark.
- Z *Auditor* ..... See below for explanation of this mark.

The mark of I—**Incomplete**, is given to either an undergraduate or a graduate student when he or she has not completed all the course work as planned for the semester and when there is, in the judgment of the instructor, a *reasonable* probability that the student can complete the course successfully without *again attending regular class sessions*. The responsibility for completing all course work rests wholly with the student. The mark of I will be changed to a grade *only* when the student completes the course work as arranged with the instructor or, if the instructor has left the University, with the chairperson of the department or other instructional unit. (The mark of I shall not be changed to an E unless, after receiving the I, the student's subsequent work is of such quality that the overall average for the course is below passing.) Work must be completed within one calendar year.

<sup>1</sup> Not applicable for graduate credit.

*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 will be changed to W, and the student will be assessed tuition and applicable fees for the second registration.*

The mark of I which is not converted to a letter grade within one calendar year from the time it was received will be considered a withdrawal (W), unless, prior to the end of that year, the student requests, and the instructor agrees, to certify in writing to the University Records Office that another calendar year has been granted for the removal of the Incomplete.

**The mark of W—Official Withdrawal**, is given when the withdrawal is reported to the Registration Office in writing, in accordance with the policy on withdrawals and changes of program. A mark of unofficial withdrawal ('X') may not be changed to a 'W;' see Withdrawals above, page 29.

**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 in sequence).

**The mark of Z—Auditor**, is given when the student has registered formally as an auditor. To so register, the student must have the written permission of his/her dean or the dean's representative.

## 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 (except Y) 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/graded.

## 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 a numerical index of the student's scholastic average. Points are assigned to each letter grade (see University Grading System, page 31) for each hour of credit. 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).

The honor point average is obtained by dividing the total number of honor points accumulated by the honor point base which, generally, is equivalent to the total number of credits in course work attempted at Wayne State University. In the example cited, the honor point average would be:

20 (honor points) divided by 7 (credits attempted) = 2.85, nominally a B-minus average.

The base excludes credit by special examination, transfer credit, basic training credit for veterans, courses with a mark of 'W' or 'X,' and courses in which a grade of 'S,' 'U,' 'M,' 'P,' or 'N' have been received.

*At the undergraduate level*, courses repeated are computed in the honor point average according to the procedure given on page 29 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.

## Graduation with Distinction

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

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

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

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

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

The criteria for Graduation with Distinction include:

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

## Application for Degree or Certificate

Each candidate for a degree or certificate must file an *Application for Degree* in the Records Office, 150 Administration Services Building, not later than the last day of the registration period 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 School Bulletin.*

## ADMISSION

### Regular Admission\*

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.

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

## 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.

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

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 (5980 Cass Avenue, Room 102, 313- 577-3596) will make every effort to process applications in time for the semester of the student's choice. However, only 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	Mid 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.

## 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 is not permitted to 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

\* 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.

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. 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 Offices 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, based on the assumption that there are students with the innate intellectual ability required to complete Ph.D. studies, but that because of compromising education, psychosocial or economic factors their prior academic performance or their performance on standardized exams fails to reflect their abilities. The Program is primarily designed for students with these characteristics who are members of racial or ethnic groups that have traditionally experienced discrimination.

In order to be considered for admission into the Program, students should hold the Bachelor's degree (or expect to receive it before their first term in the Program commences), and must have 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 \$7,500, 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 Julia Simmons, 1050 Mackenzie Hall, Wayne State University, Detroit, Michigan 48202.

## International Students

Students from other countries must contact the Office for Graduate Admissions, 5980 Cass Avenue, 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 \$11,000 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.

Since it is not always possible for an applicant to demonstrate proficiency in English prior to arriving on campus, conditional admission may be extended to allow intensive English study or demonstration of proficiency upon arrival. Registration for graduate coursework may be permitted while proof of proficiency is being determined. Such authorization requires the written consent and support of the student's academic adviser and approval by the Graduate Dean. The student's admission status in such cases will remain a temporary one (generally no more than two semesters) until an acceptable test score is received or an exception is granted by the Graduate Dean in the manner described above.

Applicants educated in countries where English is not the native language and who are now permanent residents or United States citizens can be tested by the Director of the University's English Language Institute if they reside near the Wayne State University campus. Procedures for such testing must be initiated through the Office for Graduate Admissions.

## University Centers and Institutes

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

### Center for Black Studies

586 Student Center

The Center for Black Studies grew out of the struggles of black students to establish an educational facility committed to filling the serious omissions in knowledge about the black experience. Since its inception in 1972, the Center has combined teaching, research, and service in an effort to enhance the quality of life for students and all residents in the urban environment of Wayne State University.

The Center has assumed the position of an educational catalyst, seeking to play a dramatic role in the growth and development of black people both in America and abroad. As one means of attaining these goals, the Center currently offers an academically substantive and politically relevant co-major curriculum at the undergraduate level. Complete information concerning this program, as well as black studies course offerings, may be found in the undergraduate Bulletin.

### Center for Chicano-Boricua Studies

300 Criminal Justice Building

The Center for Chicano-Boricua Studies (CBS) 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 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.

### Computing Services Center

5925 Woodward Avenue

The University operates one of the largest computing centers in the Detroit metropolitan area. The Computing Services Center (CSC) is a modern facility dedicated to the service of all university students, faculty, staff and public sector users.

The CSC manages three large mainframes: one IBM 3081GX with 32 megabytes of main memory; one IBM4381 with sixteen megabytes of main memory; and one Amdahl 470V/8 with sixteen megabytes of main memory. The major operating systems are the Michigan Terminal System (MTS), IBM's Multiple Virtual Storage (MVS) and Conversational Monitor System (CMS). All systems run under IBM's Virtual Machine (VM) Operating System. MTS is a general purpose



time-sharing system providing a rich command language and a powerful editor. MTS supports the needs of students and the research requirements of graduate students and faculty. MVS is a standard IBM operating system which supports the administrative data processing needs of the University and certain external users. On-line administrative systems run under IBM's Custom Information Control System (CICS). CMS is a standard IBM time-sharing operation system used for programming applications and office automation. CMS is used by both academic and administrative users. Many application programs extend the capabilities of the operating systems. These include statistical and mathematical libraries, graphics, data base management systems and text processing languages. Compilers are available for most programming languages.

Several user areas are located on campus and throughout metropolitan Detroit to allow easy access to the University's central computers. A user area with public terminals and microcomputers is located at the Computing Services Center at 5925 Woodward; this location also contains the documentation library, consulting and billing offices, and output distribution window. Remote service sites are located on campus in the Science Library, the Student Center Building, and the Engineering Building. Off-campus terminal sites operated by the College of Lifelong Learning are located at:

*Birmingham Center*  
20500 W. 13 Mile Road  
Room A46  
Birmingham, Michigan  
577-3605, 642-2661  
SCP Access: 258-6811

*Downriver Center*  
15100 Northline  
Room 200  
Southgate, Michigan  
577-4680, 284-5535  
SCP Access: 283-8822

*Eastside Center*  
3127 East Canfield  
Detroit, Michigan  
577-4701

*Northeast Center*  
22860 Schroeder  
East Detroit, Michigan  
577-3590, 771-3730

Public terminals may be used by anyone having a valid CSC computer identification. Students, faculty, and staff may also connect their personal terminal or microcomputer to the University computers through a standard phone call.

Several specialized output devices are attached to the mainframe computers. A four-pen, 36-inch plotter is available for producing high-resolution color graphics. The University's computerized typesetter is used extensively for newsletters, books, journal articles, and dissertations. The CSC's two high-speed laser printers also produce very high-quality output at low cost. Laser printers are the standard printers used at the CSC. Over 1.5 million 8-1/2 x 11 inch pages are printed per month.

The mainframes, software, and specialized output devices are only part of computing at the University. Minicomputers and microcomputers are used campus-wide for research and training. The CSC provides software and consulting support for small machines. It also provides communication support to transfer information between these machines and the mainframes.

The Merit Computer Network connects the University computers to the computing facilities of the University of Michigan (an Amdahl 5860) and of Michigan State University (a CDC 6500). The Merit Computer Network also provides Telenet access from most major cities of the United States, Canada, Europe and Japan; any computer belonging to the Merit Network can be accessed from these cities through a local telephone call.

Users of the CSC are encouraged to use the facilities themselves. The required skills may be learned through courses taught by various departments, including Computer Science, and through free, non-credit seminars offered each semester by the CSC. The CSC operates a telephone consulting service from 9 a.m. to 5 p.m. weekdays and also operates a network control center twenty-four hours per day, seven days per week. Various publications describe the use of CSC programs and systems. Copies of these publications are available for public use at the central and remote service sites. Personal copies may be purchased through the University bookstore. A bi-monthly newsletter keeps users informed of additions and changes in services.

Any WSU undergraduate or graduate student can obtain an MTS computer account at special student rates by applying to the CSC. Accounts are also available during registration. The first \$10.00 of computing is free to all students. Accounts remain active until the student leaves the University.

## 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 four ongoing programs: (1) the Council on Early Childhood (COEC), composed of students and faculty from University departments, outside agencies and other interested persons working together on issues for and about young children; (2) the Michigan Metropolitan Information Center (MIMIC), a regional source of U.S. census data; (3) the City-University Consortium, an organization which links University resources with the City of Detroit government to solve urban problems; and (4) Research Services, specializing in the implementation of research projects, from sampling and questionnaire development through data analysis. The Center also offers student internships, graduate assistantships, and experienced consultation on research projects.

# UNIVERSITY STUDENT SERVICES

## OFFICE OF THE VICE PRESIDENT FOR STUDENT AFFAIRS

573 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. 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 Admissions

116 Administrative Services Building II; 577-3577

The Office of Admissions has the primary function of locating, recruiting, and admitting new students to the University. The Office also helps to coordinate the recruitment activities of individual departments, alumni groups, and students; it organizes visits to local high schools and community colleges and develops programs for community groups. Services offered to students include walk-in advising, and visa processing for foreign applicants.

### Office of the Registrar

165 Administrative Services Building; 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 Registrar's 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 Room Scheduling. Central Records is responsible for maintaining permanent academic records, graduation processing, issuance of transcripts, student's grades and certifications. The Registration Office is responsible for determining residency status for purposes of computing tuition, processing student's registrations and Drop/Add Forms, and the accurate assessment of tuition and fees. Room Scheduling is responsible for the preparation of the *Schedule of Classes*, assigning classrooms, student enrollment reporting, and athletic eligibility determination.

### University Counseling Services

334 Mackenzie Hall; 577-3398

University Counseling Services have 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 administrators of University Counseling Services may be found on page 420.

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, 577-3398, 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 the wide range of problems which students confront in the University curriculum.

**Educational Resources for Students with Disabilities, 450 Mackenzie Hall, 577-2006, TDD only 577-3365:** Through this office numerous resources are available to students with physical or perceptual impairments. Services are designed to equalize opportunities for the full participation of students throughout the campus. Resources include pre-admission counseling, orientation to the campus, information about campus accessibility, consultation regarding methods of managing academic coursework and examinations, reading and recording services, interpreters, notetakers, technical aids, study rooms, emergency wheelchair service, alternate testing arrangements, campus transportation, parking, referrals and advocacy, and information for staff and faculty. Students are invited to contact the Office regarding questions related to their individual situations.

**Life Career Development Laboratory, 340 Mackenzie Hall, 577-3398:** The Laboratory is a 'walk-in' service which offers students consultation, testing and other activities to increase their self-awareness, their background of relevant occupational and curricular information and their decision-making skills so that they can more realistically evaluate potential career and educational direction.

**Minority Programs, 428 Mackenzie Hall, 577-2006:** Minority Programs and the Minority Resource Center provide individualized personal counseling and advising, role modeling and networking, workshops, seminars, discussions, newsletters, intercultural exchange, graduate and professional school information, and conferences. Activities are oriented to the needs and concerns of minorities; participation is open to everyone.

**Psychological and Counseling Services, 334 Mackenzie Hall, 577-3398:** These services provide students with special opportunities for consultation about needs or concerns for which highly individualized

help is desired. Any facet of experience which affects a student's educational progress may be explored with members of the counseling staff. Counseling may help students to clarify for themselves their own identity and relationship with the educational and occupational world, to explore opportunities for development, to set and realize goals and to resolve motivational and other personal conflicts. In addition to confidential private consultation, a number of group counseling programs are offered.

**Reading and Study Skills, 456 Mackenzie Hall, 577-3398:** The structured programs offered by this office are designed for students who want help in developing the learning process skills necessary to achieve realistic educational goals. Service is provided through non-credit courses (see page 420) and individualized laboratory experiences or through programs coordinated with academic departments or special University programs.

**Re-Entry to Education Program, 423 Mackenzie Hall, 577-2006:** 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, 343 Mackenzie Hall, 577-3400:** Testing is provided to students for entrance examinations, freshmen tests, qualifying examinations for course selection 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 Scholastic Aptitude Test 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 Program, 423 Mackenzie Hall, 577-2006:** 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

470 Mackenzie Hall; 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 must 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).

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.

**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, orientation, translation, International Fair, holiday programs, and special services to foreign spouses are also coordinated through the International Services Office.

## Military and Veterans Affairs

470 Mackenzie Hall; 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 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

1st Floor, Mackenzie Hall; 577-3390

University Placement Services provide 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.

**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 Service Programs (TRIO)

488 Mackenzie Hall; 577-1934

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.

The TRIO programs funded at Wayne State University are:

**The Educational Opportunity Center (EOC), 410 Mackenzie Hall, 577-5050,** provides information and assistance concerning admission to post-secondary education and application for financial aid to first generation college students, nineteen years of age and older, who reside in the target area and wish to pursue a program of post-secondary education.

**The Higher Education Opportunities Committee — Talent Search (HEOC), 488 Mackenzie Hall, 577-1937,** provides information and assistance concerning admission to post-secondary education and availability of financial aid to potential first generation college students, twelve to eighteen years of age, who reside in the target area or attend designated Detroit high schools and who wish to pursue a program of post-secondary education.

**Special Services for Disadvantaged Students (Project 350), 5229 Cass, Room 215, 577-1994,** 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, eleventh, and twelfth grades who are potential first-generation college students and who attend designated Detroit high schools.

**Veterans Educational Opportunity Program (VEOP), 4216 McDougal, 577-4690,** provides a program of instruction, academic and career guidance, personal counseling, and post-secondary placement to veterans who served in the Armed Forces between December 31, 1955 and December 31, 1976.

## Student Center and Program Activities

*Director:* 341 Student Center; 577-3482

*Associate Director:* 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,' 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. Table games 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, SEMTA 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, magazines, 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.

**Program Facilities:** Rooms are available for business meetings, seminars, conferences and for special programs. Reservations may be made in the Reservations Office, 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:** This 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 3:00 p.m. on Friday. Information available in the Center includes: University academic programs and services; off-campus housing information; campus activities; Share-a-Ride Board; travel information; weekly and monthly calendars; job postings; SEMTA and DOT bus schedules; Ride-Match Carpool program; and community activities.

**Leisure Learning School:** The Leisure Learning School offers pleasurable learning experiences and opportunities for self development through non-credit courses during the fall and winter semesters.

**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 alternate Thursdays. In addition, music videos and movies are shown daily on 'Rockworld's' large-screen television, located at the south end of the lower level.

## 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.

Medical visits to the Health Service are by appointment, which can be made by telephoning 494-4774. Transportation from the main campus is via the Three Center Mini Bus.

## OTHER UNIVERSITY SERVICES

### UNIVERSITY LIBRARIES

The University Libraries are housed in six separate units, five of which are free-standing buildings. As of 1985, the library system reported holdings of 2,084,110 volumes, 20,995 current journals, and 1,554,939 microform holdings, in addition to over 550,000 pamphlets and many maps, films, filmstrips, and sound recordings.

The library system comprises the Purdy/Kresge Library, the Pharmacy and Allied Health LRC, the Arthur Neef Law Library, the Science and Engineering Library and the Vera Parshall Shiffman Medical Library, and the Federal-Mogul Library Annex. Except for items forming special collections and those items in the library annex, the University collections are in open stack arrangement.

These collections are supplemented by the resources of two other major libraries, the 2,000,000-volume Detroit Public Library and the Center for Research Libraries. Access to the Detroit Public Library is available to all Wayne students and faculty. The Center for Research Libraries collects government documents, newspapers and other statistical materials from many areas of the world. Its collections include journals which are of scholarly value but are deemed not to be in sufficient demand to be purchased by a member library, and older research materials.

All University Libraries offer reference and information services, interlibrary loan services, computer search services, photocopying services, and bibliographic instruction programs. The libraries are actively involved in automation of files and processing to provide state-of-the-art access to instructional and research materials.

### Purdy/Kresge Library

The Purdy/Kresge Library contains the collections for the humanities, social sciences, and education, serving the College of Liberal Arts, the College of Education, the School of Business Administration, and the School of Social Work. The library contains the University's major microfilm collection and the larger of its two government document depository collections.

The Purdy/Kresge Library is the largest of the University's libraries, and houses the library administration, central materials processing departments, and Media Services.

### Science and Engineering Library

The Science and Engineering Library contains the collections for the science disciplines of the College of Liberal Arts, as well as serving as the primary library for the College of Engineering and the College of Nursing. The library now contains over 335,000 volumes and is currently receiving over 2,700 journals.

### Vera Parshall Shiffman Medical Library

This library, serving both the School of Medicine and the College of Pharmacy and Allied Health Professions, is located in the Detroit Medical Center. Its collections include over 170,000 volumes and it receives over 2,800 journals covering the intellectual content of the world's medical scholarship. The Shiffman Library serves as a medical resource library for the Detroit metropolitan area as well as for the Greater Midwest Regional Medical Library Network. Additional information may be found in the School of Medicine section of the Wayne State University Graduate School Bulletin.

## Arthur Neef Law Library

The Law Library, named in honor of the late Dean, Arthur Neef, who served as Dean of the Law School from 1936 to 1967, is located in the Law School building at the north end of the University campus. The Neef Law Library contains over 330,000 volumes, making it the second largest law library in the state of Michigan. Approximately 1,500 periodicals and 1,000 looseleaf services are received regularly. The Neef Library is one of the official depositories of U.S. Government publications. Additional information may be found in the Law School section of the Wayne State University Graduate School Bulletin.

## University Archives

Walter P. Reuther Library; 577-4024

The University Archives 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 225 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 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. 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. Children are not permitted to reside at the Chatsworth Tower and 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. Children are not permitted to reside in these buildings.

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

## University Ombudsman

652 Student Center; 577-3487

*Interim Ombudsman:* Asa Brown

The Office of the Ombudsman, established by the Board of Governors, is charged with helping students solve University-related problems. While Ombudsman means 'grievance man' in Swedish, the student's problem does not have to be a clear-cut grievance; issues may be brought to the attention of the Ombudsman which have been formulated in the student's mind as questions, doubts, or anxieties about a University matter.

The student's problems may be academic or nonacademic. Examples of academic problems are issues about admission, registration, records, grading, course content, conduct of an instructor and requirements for graduation. Nonacademic problems include such matters as financial aid, accounts receivable, student services and the physical plant.

Many other University-related problems exist which the Ombudsman can help the student solve. The Ombudsman acts as an information source on all student matters, attempts to resolve problems when students become entwined in academic or bureaucratic red-tape, and acts as counsel for the student in appropriate circumstances. Additionally, the Ombudsman seeks to change those policies and practices of the University which have become outmoded, irrelevant, or otherwise unfair.

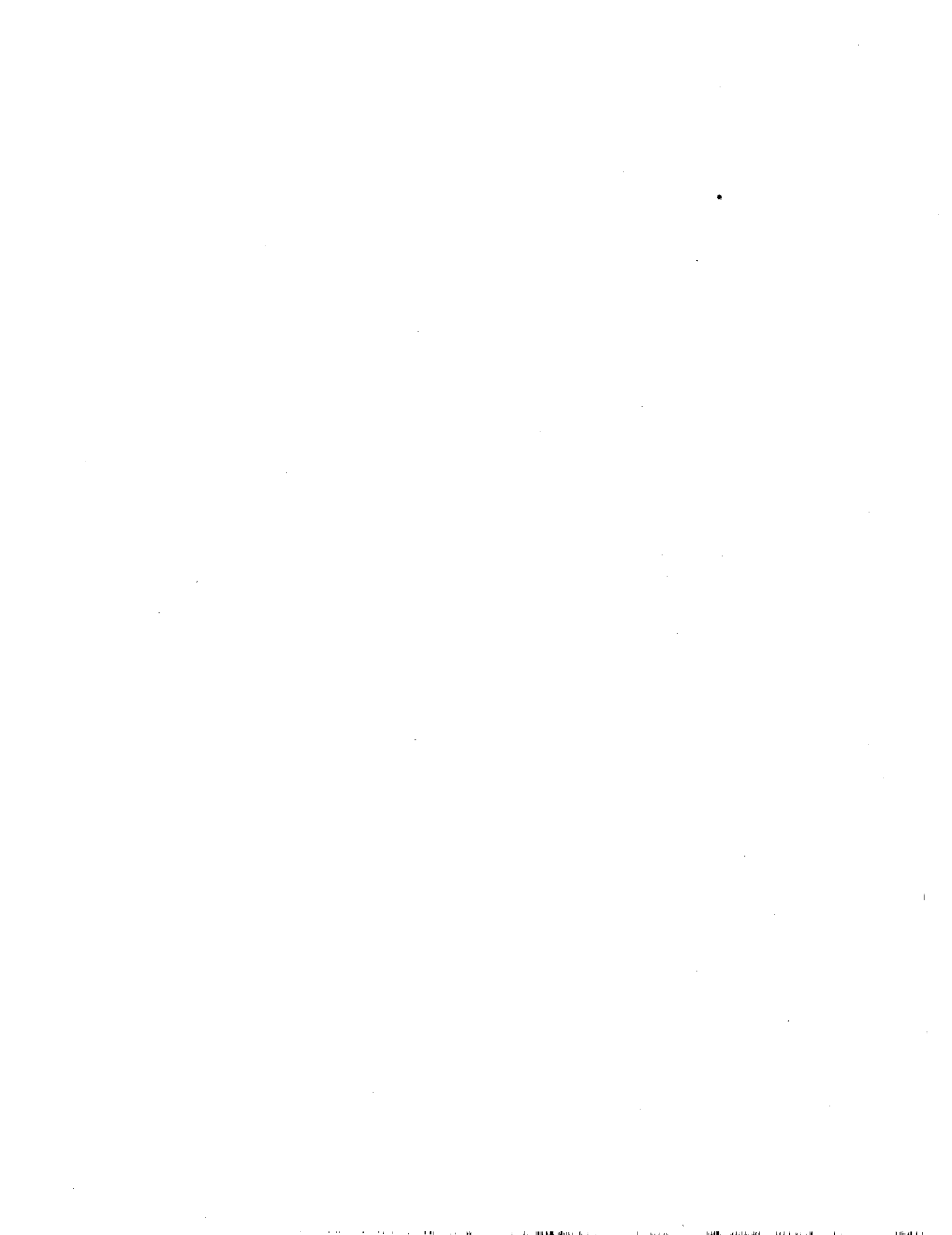
*In any case, whenever the student is unsure about anything relating to the University, he/she is invited to consult the Ombudsman.*

## Frederick C. Matthaei Physical Education Center

**Athletics:** The Department of Intercollegiate and Intramural Sports is housed in the Frederick C. Matthaei Physical Education Center. Students may participate in a full range of sports as athletes and as spectators. Tickets at student rates and information on intercollegiate and intramural sports are available at 101 Matthaei Building, 577-4280.

**Recreation:** The facilities and services of the Division of the Health and Physical Education are available to students, faculty and staff for 'drop-in' recreation whenever unscheduled for instruction or formal athletic programs. Areas available include: swimming pool, handball-racquetball courts, squash courts, weight training room, basketball courts, volleyball court, tennis courts and playfields for softball, touch football and soccer. Identification is required for using indoor facilities; one guest may accompany a student, faculty or staff member after 5:00 p.m. Monday through Friday and any time during open hours on weekends. A guest fee is charged as posted. For additional information, telephone 577-4295.







# **School of Business Administration**

*DEAN: WILLIAM 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 adult 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 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.

## Undergraduate Program

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.

## Graduate Program

The 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 limited course offerings on Saturday mornings.

For additional graduate program information, consult the Wayne State University Graduate School Bulletin.

## Degree Programs

### *Bachelor of Science in Business Administration with majors in*

accounting  
Finance and Business Economics  
Management and Organization Sciences  
Management Information Systems

### *Bachelor of Arts in Business Administration with majors in*

all of the concentrations offered in the  
Bachelor of Science program cited above.

### \* *Master of Business Administration*

## Directory of the School

Dean .....	226 Prentis Building; 577-4501
Associate Dean for Academic Affairs	226 Prentis Building; 577-4503
Assistant to the Dean .....	226 Prentis Building; 577-4472
Business Manager .....	226 Prentis Building; 577-4502
Director, Bureau of Business Research	209 Prentis Building; 577-4213
Director, Professional Development Division	105 Prentis Building; 577-4353
Director, Management Center .....	105 Prentis Building; 577-4449
Director, Michigan Small Business Development Center	2727 Second Avenue; 577-4848
Director, W.S.U. Small Business Development Subcenter	2727 Second Avenue; 577-4850
Director of Student Services .....	103 Prentis Building; 577-4510
Student Senate Office .....	6 Prentis Building; 577-4783
Department of Accounting .....	200 Prentis Building; 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

\* For complete information, consult the Wayne State University Graduate School Bulletin.

# BACHELOR'S DEGREES

## Admission Requirements

The undergraduate program of the School of Business Administration is offered at the upper-division (junior-senior) level to Wayne State University students who have completed the pre-business administration course requirements (see below), and a minimum of fifty-four credits with at least a 2.5 cumulative 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 Director of the Undergraduate Program 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 law, mathematics, economics, and statistics will comprise a portion of the pre-business administration curriculum. Students complete prescribed courses as pre-business administration students 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 (4 cr.).....Prereq: MAT 150; ECO 101,102.

ACC 302 (4 cr.).....Prereq: ACC 301 and ALL ACC 301 prerequisites.

### Business Law

ACC 351 (3 cr.).....Prereq: sophomore standing.

### Economics

ECO 101 (3 cr.).....Note: Either ECO 101 or 102 will satisfy the basic  
ECO 102 (3 cr.) Social Science Group Requirement.

### English

ENG 102 (4 cr.).....Prereq: placement examination.

ENG 301 (3 cr.).....Prereq: ENG 102 and English Proficiency Exam.

### Mathematics

MAT 150 (3 cr.).....Prereq: Qualifying Examination.

or

MAT 180\* (4 cr.).....Prereq: Qualifying Examination.

### Philosophy

PHI 105 (3 cr.).....Prereq: none.

### Psychology

PSY 101 (4 cr.).....Note: PSY 101 will satisfy the requirement for

or

PSY 102 (3 cr.) a Natural Science laboratory, and the Life Science  
Group Requirement.

### Speech

SPB 101 (2 cr.).....Prereq: none.

### Statistics

FBE 330 (3 cr.).....Prereq: MAT 150 or 180.

or

ECO 410 (3 cr.).....Prereq: ECO 102; MAT 150 or 180 or equiv.

## Degree Requirements

### Bachelor of Science in Business Administration

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 20). In reviewing that material, students should note that MKT 533 satisfies the Writing-Intensive major course requirement for business administration curricula; and PSY 101 (4 credits) is recommended for satisfaction of the Life Science group requirement. Pre-business and Business Administration students should consult the University Advising Office, Office of Student Services, School of Business

\* Required as a prerequisite for most advanced computer science courses.

Administration, for specific information regarding the satisfaction of these requirements consistent with academic requirements of the School.

## — 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 <b>Must be satisfactorily completed in the first sixteen credits after admission to the School of Business Administration.</b>
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. <b>To be taken as one of the last five courses toward bachelor's degree and after completion of all other core courses</b>
MKT 530.....	Marketing Management
MKT 533.....	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); other majors require six courses (eighteen credits).

Students should refer to the respective departmental section (pages 54-61) 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 under the direction of 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. Elective credits are required the *non-business elective* area and the *free elective* area.

**NON-BUSINESS ELECTIVES:** All business administration students, regardless of major, must satisfactorily complete eight credits in

non-business elective courses. 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 School of Fine and Performing 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:** Eight credits in free electives are required of all business administration students *except those majoring in accounting*. (No free electives are provided for within the minimum 128 credit degree program in the accounting major.) 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 School of Fine and Performing Arts, subject to the same conditions and exceptions noted for non-business electives (see above).

*Students who wish to take elective courses in schools or colleges other than those specified must obtain prior approval from the Undergraduate Committee of the School of Business Administration. No degree credit will be granted if prior approval is not obtained. Additionally, no credit will be allowed for remedial courses on a sub-collegiate level, nor subsequently allowed for courses originally taken on a non-credit basis.*

**LANGUAGE ELECTIVES:** Students who are interested in employment opportunities overseas or with international corporations should consider electing certain foreign language courses especially designed for business administration majors. 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 Chairperson, Department of Romance and Germanic Language and Literature, 487 Manoogian Hall, telephone 577-3002.

## Bachelor of Arts in Business Administration

**Admission Requirements:** see above, page 47.

**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 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, Room 111, Mackenzie Hall.

Students admitted to the program with minimum junior standing should recognize that an additional 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; S/U marks, however, are given and are entered on the official University transcript.

## Mortuary Science

Mortuary science students may earn a bachelor's degree in business administration in addition to the Certificate in Mortuary Science. For specific requirements, consult the Office of Student Services of the School of Business Administration.



# ACADEMIC PROCEDURES

*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 Class

Students who are late registrants or who wish to file a *Change of Elections* will not be added to any class that meets once a week after the second class meeting. For classes meeting twice a week, no student will be added after the third class meeting. **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, 150 Administrative Services Building, 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 Student Services Office, 103 Prentis Building. A *Plan of Work* for the requested major will then be issued. 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.

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 five 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 within the first sixteen credits following admission to the School of Business Administration. 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, 343 Mackenzie Hall; 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.**

## 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 33.

## Grievance Procedure

Students with a course-related grievance should first contact the instructor of the course. Should the grievance remain unresolved, the student should contact the chairperson of the department in which the course is offered. If the problem remains unresolved at this level, the student should refer it to the Dean of the School or his/her designee.

Non-classroom-related grievances should be brought directly to the appropriate departmental chairperson or to the Office of the Dean. Additionally, the University Ombudsman (see page 42) is available to all students to assist in the resolution of University-related problems.

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

## 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 Director 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.<sup>1</sup> 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.

<sup>1</sup> The Undergraduate Committee is composed of the four departmental chairpersons and is chaired by the Director of the Undergraduate Program.

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

No course in which a student has received a satisfactory passing grade or mark may be repeated without the prior written approval of the Director of Student Services of the School of Business Administration.

## Residence

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 another institution.

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 elected 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 Program 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 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 are expected to 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 Associate Dean for Academic Affairs or the appropriate department chairperson is required.

## Waiver of Degree Requirements

Students are expected to 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.

# 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.

*American Production and Inventory Control Society Scholarship:* Open to business students interested in careers in production or operations management.

*Becker C.P.A. Scholarship:* Awarded to an accounting major with high academic achievement, intending to pursue a career in public accounting.

*Stanton P. Bocknek Memorial Scholarship:* Established in 1986, this award is designated for accounting majors demonstrating high academic achievement.

*Betty Brown Scholarship (ASWA):* Awarded through the American Society of Women Accountants to female accounting students with high academic achievement.

*Morris Blumberg Memorial Scholarship:* Awarded to students involved in or intending to pursue careers in the area of small business.

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

*Chrysler Corporation Minority Scholarship:* A combined scholarship/internship award designated for minority students demonstrating high academic achievement.

*College Women's Club Scholarship:* Open to undergraduate women in business administration with high academic achievement.

*Commerce High School Alumni Scholarship:* Funded by the Alumni Association of Detroit's Commerce High School, this award is designated for undergraduate business students with high academic achievement.

*Crain's Detroit Business Scholarship:* Established in 1986 in conjunction with Crain's Executive Newsmaker of the Year Award. This scholarship is designated for an outstanding student in business administration.

*Detroit Corporate Cash Management Association Scholarship:* Designated for finance majors demonstrating high academic achievement.

*Dow Corning Scholarship for Minorities and Women:* Open to minorities and women in business administration.

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

*First of America—Detroit Minority Scholarship:* Awarded to minority students in business administration demonstrating high academic achievement.

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

*Michigan Bell Scholarship:* Established in 1986, this award is open to all business administration students demonstrating high academic achievement; combined with the scholarship is a summer internship program.

*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 Co., this award is designated for accounting majors demonstrating high academic achievement.

*Price Waterhouse Minority Accounting Scholarship:* Established in 1986, this award is designated for minority accounting students demonstrating high academic achievement.

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

*Volkswagen of America Minority Scholarship:* A scholarship/internship award designated for minority students in business administration demonstrating high academic achievement.

## 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.

# 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.

## 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 is Dr. Edwin Harris; telephone: 577-4353. Director of the Management Center is Rod Beaulieu; telephone: 577-4449.

## Small Business Development Center

In the fall of 1983, the Wayne State University School of Business Administration was selected by the United States Small Business Administration as the 'lead institution' for the federally-sponsored Small Business Development Center (SBDC) in the State of Michigan. The statewide SBDC network, 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 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 to see the Director 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. 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.

*Beta Gamma Sigma* is the national honor society for students in business administration. The Wayne State chapter was installed in national membership in March, 1979. *Beta Gamma Sigma* is the only scholastic honor society recognized by the American Assembly of Collegiate Schools of Business, the major accrediting body for schools of business administration. Election to membership in this honor society is the highest scholastic honor that a student in business administration can achieve. To be eligible for membership, students must rank in the upper five percent of their junior class, or the upper ten percent of their senior class, or rank in the upper twenty percent of those receiving masters degrees. Membership is by invitation only.

*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*.

# ACCOUNTING

Office: 200 Prentis Building  
 Chairperson: Alan Reinstein

## Professors

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

## Associate Professors

Donald E. Gorton, K. Gregory Jin, Ronald D. Schwartz, Myles S. Stern, James F. Wallis (Emeritus)

## Assistant Professors

Fouad K. Al-Najjar, Sharon M. Moody, Jack D. Schroeder, Adrienne L. Slaymaker, Albert D. Spalding, Jr., Linda B. Wright

## Lecturers

Toni J. Beatty, Susan D. Garr, George W. Gregory, Michael Grose, Edward Richardson, Jr.

## 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 pages 47,48.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on page 47, 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 20-31 and 49-51 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.

Specific course information regarding the MIS curriculum may be obtained from the Office of Student Services, 103 Prentis Building, or the Department of Accounting, 200 Prentis Building.

## COURSES OF INSTRUCTION<sup>1</sup> (ACC)

**301. Elementary Financial Accounting Theory. Cr. 1 or 4**  
 Prereq: bachelor's degree; or sophomore standing, ECO 101 and ECO 102, MAT 150. Offered for one credit only after ACC 550. Introduction to financial accounting principles; preparation and interpretation of balance sheets and income statements. (T)

**302. Elementary Managerial Accounting Theory. Cr. 4**  
 Prereq: ACC 301, sophomore standing, ECO 101 and ECO 102, MAT 150; or ACC 301, bachelor's degree. 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. 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**  
 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.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

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 and 563, CSC 100. 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)

**550. Survey of Accounting. Cr. 3**

Prereq: junior standing. Not recommended for students in the School of Business Administration. No credit after ACC 301. Fundamental concepts of financial and managerial accounting. The flow of accounting information. Interpretation of accounting reports. (I)

**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 and 302, CSC 100, MAT 150, MGT 550. Student computer account required. Concepts and techniques of design, use and control of computer-based systems for business data processing, office automation, information reporting, and decision-making. (T)

**592. Data Base Systems. Cr. 3**

Prereq: ACC 563. Student computer account required. Effective use of data base management systems for processing management information; design and administration of 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

## Professor

Milton H. Spencer

## Associate Professors

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

## Assistant Professors

Arnold R. Cowan, Hassan B. Ehsani, Mahmoud Haddad, Matthew R. Hyle, William W. Poffenberger

## Lecturers

Timothy W. Butler, Jack R. Kuzminski, Yu-Wen Elizabeth Sun

## 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 47.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on page 47, 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 20-31 and 47-51 respectively.

## Corporation Finance

The corporate financial specialization prepares individuals for careers as financial managers in non-financial corporations. Entry level positions are generally as junior financial analysts or junior accountants, while potential future responsibilities include management of working capital, operating budgets, financial statement preparation, bank relationships, long-term financial planning and 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	Seminar in Financial Markets and Investments
FBE 635	Real Estate Finance
FBE 636	Financial Modeling
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 and 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 Investment
FBE 622	Portfolio Management
FBE 634	Seminar in Financial Markets and Investments

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 636	Financial Modeling
FBE 637	Risk Management

## COURSES OF INSTRUCTION<sup>1</sup> (FBE)

### 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). 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

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. 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. FBE 529 and ECO 410 recommended as background. (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. (T)

### 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. (T)

### 630. Working Capital Management. Cr. 3

Prereq: FBE 529 and 540 or equiv. Advanced financial management principles applied to the administration of corporate cash, marketable securities, receivables, inventory, short-term financing, payables and bank relationships. (I)

### 631. Capital Budgeting and Long Term Financing. Cr. 3

Prereq: FBE 523, 529 and 540 or equiv. Advanced financial principles applied to the administration of corporate capital budgeting, debt management, cost of capital, dividend policy, lease financing, merger valuation and reorganization. (I)

### 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. (I)

### 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. Seminar in Financial Markets and Investments. Cr. 3

Prereq: FBE 622. Advanced analysis of security pricing and portfolio construction and administration. Analysis of spot, future and options markets for financial securities and for commodities and their instruments. (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

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

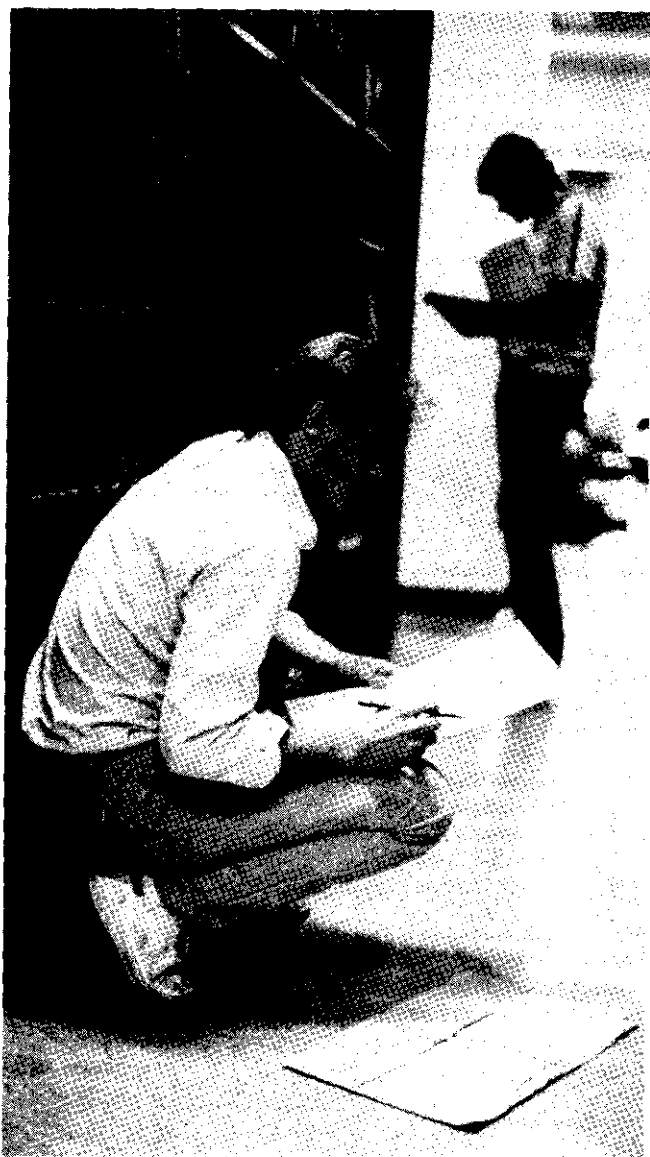
methods for real estate transactions and real estate investment strategies. (F,W)

**636. Financial Modeling. Cr. 3**

Prereq: FBE 529, 540; and 630 or 631. Courses for advanced finance majors. Concepts, training and use of major spread sheet and multidimensional computer financial modeling languages. Applications to cash-flows, budget and variance, consolidation (including international), pro forma simulations. Individual project required. (I)

**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

Chairperson: Edwin F. Harris

## Professors

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

## Associate Professors

Edwin F. Harris, K.S. Krishnan, Harvey Nussbaum, Donald H. Palmer (Emeritus), Irving Paster (Emeritus), Fred P. Unruh (Emeritus), Harish L. Verma

## Assistant Professors

Yitzhak Fried, Barbara C. Goodman, Ronald H. Humphrey, Ariel S. Levi, Thomas J. Naughton, Janice H. Zahrly

## Lecturer

Margaret H. Padgett

## 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 47.

**Degree Requirements:** Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on page 47, 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 20-31 and 47-51, 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	Human Resource Management

## 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 two of 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
MGT 567	Small Business Management Problems

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
ACC 615	Michigan Taxes
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:

* MGT 695	Seminar in Management
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
* MGT 695	Seminar in Management

## COURSES OF INSTRUCTION<sup>1</sup> (MGT)

### 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 and SOC 200. No graduate credit. May count as repeat of either former MGT 559 or MGT 660. The design and functioning of organizations. Types of formal organization structures, relationships between departments, technology, authority, responsibility and decision-making at all management levels, environmental and international relationships, and organizational effectiveness. (T)

\* Requires written approval of Department Chairperson.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

- 552. Behavior in Organizations. Cr. 3**  
Prereq: PSY 101 or PSY 102 and SOC 200. No graduate credit. Repeat of former MGT 662. 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: CSC 100, FBE 330 or ECO 410, and MGT 550 or MGT 559, or MGT 660. 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 or MGT 559 or MGT 660, and 552 or 662 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 559 or 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 559 or 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)
- 567. Entrepreneurship/Small Business Field Studies. Cr. 3**  
Prereq: MGT 565, 566, senior standing; or senior standing, consent of instructor. Students assigned to act as consultants to entrepreneurs or to small business owner/managers in Detroit metropolitan area. Class meetings focus on the consultative and problem-solving processes. (Y)
- 570. Personnel Administration. Cr. 3**  
Prereq: MGT 559; or 550 or 660, and 552 or 662; 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 559; or 550 or 660, and 552 or 662; 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 559; or 552 or 662; or consent of instructor. No credit after former B A 589. Influence of the external environment on the corporation. Rules and responsibilities of business persons; corporate governance; assessment of social performance; contemporary issues. (T)
- 661. Corporate Strategic Planning. Cr. 3**  
Prereq: MGT 559; or 550 or 560, and 552 or 662; or consent of instructor. Theory and method of corporate strategic planning. An analysis of the processes of strategic search, appraisal, choice and implementation. Examination of strategic planning techniques including model building, MBO, Delphi, forecasting and assessment. (Y)
- 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**  
No credit after former B A 0690 or former B A 689. 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 top-level managers in their strategy determination, policy formulation, and policy implementation roles. Managing the firm as an integrated unit under conditions of uncertainty. Integration of concepts and skills covered in previous specialized courses. (T)
- 695. Seminar in Management. Cr. 3**  
Prereq: MGT 561, 570, 662 or consent of instructor. Selected topics in the management and organizational sciences. (I)
- 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 Prentiss Building  
 Chairperson: Edward A. Riordan

## Professors

H. Webster Johnson (Emeritus), J. Partick Kelly (K mart Professor),  
 Fred W. Morgan

## Associate Professors

Hugh M. Cannon, Lyda E. Chamberlin (Emerita), Mary S. Irwin (Emerita),  
 George C. Jackson, Leon R. Klein (Emeritus), Ferdinand F. Mauser (Emeritus),  
 John J. Rath (Emeritus), Edward A. Riordan, Jone M. Rymer, Louis L. Stern,  
 Attila Yaprak

## Assistant Professors

Ishmael P. Akaah, Theodore C. Alex, John D. Beard, Francis J. Brown (Emeritus),  
 Alice Herge (Emerita), M. Christine Lewis

## 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 47.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on page 47, 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 20-31 and 47-51 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 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 (MKT 563 recommended)

## 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

# COURSES OF INSTRUCTION<sup>1</sup> (MKT)

**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. 5)**

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. Business Communication. Cr. 3**

Prereq: successful completion of English Proficiency Examination in Composition. Open only to students admitted to the School of Business Administration. Fundamental principles and skills of

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations



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. Industrial 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. (T)

**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. (Y)

**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. (Y)

**562. Business Logistics. Cr. 3**  
Prereq: FBE 540 and MKT 530. No credit after MKT 546. Achieving efficient physical flow of goods to fulfill production and marketing objectives through the integration of transportation, inventory management, order processing, warehousing, packaging, materials handling and acquisition. (Y)

**563. Advanced Business Logistics. Cr. 3**  
Prereq: MKT 562. Utilization of cases in analysis of problems encountered in the design and operation of a logistics system, both domestic and international. (I)

**570. Retail Management. Cr. 3**  
Prereq: MKT 530. Retailing concepts and problems. Competitive structure, store location, organization, buying, inventory control, sales promotion, pricing, credit policy, customer services, research and

franchising. (Y)

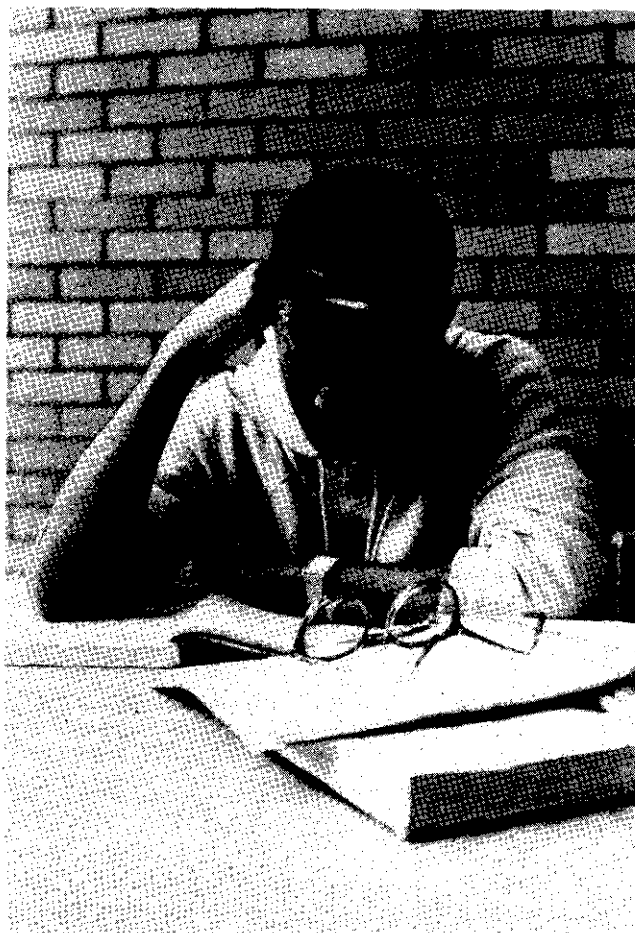
**585. Promotion Strategy. Cr. 3**  
Prereq: MKT 530. Development of integrated strategies, plans and programs in advertising, personal selling, publicity and promotion, and their implementation in the overall marketing effort. (T)

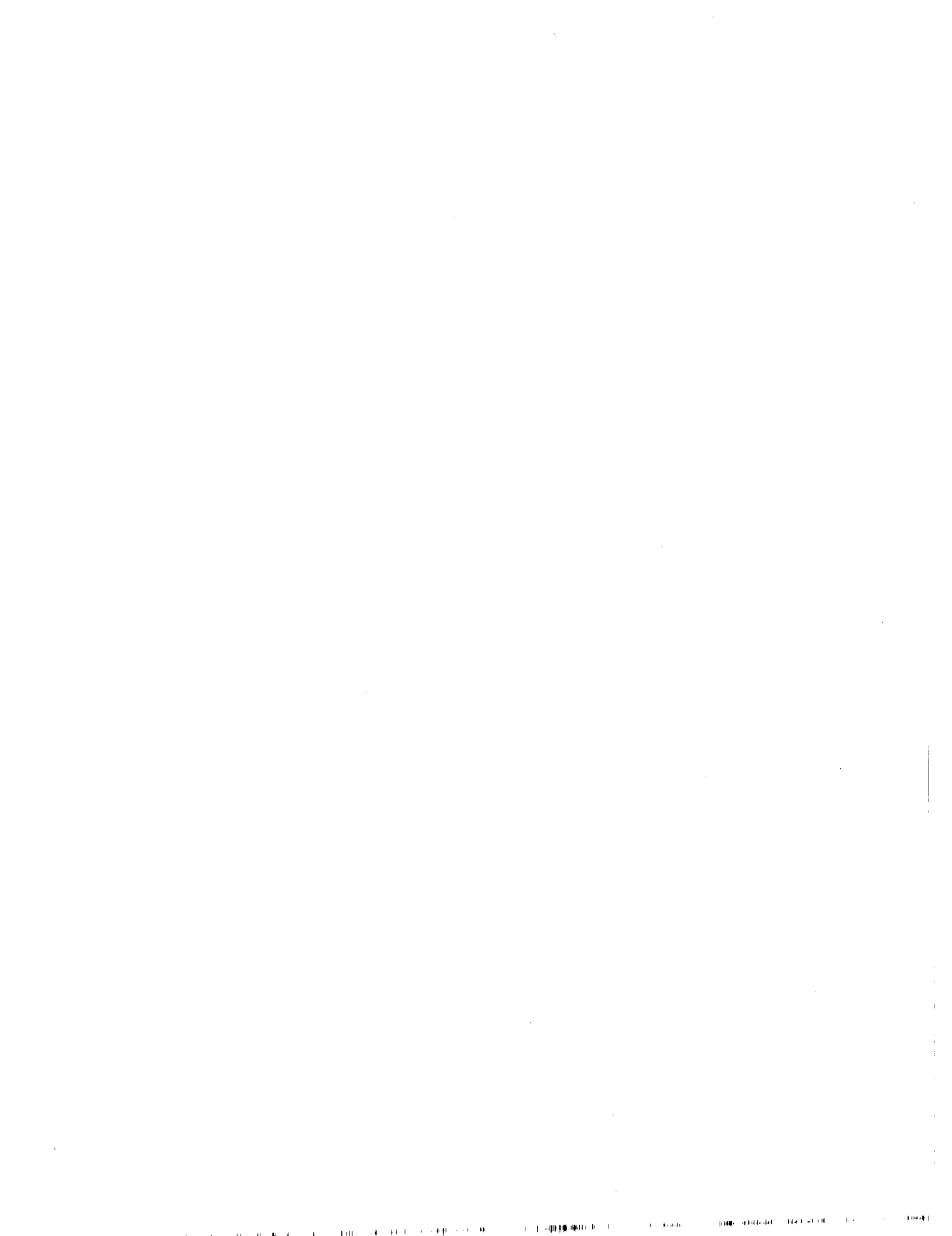
**641. Marketing Research and Analysis. Cr. 3**  
Prereq: MKT 530, FBE 540. Methods of gathering and analyzing data which will facilitate the identification and solution of marketing problems. Planning the project, data sources for exploratory and conclusive research. Questionnaire construction, sample 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 of 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 placement 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 education problems. To meet this need, excellent professional resources are available in the other colleges, schools and divisions of the University, and in numerous other school districts.

As society has been altered by such factors as the development of knowledge, technological advances and population growth, the purposes and processes of education have changed. New technologies of instruction are evolving rapidly and offer the prospective teacher many opportunities for developing a high level of teaching competence. Problems generated in our urban society are complex, and those related to education are no exception. Yet, the opportunities for curriculum innovation, experimentation and leadership have never been greater.

## Accreditation

The programs of the College of Education have been accredited by the National Council for Accreditation of Teacher Education since 1954. The College has been reaccredited periodically 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
  - Speech Education
  - Multiply Impaired
  - Visually Impaired
- Speech Education—Secondary

### *Bachelor of Science in Education* with majors in the areas listed above

### *Bachelor's Degrees in Health and Physical Education with majors in:*<sup>1</sup>

- Physical Education
- Recreation and Park Services<sup>2</sup>

### \* *Master of Arts in Teaching Degree Majors*

- Elementary Education
  - Bilingual-Bicultural Education
  - Science Education
- Secondary Education
  - Bilingual-Bicultural Education
  - Business Education
  - Distributive Education
  - English Education
  - Family Life Education
  - Foreign Language Education
  - Health Occupations Education
  - Industrial Education
  - Mathematics Education
  - Science Education
  - Social Studies Education

### \* *Master of Arts with majors in*

- Counseling
- Recreation and Park Services<sup>3</sup>
- 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
- English Education (Secondary)
- Evaluation and Research
- Foreign Language (Secondary)
- Health Education
- History and Philosophy of Education
- Instructional Technology
- Mathematics Education
- Physical Education
- Preschool and Parent Education
- Reading
- Science Education (Elementary and Secondary)
- Secondary Curriculum and Instruction

<sup>1</sup> Bachelor's degree programs offered in the Division of Health and Physical Education are granted through the College of Education. For these degree programs, see the Division of Health and Physical Education section of this bulletin, page 170.

<sup>2</sup> This is a degree program only and does not lead to teacher certification.

<sup>3</sup> Master's degrees with majors in Health and Physical Education, Recreation and Park Services, and Sports Administration are granted through the College of Education but are administered by the Division of Health and Physical Education. See the Division of Health and Physical Education section of the Graduate School Bulletin and consult with an adviser in that Division.

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

Social Studies Education (Secondary)  
Special Education  
Vocational Education

\* *Education Specialist Certificates with majors in*

Counseling  
Educational Sociology  
Elementary Education Curriculum and Instruction  
English Education (Secondary)  
General Administration and Supervision  
Instructional Technology  
Mathematics Education  
Reading  
Science Education  
Secondary Curriculum and Instruction  
Social Studies Education  
Special Education  
Special Education (Administration)  
Vocational Education  
Vocational Rehabilitation Counseling

\* *Doctor of Education and Doctor of Philosophy degrees with majors in*

Counseling  
Curriculum and Instruction—with emphases in  
    Art Education  
    Bilingual-Bicultural Education<sup>1</sup>  
    Elementary Education  
    English Education (Secondary)  
    Foreign Language Education (Secondary)  
    K-12 Curriculum  
    Mathematics Education  
    Science Education (Elementary and Secondary)  
    Secondary Education  
    Social Studies Education (Secondary)  
Educational Psychology  
Educational Sociology  
Evaluation and Research  
General Administration and Supervision  
Higher Education—with an emphasis in  
    Adult and Continuing Education  
History and Philosophy of Education  
Instructional Technology  
Reading  
Special Education  
Special Education (Administration)  
Vocational Education

# ACADEMIC PROCEDURES

*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 University. In instances of prolonged absences of five years or more, it may be necessary to revalidate credits, either through examinations or refresher courses, within the student's major and the professional education sequences.

## Attendance

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

## Transferred Credits and Residence Requirements

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

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

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

<sup>1</sup> Doctor of Education (Ed.D.) degree only.

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 toward the certificate may be accepted by transfer but at least fifteen credits must be completed at Wayne.<sup>1</sup>*

## 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. A student on probation must secure the approval of the Director of the Division of Academic Services before registering for subsequent work in the College. The College reserves the right to ask a student to withdraw at any time from specific courses or from the College entirely, if progress does not warrant continuance.



<sup>1</sup> When a student already holds one type of certificate and is working on another, this residence requirement may be lowered.

# ACADEMIC SERVICES

*Office:* 489 Education

*Director:* Howard E. Reilly, Professor

*Undergraduate Programs:* Mary Manion, Leonett White

*Graduate Programs:* Stuart Itzkowitz, Toni Nicholas

*Teacher Certification:* Dolores Stevens

*Education Placement:* William Young

## Purposes

The Academic Services Division is responsible for admitting undergraduate students to the programs of the College of Education, maintaining all student files, and processing and certifying that degree and teaching certificate requirements have been met. As the initial contact point for prospective students at all degree levels, the Division provides information and advice concerning various programs offered by the College, admission procedures, teacher certification and degree requirements, and regulations and policies pertaining to the College and the University.

Counselors in the Academic Services Division 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.

## Education Placement Office

This unit 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 policies on teacher qualification and selection and trends in teacher supply and demand. College and university staff vacancies for professional positions throughout the United States are listed with this office.

The specific functions of the Education Placement Office are: to assist registrants in preparing their credentials and in securing teaching positions; to assist school administrators in obtaining qualified teachers for the vacancies they may identify; and to assist in-service teachers and graduates who may wish to advance professionally.

## Services to Students

**The University advisory staff** provides a thorough program of advising for the freshman and sophomore students enrolled in the pre-teaching curriculum prior to their transfer to the College of Education at the beginning of the junior year.

**The Student's Adviser:** Each student admitted to the College at the undergraduate level and seeking a degree and a teacher's certificate 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.

## 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	Room 441, Education Building; 577-1620
Associate Dean	Room 441, Education Building; 577-1620
Director, Academic Services	Room 489, Education Building; 577-1600
Division Administrator, Administrative and Organizational Studies	Room 375, Education Building; 577-1730
Division Administrator, Teacher Education	Room 221, Education Building; 577-0963
Division Administrator, Theoretical and Behavioral Foundations	Room 323, Education Building; 577-1620

Mailing address for all offices:

Wayne State University  
5425 Second Avenue  
Detroit, Michigan 48202

# TEACHER EDUCATION

*Division Administrator:* Mark H. Smith Jr., Associate Dean  
*Office:* 441 Education Building

*TED Advising:* James Boyer  
*Office:* 289 Education Building

*Art Education Advising Office:* 163 Community Arts Building

## Professors

Donald J. Bissett, Asa J. Brown, Kenneth A. Hanninen, Polly Mosteller Hughes, Leonard Kaplan, Peter L. Sanders, Eugene P. Smith, Gary R. Smith, Samuel B. Stone, Frank O. Youkstetter

## Associate Professors

Rudi Alec, Fred G. Attebury, Daniel E. Behmer, James Boyer, John S. Camp, Sharon W. Elliott, Annamarie Hayes, Tommie U. Johnson, Bette H. LaChapelle, 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, Edward Walker, Jr., Marshall Zumberg

## Degree 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  
Physical Education  
Science Education  
Social Studies Education—Secondary  
Special Education  
Speech Education  
Multiply Impaired  
Visually Impaired  
Speech Education—Secondary

*Bachelor of Science in Education*  
*with majors in the areas listed above*

***Bachelor's Degrees in Health and Physical Education with majors in:<sup>1</sup>***

Physical Education  
Recreation and Park Services<sup>2</sup>

***\* Master of Arts in Teaching Degree Majors***

Elementary Education  
Bilingual-Bicultural Education  
Science Education  
Secondary Education  
Bilingual-Bicultural Education  
Business Education  
Distributive Education  
English Education  
Family Life Education  
Foreign Language Education  
Health Occupations Education  
Industrial Education  
Mathematics Education  
Science Education  
Social Studies Education

***\* Master of Education Degree Majors***

Adult and Continuing Education  
Art Education  
Bilingual-Bicultural Education  
Elementary Education—also provides opportunity for emphasis in childhood education, language arts and reading, literature for children, mathematics education, science education, and social studies education  
English Education—Secondary  
Teaching English as a Second Language/Foreign Language  
Language Education—Secondary  
Mathematics Education  
Pre-School and Parent Education  
Reading  
Science Education  
Social Studies Education  
Special Education  
Developmental Disabilities  
Emotionally Impaired  
Gifted Child Education  
Learning Disabilities  
Visually Impaired  
Vocational Education

***\* Education Specialist Certificate Majors***

Elementary Curriculum and Instruction  
Mathematics Education  
Reading  
Science Education  
Secondary Curriculum and Instruction  
Secondary English Education  
Teaching English as a Second Language/Foreign Language  
Social Studies Education  
Special Education  
Vocational Education  
Business/Distributive Education  
Family Life Education  
Industrial Education

***\* Ed.D. and Ph.D. Majors***

Curriculum and Instruction—with emphases in  
Art Education  
Bilingual-Bicultural Education (Ed.D. only)  
Elementary Education  
K-12 Curriculum  
Mathematics Education  
Science Education (Elementary and Secondary)  
Secondary Education  
Secondary English Education  
Secondary Foreign Language Education  
Secondary Social Studies Education  
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 School of Fine and Performing 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)

**SCHOOL OF FINE AND PERFORMING ARTS**

Dance  
Music Education

<sup>1</sup> Bachelor's degree programs offered in the Division of Health and Physical Education are granted through the College of Education. For these degree programs, see the Division of Health and Physical Education section of this bulletin, page 169.

<sup>2</sup> This is a degree program only and does not lead to teacher certification.

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



# ADMISSION REQUIREMENTS for Bachelor's Degree Programs

## 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-teaching 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 at the junior college level. Admission for each of these groups is through the University Office of Admissions, 116 Administrative Services Building, .5950 Cass, Detroit, Michigan 48202; telephone: 577-3560.

For information regarding application procedures, admission requirements and fees please refer to the General Information section of this bulletin, pages 13-19.

## Senior College Admissions 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 to senior college professional work 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. This work should generally conform to the two years of preprofessional 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. The honor point average used in considering admissibility to the College is calculated as a gross total representing all institutions attended and all courses attempted.

**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 21, 24).

**3. Physical and Emotional Health:** Definite standards of health must be met by all students entering the senior level of the College. All students entering the College of Education are required to complete a T.B. test prior to beginning work in the College.

Students with recognizable speech defects 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 senior College of Education. As a matter of routine, students at the junior college level anticipating teacher education work are strongly urged to avail themselves of the diagnostic services of the

Speech Clinic prior to applying to the senior college level. Students whose speech is judged unacceptable for classroom participation during their senior college years will be referred to the Speech Clinic for testing and remediation. 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.

## Senior 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 to senior college professional work. Applicants who have completed two full years or more of college work in some institution other than Wayne must apply for admission through the University Admissions Office, Room 116, Administrative Services Building. 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 the College of Education Division of Academic Services, 489 Education Building. An application fee of \$20.00 is charged to students new to the University who seek admission at the senior college or post-degree levels.



# BACHELOR'S DEGREE REQUIREMENTS AND PROGRAMS

## 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 subsequent program descriptions (pages 70-82). NOTE: Some programs require more than 124 credits; note also the addendum cited below for the Bachelor of Arts degree.

1. Forty credits in general education including 6-8 credits in English (ENG 102, plus one course at the 200 level or above) and general education courses specified by individual program areas.
2. Completion of the appropriate professional education sequence.
3. Completion of major 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 20).

## Bachelor of Arts in Education

In addition to the above requirements, programs of candidates for the Bachelor of Arts degree must include twelve credits in a foreign language. If two or more units of a foreign language are offered as admission credentials, this requirement may be satisfied by completing eight college credits in the same language beyond the freshman level.

## 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 of the student's concentration may be taught in the sixth through eighth grade with elementary certification.

**Admission Requirements:** see above, page 69.

**DEGREE REQUIREMENTS:** The following requirements in various curricular areas supplement the degree requirements outlined above.

**GENERAL EDUCATION 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 20), but the dual application of any course to both College and University General Education categories cannot be used to reduce the total degree requirement below 124 credits.

### ENGLISH (Two Courses)

ENG 102 — Freshman Composition .....	4
One 200-level English elective .....	3-4

### HEALTH (One Course)

HEA 233 — First Aid and CPR .....	3
HEA 330 — Health of the School Child .....	3

### NATURAL SCIENCE (Three Courses: one from each of the following groups)

BIO 100 or BIO 101	
—An Introduction to Life .....	4
—Basic Biology I .....	4
PHS 191 or PHS 192 or PHS 193	
—Conceptual Physics: The Basic Science .....	3-4
—Chemistry and Your World .....	3-4
—The Science of the Earth .....	4
SCE 501 or SCE 502	
—Biological Sciences for Elementary and Middle School Teachers .....	3
—Physical Sciences for Elementary and Middle School Teachers .....	3

### MATHEMATICS (Two Courses)

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

### SOCIAL STUDIES (Four Courses)

PSY 101 — Introductory Psychology .....	4
P S 101 or P S 103	
— American Government .....	4
— The American Governmental System .....	3
GEG 110 — World Regional Patterns .....	4
HIS 204 or HIS 205	
— American Foundations: U.S. to 1877 .....	3-4
— American Foundations: U.S. from 1877 .....	4

### SPEECH (One Course)

SPB 200 — Effective Speech .....	3
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**PROFESSIONAL EDUCATION REQUIREMENTS:** The following courses are required of all students seeking K-8 certification, regardless of selection of major or minor studies.

*The following courses may be taken while in the College of Liberal Arts:*

ELE 320 — Literature for Children .....	3
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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 — Introduction to Child Study .....	3
ELE 340 — Teaching Mathematics: Preprimary-8 .....	3
ELE 350 — Teaching Science: Preprimary-8 .....	3
ELE 360 — Teaching Social Studies: Preprimary-8 .....	3
RDG 443 — 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):** The configuration of courses in phases I-III represents the sequence in which students must elect these courses. 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 .....	3

<i>Phase II</i>	<i>Credits</i>
TED 356 – Pre-Student Teaching Field Experiences.....	3
ELE 332 – Teaching Reading: Preprimary-8.....	3

<i>Phase III</i>	
TED 578 – Directed Teaching and Conference.....	10

**MAJOR AREAS OF STUDY:** Students seeking a K-8 certification must complete one of the following majors:

**ENGLISH MAJOR (Thirty Credits)**

The following courses plus all of the courses listed under the English Minor; see below.

	<i>Credits</i>
ENG 220 – Shakespeare.....	3
ENG 311 or ENG 312	
–English Literature to 1700.....	3
–English Literature after 1700.....	3
Literature Elective.....	4

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

The following courses plus all of the courses listed under the English/Speech Minor; see below.

ENG 220 – Shakespeare.....	3
ENG 311 or ENG 312	
–English Literature to 1700.....	3
–English Literature since 1700.....	3
Electives in Speech.....	6

**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 (Thirty Credits)**

The following courses plus all of the courses listed under the Mathematics Minor; see below.

	<i>Credits</i>
MAT 151 or MAT 201	
–Calculus for the Social and Management Sciences.....	3
–Calculus I.....	4

*Electives from:*

CSC 100 or CSC 102	
–Introduction to Computer Science.....	3
–Computer Science I.....	4
MAT 186 – Discrete Mathematics for Computer Science I.....	4
MAT 221 – Elementary Probability and Statistics.....	4
STA 102 – Elementary Statistics.....	3

**NATURAL SCIENCE GROUP MAJOR (Thirty-six Credits)**

PHS 191 – Conceptual Physics: The Basic Science.....	3-4
BIO 101 – Basic Biology I.....	4
BIO 102 – Basic Biology II.....	4
GEL 101 – Geology: The Science of the Earth.....	4
GEL 102 – Interpreting the Earth.....	4
CHM 102 – 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

<b>SOCIAL STUDIES GROUP MAJOR (Thirty-six Credits)</b>	<i>Credits</i>
P S 101 or P S 103	
–American Government.....	4
–The American Governmental System.....	3
SOC 200 – Understanding Human Society.....	3
GEO 110 – World Regional Patterns.....	5
HIS 110 – The Ancient World.....	3-4
HIS 120 – The Medieval World.....	3-4
HIS 190 or HIS 287	
–The World and the West: 1500-1945.....	4
–The Transformation of Western Society.....	3
HIS 204 – American Foundations: United States to 1877.....	3-4
HIS 205 – Modern America: United States Since 1877.....	3-4

*Select TWO courses from:*

ECO 101 – Principles of Macroeconomics.....	4
SOC 202 – Social Problems.....	3
ANT 210 or ANT 520	
–Introduction to Anthropology.....	4
–Social Anthropology.....	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)**

	<i>Credits</i>
AED 117 – Methods and Materials for Sculptural Expression.....	3
AED 118 – Art Process, Perception and Expression.....	3
AED 211 – Art Teaching Laboratory.....	3
AED 513 – Visual Communications.....	3
AED 517 – Methods and Materials: Fibers.....	3
AED 522 – Methods and Materials: Painting.....	3
AED 523 – Ceramics Education I.....	3
AED 528 – Methods and Materials: Printmaking.....	3

**BILINGUAL-BICULTURAL MINOR (Twenty-two Credits)**

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 –Elementary Bilingual/Bicultural Education: Methods.....	3
BBE 670 – Seminar in Cultural Awareness.....	3
BBE 502 – Effective Involvement of Parents in School and Community.....	3
BBE 660 – Internship in Bilingual/Bicultural Teaching.....	5

**EARLY CHILDHOOD MINOR (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	
–Community Contacts: Working with Families in Urban Settings.....	2
–Parent Intervention Programs in Home and School.....	3
ELE 608 – Preprimary Goals and Practice.....	2
ELE 634 – Teaching Reading in Early Childhood Education.....	3
PSY 580 – Maturation and Development of the Individual.....	3
Early Childhood Elective.....	3-4

**ENGLISH MINOR (Twenty Credits)**

ENG 102 – Freshman Composition.....	4
ENG 301 – Techniques of Expository Writing.....	3
ENG 541 or ENG 542 or ENG 545	
–American Literature: 1800-1865.....	3
–American Literature: 1865-1914.....	3
–Modern American Literature.....	3

	<i>Credits</i>
ENG 239 — Introduction to Afro-American Literature .....	4
ENG 570 — Introduction to English Linguistics .....	3
ELE 320 — Literature for Children .....	3

**ENGLISH/SPEECH GROUP MINOR (Twenty-six Credits)**

ENG 102 — Freshman Composition .....	4
ENG 301 — Techniques of Expository Writing .....	3
ENG 541 or ENG 542 or ENG 545	
—American Literature: 1800-1865 .....	3
—American Literature: 1865-1914 .....	3
—Modern American Literature .....	3
ENG 239 — Introduction to Afro-American Literature .....	4
ENG 570 — Introduction to English 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.

**MATHEMATICS MINOR (Twenty Credits)**

	<i>Credits</i>
MAT 111 — Mathematics for Elementary Teachers I .....	3
MAT 112 — Mathematics for Elementary 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
—Elementary Functions .....	4

**Electives From:**

CSC 100 or CSC 102	
—Introduction to Computer Science .....	3
—Computer Science I .....	4
MAT 151 — Calculus for the Social and Management Sciences .....	3
MAT 221 — Elementary Probability and Statistics .....	4
MAT 225 — Elementary Linear Algebra .....	3
STA 102 — Elementary Statistics .....	3

**NATURAL SCIENCE GROUP MINOR (Twenty-four Credits)**

PHS 191 — Conceptual Physics: The Basic Science .....	3-4
PHS 192 — Chemistry and Your World .....	3-4
PHS 193 — The Science of the Earth .....	4
BIO 101 — Basic Biology I .....	4
BIO 102 — Basic Biology II .....	4
SCE 501 — Biological Science for Elementary and Middle School Teachers .....	3
SCE 502 — Physical Sciences for Elementary and Middle School Teachers .....	3

**PHYSICAL EDUCATION MINOR (Twenty Credits)**

P E 191 or P E 354	
—Professional Perspectives in Physical Education .....	1
—Cultural Foundations of Physical Education .....	3
P E 340 — Human Growth and Development for Physical Education .....	2-3
P E 358 — Kinesiology .....	3
P E 341 or P E 555	
—Physical Education for Elementary School Children I .....	3
—Movement Education for Children .....	3
P E 342 or DNC 581	
—Physical Education for Elementary School Children II .....	3

—Creative Dance for Children .....

3

Electives from PEA and P E courses (4-5 credits): Depending upon the particular major and interest of the student, an elective emphasis area will be selected (e.g., Adapted Physical Education, Elementary Physical Education). Contact Dr. Mary Barnett for advising.

**SOCIAL STUDIES GROUP MINOR (Twenty-four Credits)**

	<i>Credits</i>
P S 101 or P S 103	
—American Government .....	4
—The American Governmental System .....	3
SOC 200 — Understanding Human Society .....	3
GEG 110 — World Regional Patterns .....	5
HIS 104 — Europe and the World: 1945 to the Present .....	4
HIS 204 — American Foundations: United States to 1877 .....	4
HIS 205 — Modern American: United States Since 1877 .....	4

At least one elective from the fields of anthropology, economics, geography, history, political science, or sociology.

## 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 School of Fine and Performing Arts. For information regarding these combined degree programs, see pages 200 and 139, respectively.

**Admission Requirements:** see page 69.

**DEGREE REQUIREMENTS:** The following requirements in various curricular areas supplement the degree requirements outlined above (see page 70).

**GENERAL EDUCATION 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**

	<i>Credits</i>
ENG 102 — Freshman Composition .....	4
One 200-level (or above) English course .....	3-4
SPB 200 — Effective Speech .....	3
HEA 233 or H E 330	
—First Aid and CPR .....	3
—Health of the School Child .....	3
PSY 101 — Introductory Psychology .....	4
P S 101 or P S 103	
—American Government .....	4
—The American Governmental System .....	3
TED 225 — Introduction to Education (optional) .....	3

**SOCIAL SCIENCE (Four Courses)**

Choose from anthropology, economics, geography, history, psychology, political science, or sociology. (The University Requirement in American Government and Introduction to Psychology may be used as two of the four requirements.)

**SCIENCE (Two Courses: one from each of the following groups)**

- 1) Biological Sciences.....BIO
- 2) Physical Sciences.....AST, CHM, GEL, or PHY

**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**

	<i>Credits</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 — 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 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 612 — English Composition in Secondary Schools.....	3
EED 633 — Teaching Literature in Secondary Schools.....	3

**FOREIGN LANGUAGE EDUCATION**

LED 550 — Intro. to Modern Languages in Sec. Schools: Methods I.....	3
LED 551 — Teaching Modern Languages in Sec. Schools: Methods II.....	3

**MATHEMATICS EDUCATION**

*Consult a Mathematics Education advisor for possible substitutions and additional courses.*

MAE 605 — Teaching Mathematics in Middle School & Junior High School.....	3
ELE 340 — Teaching Mathematics: Preprimary-8.....	3

**SCIENCE EDUCATION**

SCE 506 — Methods and Materials for Instruction in Secondary School Science I.....	3
SCE 507 — Methods and Materials of Instruction in Secondary School Science II.....	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 612 or EED 633	

— English Composition in Secondary Schools.....	3
— Teaching Literature in Secondary Schools.....	3

**MAJOR AREAS OF STUDY:** Students seeking secondary certification for grades 7-12 must complete one of the following majors:

**COMPUTER SCIENCE MAJOR (Thirty-one Credits)**

	<i>Credits</i>
CSC 102 — Computer Science I.....	4
CSC 203 — Computer Science II.....	4
CSC 371 — Data and File Structures.....	4
CSC 206 or CSC 210	
— Introduction to Fortran.....	3
— Introduction to Cobol.....	3

*Electives (at least 15 credits)*

CSC 441 — Introduction to Computer Systems .....	4
CSC 513 — Introduction to Information Systems.....	4
CSC 520 — Principles of Programming Languages.....	4
CSC 531 — Computer Organization.....	4
CSC 587 — Computer Graphics.....	3

**ECONOMICS MAJOR (Thirty Credits)**

ECO 101 — Principles of Macroeconomics.....	4
ECO 102 — Principles of Microeconomics.....	4
ECO 300 — Survey of Economics.....	4
ECO 320 — Public Control of Business.....	3
ECO 380 — Environmental Economics.....	3
ECO 464 — Economic Development of the United States.....	3
ECO 561 — Comparative Economic Systems.....	3
ECO 441 — Labor Institutions.....	4
ECO 560 — Introduction to Development Economics.....	4

**ENGLISH MAJOR (Thirty Credits)**

ENG 301 or ENG 501	
—Techniques of Expository Writing.....	3
—Advanced Expository Writing.....	3
ENG 311 or ENG 312	
—English Literature to 1700.....	3
—English Literature After 1700.....	3
ENG 220 — 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 English Linguistics.....	3
—Traditional Grammar.....	3
ENG 280 — Techniques of Imaginative Writing.....	4
ENG 239 or ENG 547	
—Introduction to Afro-American Literature.....	4
—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.....	3
SPA 202 — Intermediate Spanish: Readings.....	4

<i>GEOGRAPHY MAJOR (Thirty Credits)</i>	<i>Credits</i>
GEG 110 – World Regional Patterns.....	5
GEG 120 – Earth Physical Systems.....	5
GEG 300 – Map Intelligence.....	3
GEG 301 – Thematic Cartography.....	4
GEG 310 – Economic Geography.....	4
GEG 313 – Introductory Urban Geography.....	4
GEG 560 – The United States.....	4

**HISTORY MAJOR (Thirty Credits)**

HIS 110 – The Ancient World.....	4
HIS 104 – Europe and The World: 1945 to the Present.....	4
HIS 120 – The Medieval World.....	4
HIS 190 or HIS 287	
–The World and the West: 1600-1645.....	4
–The Transformation of Western Society.....	3
HIS 204 – American Foundations: U.S. to 1877.....	4
HIS 205 – Modern America: U.S. Since 1877.....	4
HIS 517 – Constitutional History of the U.S. Since 1877.....	4

*Plus one of the following:*

HIS 250 – Introduction to Peace and Conflict Studies.....	3
HIS 320 – Slavery, Racism, and Anti-Semitism.....	3
HIS 522 – The Changing Shape of Ethnic America: World War I to Present.....	4
HIS 240 – African Civilizations to 1800.....	4
HIS 241 – African Civilizations Since 1800.....	3-4

**MATHEMATICS MAJOR (Thirty Credits)**

MAT 201 – Calculus I.....	4
MAT 202 – Calculus II.....	4
MAT 203 – Calculus III.....	4
MAT 204 – Calculus IV.....	4
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

*Electives (two courses from the following):*

MAT 507 – Advanced Calculus.....	4
MAT 540 – Elementary Theory of Numbers.....	3
MAT 560 – Introduction to Analysis I.....	4
MAT 586 – Introduction to Linear Programming.....	3

*Recommended Additional Credit:*

CSC 102 – Computer Science I.....	4
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**POLITICAL SCIENCE MAJOR (Thirty Credits)**

P S 101 – American Government.....	4
P S 207 – State and Local Government.....	4
P S 224 – 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

**SCIENCE MAJOR (Thirty Credits)**

Thirty 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.

**SCIENCE GROUP MAJOR (Thirty-six/Forty-eight Credits)**

Forty-eight credits required, without science or mathematics minor; thirty-six credits required, if combined with science or mathematics minor.

	<i>Credits</i>
BIO 101 – Basic Biology I.....	4
BIO 102 – Basic Biology II.....	4
CHM 107 – Principles of Chemistry I.....	4
CHM 108 – Principles of Chemistry II.....	5
CHM 674 – Laboratory Safety.....	2
GEL 101 – Earth Science.....	4
GEL 102 – Interpreting the Earth.....	4
PHY 213 – General Physics.....	3-4
PHY 214 – General Physics.....	4
AST 201 – Descriptive Astronomy.....	4-5
Science Electives in any of the above areas.....	12

**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 min or 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).*

SPB 200 – Effective Speech.....	3
SPD 204 – Voice and Articulation.....	3
SPC 210 – Persuasive Speaking.....	3
SPC 211 – Argumentation and Debate.....	3
SPD 250 – Beginning Oral Interpretation.....	3
SPE 606 – Teaching Communication at the Secondary Level.....	3
SPD 530 – Introduction to Speech Pathology.....	3
Speech Electives.....	9

**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 or AED 526	
–Methods and Materials of Sculptural Expression.....	3
–Methods and Materials: Wood, Metal and Plastics.....	3
AED 118 or AED 622	
–Art Process, Perception and Expression.....	3
–Drawing and Watercolor – Field Studies.....	3
AED 513 – Visual Communications.....	3
AED 517 – Methods and Materials: Fibers.....	3
AED 522 – Methods and Materials: Painting.....	3
AED 523 – Ceramic Education I.....	3
AED 528 – Methods and Materials: Printmaking.....	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. 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.

	Credits
BBE 500 — Multicultural Education in Urban America .....	2
* BBE 550— Effective Involvement of Parents in School and Community .....	3
BBE 553 — The Socio-Psychological Needs of Ethnocultural Communities .....	3
* BBE 657— Secondary Bilingual/Bicultural Education: Methods .....	3
* BBE 685— Applied Linguistics: Issues in Bilingual Education .....	3
* BBE 670— Seminar in Cultural Awareness .....	3
BBE 659 — Culture and Language in Bilingual/Bicultural/Education .....	1-3
BBE 660 — Internship in Bilingual Teaching .....	2-12

**COMPUTER SCIENCE MINOR (Twenty Credits)**

CSC 102 — Computer Science I .....	4
CSC 203 — Computer Science II .....	4
CSC 206 or CSC 210	
— Introduction to Fortran .....	3
— Introduction to Cobol .....	3
CSC 371 — 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 531 — Computer Organization .....	4
CSC 587 — Computer Graphics .....	3

**ENGLISH MINOR (Twenty Credits)**

ENG 220 — Shakespeare .....	3
ENG 301 or ENG 280	
—Techniques of Expository Writing .....	3
—Techniques of Imaginative Writing .....	4
ENG 314 or ENG 545	
—Survey of American Literature .....	3
—Modern American Literature .....	3
ENG 570 or ENG 573	
Introduction to English Linguistics .....	3
—Traditional Grammar .....	3
ENG 311 or ENG 312	
—English Literature to 1700 .....	3
—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.

**MATHEMATICS MINOR (Twenty Credits)**

MAT 201 — Calculus I .....	4
MAT 202 — Calculus II .....	4
MAT 203 — Calculus III .....	4
MAT 204 — Calculus IV .....	4

**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

**PHYSICAL EDUCATION MINOR (Twenty Credits)**

P E 191 or P E 354	
—Professional Perspectives in Physical Education .....	1
—Cultural Foundations of Physical Education .....	3
P E 340 — Human Growth and Development for Physical Education .....	3

P E 358 — Kinesiology .....	3
P E 258 — Physical Education in Secondary Schools I .....	5
P E 259 — Physical Education in Secondary Schools II .....	5

*Electives from PEA and P E courses (1-9 credits):* Depending upon the particular major and interest of the student, an elective emphasis area will be selected (e.g., Adapted Physical Education, Secondary Physical Education, Coaching, Aquatics, Athletic Training, Fitness Leadership).

**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)**

The science group minor consists of basic course work in the areas of biology, chemistry, geology, and physics. Minor credit cannot be earned in the subject area in which the student has accrued major credit. Twelve credits must be earned in one subject and the student must take one science methods course, SCE 506. For recommended electives, see the Science Group Major above, page 74.

**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 minor is offered only in combination with a social science major in one of these areas. 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
SPB 200 — Effective Speech .....	3
SPD 204 — Voice and Articulation .....	3
SPC 210 — Persuasive Speaking .....	3
SPC 211 — Argumentation and Debate .....	3
SPD 250 — Beginning Oral Interpretation .....	3
SPE 606 — Teaching Communication at the Secondary Level .....	3
Speech Electives .....	3

## Bachelor's Degree Programs in Special Education Leading to Grades K - 12 Endorsement

The special education curriculum leads to a bachelor's degree in education and certification in the areas of multiple impairment or visual impairment. The multiple impairment major prepares teachers to work with children who are mentally retarded and/or physically handicapped. The visual impairment major prepares teachers to work with children who are blind or partially sighted. An Art Education/Special Education dual major program is also available; for requirements, see page 77.

**Admission Requirements:** see page 69.

**DEGREE REQUIREMENTS:** The following requirements in various curricular areas supplement the degree requirements outlined above (see page 70). The entire program in special education requires a minimum of 140 credits.

**GENERAL EDUCATION 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, 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.

	<i>Credits</i>
BIO 100 – An Introduction to Life .....	4
BIO 187 – Anatomy and Physiology .....	5
ENG 102 – Freshman Composition .....	4
English 200-level course .....	3
HEA 233 – First Aid and CPR .....	3
MAT 111 – Mathematics for Elementary Teachers I .....	3
MAT 112 – Mathematics for Elementary Teachers II .....	3
PSY 101 – Introductory Psychology .....	4
SPB 200 – Effective Speech .....	3

**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.

<i>PHASE I (Seventeen Credits)</i>	<i>Credits</i>
TED 355 – Teaching Theory and Practice .....	5
ELE 330 – Teaching Language Arts: Preprimary-8 .....	3
ELE 340 – Teaching Mathematics: Preprimary-8 .....	3
EDP 331 – Educational Psychology .....	3
RDG 443 – Teaching Reading in Subject Matter Areas .....	3

<i>PHASE II (Twelve Credits)</i>	
TED 356 – Pre-Student Teaching Field Experiences .....	3
ELE 350 – Teaching Science: Preprimary-8 .....	3
ELE 360 – Teaching Social Studies: Preprimary-8 .....	3
ELE 332 – Teaching Reading: Preprimary-8 .....	3

<i>PHASE III (Eight Credits)</i>	
TED 578 – Directed Teaching and Conference .....	5
EHP 360 – Introduction to Philosophy of Education .....	3

<i>PHASE IV (Ten-Eleven Credits)</i>	
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>MULTIPLE IMPAIRMENT (Thirty-one 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 560 – Intro. to Educ. of Hearing/Visually Impaired Children .....	3

SED 513 – Curriculum Development: MR/POHI .....	3
SED 514 – Behavior Management: MR/POHI .....	3
SED 526 – Children with Physical Impairment: Home & Hospital .....	4
SED 570 – Computer & Adaptive Technology in Special Ed. ....	2
SED 600 – Problems in Special Education .....	3
SED 601 – Seminar in Multi-Handicapped .....	2

**VISUAL IMPAIRMENT (Thirty-three Credits)**

SED 406 – Developing Observation & Assessment Skills – Lab/Seminar .....	3
SED 408 – Special Education 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 Cognitive Processes .....	3
SED 560 – Intro. to Educ. of Hearing/Visually Impaired Child .....	3
SED 561 – Pathology of Organs of Vision .....	3
SED 562 – Teaching Visually Impaired Children .....	3
SED 563 – Braille Methods .....	2
SED 564 – Advanced Braille and Technical Aids for Blind .....	2
SED 570 – Computer & Adaptive Technology in Special Education .....	2
SED 601 – Seminar in Multi-Handicapped .....	2
SED 665 – Orientation & Mobility: Visually Impaired Children .....	2

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

**SPECIAL EDUCATION PLANNED MINOR (Twenty Credits)**

PSY 230 – Psychology of Adjustment .....	4
SOC 200 – Understanding Human Society .....	3
ANT 210 – Introduction to Anthropology .....	3
P S 101 – American Government .....	4
ELE 320 – Literature for children .....	3
SED 600 – Problems in Special Education .....	3
AED 512 – Art for Special Education .....	4

**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 one and one-half to two years (see below, page 77). The sequence begins in the fall semester.

**Admission:** see page 69. 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 70).



**GENERAL EDUCATION 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 – Freshman Composition .....	4
ENG 200-level course .....	3-4
SPB 200 – Effective Speech .....	3
P S 101 – American Government .....	4
PSY 101 – Introductory Psychology .....	4
A H (elect 9 credits in Art History) .....	9
HEA 233 – First Aid and CPR .....	3

**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 211 – Art Teaching Laboratory .....	3
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: 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:

*Required Courses:*

	<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: Sculptural Expression .....	3
AED 118 – Art Process, Perception, and Expression .....	3
AED 513 – Visual Communication .....	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 Plastics .....	3
AED 528 – Methods and Materials: Printmaking .....	3
ADR 207 – Beginning Life Drawing .....	3
ASL 215 – Introduction to Sculpture .....	3

*Recommended Electives:*

AED 520 – Computer Programmed Multi-Screen, Multi-Image Presentations .....	3
AED 615 – Instructional Applications of Computer Graphics .....	3
AED 622 – Drawing and Watercolor: Field Studies .....	3
AED 623 – Ceramics Education II .....	3

**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 74-75.

## 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 a year and one-half to 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-two 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 74-75.

*PROFESSIONAL EDUCATION (Twenty-four Credits)*

	<i>Credits</i>
AED 211 – Art Teaching Laboratory .....	3
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

*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 513 – Visual Communication .....	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

*Electives: One of the following*

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 615 – Instructional Applications of Computer Graphics .....	3
AED 622 – Drawing and Watercolor – Field Studies .....	3
AED 623 – Ceramics Education II .....	3

## Bachelor's Degree Programs with a combined major in Art Education and Special Education

The College offers a dual major program in art education and special education leading to the following endorsements: teaching art in grades K-12; teaching all subjects in grades K-8; and teaching all subjects to mentally impaired or physically handicapped children in grades K-12. This program has specific general education and professional education requirements, as well as a double major (there is no minor) required of all applicants; for the curriculum, see below.

**Admission Requirements:** See pages 69 and 76.

**DEGREE REQUIREMENTS:** The following requirements (143 credits) in various curricular areas supplement the degree requirements of the College as outlined on page 70.

## GENERAL EDUCATION REQUIREMENTS

	<i>Credits</i>
ENG 102 — Freshman Composition .....	4
ENG 200-level elective.....	4
SPB 200 — Effective Speech.....	3
P S 101 — American Government.....	4
HEA 233 — First Aid and CPR.....	3
BIO 100 — An Introduction to Life .....	4
PSY 580 — Maturation and Development of the Individual.....	4
MAT 111 — Mathematics for Elementary School Teachers I.....	3
MAT 112 — Mathematics for Elementary School Teachers II.....	3

## PROFESSIONAL EDUCATION REQUIREMENTS

	<i>Credits</i>
AED 211 — Art Teaching Laboratory.....	3
EDP 331 — Educational Psychology (Secondary).....	3
AED 411 — Theory and Practice in Art Education .....	2
TED 578 — Directed Teaching and Conference .....	8
TED 579 — Student Teaching and Conference for Special Groups.....	5
ELE 330 — Teaching Language Arts: Preprimary-8.....	3
ELE 332 — Teaching Reading: Preprimary-8.....	3
ELE 340 — Teaching Mathematics: Preprimary-8.....	3
EHP 360 — Introduction to the Philosophy of Education.....	3
RDG 443 — Teaching Reading in Subject Matter Areas.....	3

**MAJOR AREAS OF STUDY:** Students pursuing a bachelor's degree with a combined major in art education and special education must complete both of the following major sequences:

### *ART/ART EDUCATION MAJOR (Thirty-six Credits)*

	<i>Credits</i>
ADR 105 — Drawing I.....	3
ADR 106 — Drawing II.....	3
ADR 120 — Design I.....	3
AED 117 — Methods and Materials of Sculptural Expression.....	3
AED 118 — Art Process, Perception and Expression.....	3
AED 513 — Visual Communication .....	3
AED 517 — Methods and Materials: Fibers.....	3
AED 519 — Light, Sound, Space and Motion.....	3
AED 522 — Methods and Materials: Painting.....	3
AED 526 — Methods and Materials: Wood, Metal and Plastic.....	3
AED 528 — Methods and Materials: Printmaking.....	3

### *SPECIAL EDUCATION MAJOR (Thirty-eight Credits)*

SED 406 — Developing Observation and Assessment Skills — Laboratory/Seminar.....	4
SED 408 — Special Education Services and Motivational Concepts.....	2
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: MR/POHI .....	3
SED 514 — Behavior Management: MR/POHI .....	3
SED 525 — Techniques in Educating Children with Physical Impairments.....	2
SED 526 — Home and Hospital Education of Children with Physical Impairments.....	3
SED 550 — Introduction to Education of the Deaf .....	2
SED 560 — Education of Visually Impaired Children.....	2
SED 570 — Learning Disabilities of Exceptional Children.....	2
SED 601 — Seminar in Multiple Handicapped.....	2
BIO 187 — Anatomy and Physiology.....	5

## Bachelor's Degree Programs Leading to Vocational Education Endorsement

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 79), all of the various majors offered under these four 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 general education, one teaching 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 69), 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 70.

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

<i>Required Courses</i>	<i>Credits</i>
AED 513 — Visual Communication .....	3
ECO 101 — Principles of Macroeconomics.....	3
ECO 102 — Principles of Microeconomics .....	3
HEA 231 — Dynamics of Personal Health.....	2
P S 101 — American Government.....	4
PSY 101 — Introductory Psychology .....	4

### *Electives*

PSY 350 — Survey of Industrial and Social Psychology.....	3
AGD 225 — Advertising Design .....	3
EED 612 — Problems in Teaching Writing.....	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 pages 21,24).

*Option I: Secondary Teaching Certification*

	<i>Credits</i>
TED 516 – Analysis of Secondary School Teaching .....	3
V E 541 – Vocational Education Practicum in Instruction.....	4
BDE 533 – Business/Distributive Education Methods: General.....	4
V E 693 – Special Problems in Vocational Education .....	3
RDG 443 – Teaching Reading in Subject Matter Areas.....	3
TED 578 – Directed Teaching and Conference .....	10
EDP 548 – Adolescent Psychology.....	3
EHP 360 – Introduction to Philosophy of Education.....	3

*Option II: Non-Certification*

TED 516 – Analysis of Secondary School Teaching .....	3
V E 541 – Vocational Education Practicum in Instruction.....	4
BDE 533 – Business/Distributive Education Methods: General.....	4
V E 693 – Special Problems in Vocational Education .....	3
EDP 548 – Adolescent Psychology .....	3
Instructional Technology electives .....	9
RDG 443 – Teaching Reading in Subject Matter Areas.....	3
TED 602 – 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*

	<i>Credits</i>
BDE 530 – B./D. Ed. Word Processing I: Typewriting .....	3
BDE 535 – B./D. Ed. Word Processing II: Recording/Transcribing.....	3
BDE 537 – B./D. Ed. Word Processing III: Principles.....	3
BDE 630 – B./D. Ed. Cooperative Internship.....	1-6
ACC 301 – Elementary Accounting Theory I.....	4
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 .....	3
MGT 566 – Managing the Small Business.....	3
CSC 100 – Introduction to Computer Science.....	3

*Distributive Education*

BDE 530 – Business/Distributive Education Communications I.....	3
BDE 630 – Business/Distributive Education Cooperative Internship.....	3
MGT 550 – Organization and Management Theory.....	3
MGT 566 – Managing the Small Business.....	3
ACC 301 – Elementary Accounting Theory I.....	4
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
AFA 549 – Economics of Merchandising .....	2
CSC 100 – Introduction to Computer Science.....	3

*ENGLISH/SPEECH MINOR (Twenty-five Credits)*

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

*Required Courses*

	<i>Credits</i>
ENG 102 – Freshman Composition .....	4
ENG 301 – Techniques of Expository Writing.....	3
ENG 303 – Writing the Research Paper.....	3
SPB 200 – Effective Speech.....	3
SPC 325 – Introduction to Organizational Communication .....	3
SPJ 210 – News Reporting I.....	4

*Electives*

ENG 501 – Advanced Expository Writing.....	3
SPC 220 – Interpersonal Communication .....	3
SPC 520 – Group Communication and Human Interaction.....	3
SPJ 321 – News Editing .....	4
SPJ 470 – Public Affairs Reporting .....	4
SPO 204 – Voice and Articulation.....	3

**Industrial Education**

The industrial arts program prepares students to teach industrial arts at the junior and senior high school levels. To teach vocational education in secondary schools or community colleges, students pursue one of the vocational industrial options.

**Admissions Requirements:** see page 69.

*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 70.

**GENERAL EDUCATION 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 – Freshman Composition .....	4
ENG 200-level course .....	4
HEA 231 – Dynamics of Personal Health.....	2
PHS 191 – Conceptual Physics: The Basic Science .....	4
PSY 101 – Introductory Psychology.....	4
SPB 200 – Effective Speech.....	3
American Government Requirement .....	4
Physical Education (P E) course.....	2
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 pages 21,24).

**OPTION I: Secondary Teaching Certificate**

**Credits**

TED 516 — Analysis of Secondary School Teaching .....	3
RDG 443 — 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
TED 578 — Directed Teaching and Conference .....	10
VE 693 — Senior Seminar .....	4

**OPTION II: Non-Certificate**

TED 516 — Analysis of Secondary School Teaching .....	3
RDG 443 — 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 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

**MAJOR AREAS OF STUDY:** Students seeking a bachelor's degree leading to certification in industrial education must complete one of the following major concentrations.

**INDUSTRIAL ARTS GROUP MAJOR (Thirty-six Credits)**

1. Sixteen (or more) credits including two courses from each of the following groups:

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

2. Twelve credits including one course from each of the following groups:

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

**INSTRUCTIONAL — VOCATIONAL UNIT MAJOR (Thirty Credits)**

Vocational certification with this major requires two years of 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 major 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 major, 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, page 74) or one of the following options related to their specific majors.

**INDUSTRIAL ARTS UNIT MINOR (Twenty Credits)**

Students with an industrial arts group major may complete their minor requirements with: 1) twenty credits in one area of concentration,

beyond the course work done in completion of the major requirements; and, 2) two years of relevant employment experience done within the past five years in the chosen concentration area.

**INDUSTRIAL — VOCATIONAL ARTS GROUP MINOR (Twenty-four Credits)**

Students with an industrial-vocational art unit major may satisfy their minor requirements by completing twenty-four credits in the following technical areas in which they have not accrued major 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 major and minor requirements. Students should consult the coordinator in the individual curriculum areas for a list of available topics.

**Family Life Education**

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. 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 major 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 single subject 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 decoration. 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 single subject major, or a thirty-six credit group major. Minor requirements are as stated above for consumer home economics.

**Admission Requirements:** see page 69.

**DEGREE REQUIREMENTS:** The following requirements in various curricular areas supplement the degree requirements outlined on page 70.

**GENERAL EDUCATION REQUIREMENTS:** Students seeking a bachelor's degree with certification in family life education must complete the following College general education requirements:

	<i>Credits</i>
AED 513 – Visual Communications.....	3
Art Elective.....	3
ENG 102 – Freshman Composition.....	4
English Elective.....	3
SPB 200 – Effective Speech.....	3
PHY 102 – Conceptual Physics: The Basic Science.....	4
CHM 100 – Chemistry and Your World.....	4
HEA 233 – First Aid and CPR.....	3
SOC 200 – Understanding Human Society.....	3
SOC 202 – Social Problems.....	3
P S 101 – American Government.....	4
PSY 101 – Introductory Psychology.....	4
PSY 230 – Psychology of Adjustment.....	4
SOC 541 – Marriage and Family Problems.....	3
Electives.....	3

**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 pages 21,24).

	<i>Credits</i>
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 – 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 Philosophy of Education.....	3
TED 602 – Computer Applications in Teaching.....	3

**MAJOR AREAS OF STUDY:** Students pursuing a bachelor's degree with certification in family life education must complete one of the following majors:

**CHILD CARE SERVICES MAJOR**

	<i>Credits</i>
PSY 240 – Human Development Across the Life Span.....	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.....	2
PSY 348 – Parent-Child Interaction.....	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.....	4
SED 503 – Education of Exceptional Children.....	4

**CLOTHING MANAGEMENT MAJOR**

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 & Construction.....	3
Elective.....	4-6

**CONSUMER HOME ECONOMICS MAJOR**

	<i>Credits</i>
NFS 203 – Nutrition and Man.....	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
AIH 260 – Introduction to Interior Design and Housing.....	3
FLE 547 – Teaching Family Financial Management.....	3
FLE 641 – Survey of Home Economics Related Occupational Courses.....	3
PSY 244 – Applied Human Development Across the Life Span.....	4
PSY 348 – Parent Child Interaction.....	3
H E 434 – Reproductive Health Education.....	3
Electives.....	3

**FOOD MANAGEMENT MAJOR**

NFS 213 – Introductory Food Science.....	2
NFS 214 – Introductory Food Science Laboratory.....	2
NFS 221 – Human Nutrition.....	3
NFS 531 – Quantity Food Production and Service.....	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

**HOME FURNISHINGS MAJOR**

The major 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 74-75.

**Health Occupations Education**

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. Half of this work experience should have been in the last five years, and none should be older than ten 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 single subject 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 70.

**GENERAL EDUCATION REQUIREMENTS:** Students seeking a bachelor's degree leading to certification in any of the health occupations majors must complete the following College general education requirements:

	<i>Credits</i>
BIO 100 — An Introduction to Life .....	4
BIO 187 — Anatomy and Physiology .....	5
BIO 220 — Introductory Microbiology .....	4
CHM 102 — General Chemistry I .....	4
Natural science electives .....	8
ENG 102 — Freshman Composition .....	4
ENG Elective .....	3
SPB 200 — Effective Speech .....	3
SOC 200 — Understanding Human Society .....	3
P S 101 — American Government .....	4
SOC 202 — Social Problems .....	3
PSY 101 — Introductory Psychology .....	4
PSY 230 — Psychology of Adjustment .....	4
Social science electives .....	8

**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:

	<i>Credits</i>
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 — 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 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 74-75.

**Continuing certificate** requirements with full vocational authorization requires an eighteen credit planned program which includes a minimum of two 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.

## TEACHING CERTIFICATES

One of the characteristics of present day education is the specialization of teaching, particularly at the secondary school and college levels and, to some extent, in the elementary school. 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. An exception is made in certain fields such as art, special education, physical education, school library education and music education, where the holder of a provisional certificate is qualified to teach his/her major subject in all grades, and, if indicated by his/her certificate, other subjects in other grades.

The certification code recognizes subject-matter specialization by requiring that the candidate for a teacher's certificate present concentrations of credits called majors and minors. The secondary school teacher must have a major and minor teaching field, and the elementary school teacher must have either a major and a minor or three minor teaching fields. 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 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 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 course.<sup>1</sup> 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.

<sup>1</sup> 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.

### Elementary Provisional Endorsement for Kindergarten through Grade Eight\*

1. The candidate must have graduated with a bachelor's degree from an approved or accredited teacher-education institution.
2. The academic background must include one major (may be a group major) and one minor, or three minors. A single subject major is defined as a minimum of thirty credits and a group major as a minimum of thirty-six credits. A single subject minor is a minimum of twenty credits, and a group minor is a minimum of twenty-four credits.
3. Completion of a professional education sequence is required.

### Secondary Provisional Endorsement 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 one major (may be 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 Certificates

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 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.<sup>1</sup>

Teachers of K-12 subjects: art, dance, music, physical education, and special education may present experience at any grade level from kindergarten through grade 12.

\*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.

<sup>1</sup>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.

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 certification with a vocational endorsement.*

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

All candidates for a secondary continuing 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 a continuing certificate.

### Bilingual/Bicultural Endorsement

The Bilingual/Bicultural Endorsement certifies a teacher who is qualified to teach classes of bilingual children. Students qualifying for an initial provisional certificate complete a twenty-four credit minor for the endorsement. Students holding existing certificates may add a bilingual endorsement by completing an eighteen credit planned program. Information and referral to the appropriate adviser on requirements for this endorsement may be obtained in Room 212 Education Building.



# STUDENT TEACHING

## Application

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 periods are as follows:

Fall semester .....the preceding October, November, December, January  
Winter semester ..... the preceding April, May, June, July

## 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.

## 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, 211 Education Building, during appropriate application period.

## 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; Business Education, Distributive Education, Room 269, Education Building; Family Life Education, Health Occupations Education, Room 273, Education Building; and Industrial Education, Room 281, Education Building; all other programs of the Division from Room 212, Education Building.

# COURSES OF INSTRUCTION<sup>1</sup>

## Teacher Education Division (TED)

- 109. Practicum for School Paraprofessionals I. Cr. 1-6(Max. 8)**  
Offered for S and U grades only. For school paraprofessionals in a teacher education program. Supervision of school paraprofessionals in classroom settings. Occasional seminars on paraprofessional concerns, such as working with children and with school personnel, classroom management. (I)
- 209. Practicum for School Paraprofessionals II. Cr. 1-6(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. Occasional seminars continue exploration of topics studied in TED 109. (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. (HE 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. 1-3**  
Overview of structure and purposes of American education; analysis of teaching including classroom management and unit and lesson planning in relation to the elementary school. Three semester credits are required for admission to an internship or student teaching experience. (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)
- 525. Teaching the Emerging Adolescent in Middle School. Cr. 3**  
Prereq: teaching experience. History of the middle school movement in the United States; philosophy of middle school movement and middle school education. Alternative organizational structure of middle schools. (I)
- 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.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations



(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) Movement and Dance in the Music Class. 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)
- 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. 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)
- 211. Art Teaching Laboratory. Cr. 3(Max. 6)**  
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)
- 212. Secondary Art Teaching Laboratory. Cr. 3**  
Prereq: AED 117 and 118 with sophomore standing or above. Material fee as indicated in *Schedule of Classes*. Alternate requirement to AED 211. Laboratory experience in teaching art to middle school or high school students to include planning, producing visual aids, evaluating adolescent work and self-assessment in teaching by using video tape recording equipment. (I)
- 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)
- 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)
- 511. Art for Occupational Therapy. Cr. 2-3**  
Material fee as indicated in *Schedule of Classes*. Studio-shop experiences with wood, metal, and plastics. Use of hand and power tools in cutting, shaping, forming, connecting, and finishing. Background for planning or production of adaptive devices and understanding of materials and processes in therapeutic activity. (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)**

Prereq: I T 512. 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)

**659. Culture and Language in Bilingual/Bicultural Education. Cr. 1-3**

Prereq: BBE 656. Research and application of multiculture activities for designing processes to bring language and culture, and instruction in English, into the classroom. (I)

**660. Internship in Bilingual/Bicultural Teaching. Cr. 2-12**  
Prereq: admission to bilingual internship. Offered for S and U grades only. Internship in a bilingual, multicultural setting; assessment of the cultural, educational, and linguistic needs of students of limited English-speaking ability. (T)

**670. Seminar in Cultural Awareness. Cr. 3**  
Understanding intergroup relations and the appreciation of cultural diversity in a multicultural society such as the United States. Selected topics offered on a semester or yearly basis. (W)

**685. Applied Linguistics: Issues in Bilingual Education. Cr. 3**  
Current major models of applied English linguistics, contrasting linguistics with special reference to the comparison of English and linguistic minority languages. (W)

## Business and Distributive Education (BDE)

**530. Business/Distributive Education Word Processing I: Typewriting. Cr. 3**

Prereq: touch typewriting knowledge. Principles and procedures for learning and teaching a basic and advanced process for using the typewriter to compose and copy business and personal materials. (F,S)

**532. Business/Distributive Education Methods: Typewriting. Cr. 3**

Prereq: TED 355, BDE 530 or consent of instructor; coreq: V E 541 or BDE 553. How to determine and develop necessary typewriting (keyboarding) skills for office occupations. Methods, materials, and equipment for teaching typewriting (keyboarding) and related skills. (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)

**538. Business/Distributive Education Word Processing IV. Cr. 3**

Principles and procedures for designing, teaching and evaluating a competency-based word processing program in a business or educational setting. (I)

**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)

**633. Special Problems in Business Education. Cr. 1-6(Max. 6, M.Ed.; max. 12, other advanced degree programs.)**

Prereq: business teaching experience. Special workshops and short term seminars in business subjects. (S)

## Counselor Education (CED)

**110. Introduction to Guidance and Counseling Services. Cr. 3**  
An overview of counseling and guidance theories, methodologies, and practices in various service settings. (F,W)

**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)

**150. Basic Helping Skills Development. Cr. 3**  
Prereq: CED 110 and 120. Attending, observing, listening and responding skills in counseling. Role-working as the vehicle by which students may practice the helping skills. (Y)

**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)

**570. Theory and Practice of Interpersonal Helping. Cr. 3**

For non-counseling majors. Introduction to theory and practice of interpersonal helping. Practice in interview techniques, basic helping skills, crisis intervention and referral procedures. (I)

**604. Student Personnel Work in Higher Education. Cr. 4**

An overview of guidance services appropriate for higher education. Variety of student types and the interaction of students and their environment. (Y)

**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)

**662. Workshop in Career Education. Cr. 1-8**

For teachers, counselors, principals and agency personnel who are responsible for career education. Emphasis on developing, evaluating and refining career education strategies (lessons, modules, or units). (I)

**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)

**675. Introduction to Human Sexual Behavior. Cr. 2**

Behavioral and attitude changes in sex behavior as it affects the role of the counselor and sex educator. (I)

**677. Behaviorism and Sex Counseling. Cr. 2-3**

Prereq: CED 675, 676. A consideration of behavioral approaches to sexual development. Principles of learning underlying diagnosis and treatment of sexual problems provide the foundation for understanding techniques such as desensitization, imagery, and conditioning. (I)

## 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 Philosophy of Education. Cr. 3**

Leading philosophies of education as they bear upon education as a profession and as a discipline. (S)

## 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)

**541. Mental Hygiene and Its Relation to the Problems of Education. Cr. 2-3**

Provides understanding of the necessary conditions underlying mental health, and a sense of what teachers can and cannot do to foster emotionally healthy and well-integrated personalities in children and youth. (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. (Y)

**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)

**631. Behavior Modification. Cr. 2-3**

Introduction to the systematic application of behavior modification and operant conditioning principles in the classroom and other social

settings. Identifying behavior problems, counting behavior, specifying techniques for either increasing or decreasing the frequency of behavior and evaluating results of those techniques. Primarily for classroom teachers. (I)

**632. Practicum in Educational Psychology. Cr. 1-6(Max. 6)**  
Closely supervised seminar-laboratory experiences to provide opportunities for evaluation and application of theory related to educational psychology. (Y)

**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)

**649. Mental Health and Sexuality. Cr. 2**  
Consideration of the role and function sex development plays during childhood, adolescence, and adulthood. Gender identity discussed. (I)

## 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. (F)

**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. 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)

**370. Teaching Creative Arts: Preprimary-8. Cr. 2**  
Objectives, teaching strategies, and the role of the creative arts in the elementary school curriculum. (I)

**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**

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)

**670. Fostering Creativity in the Elementary School Child. Cr. 3**

Ways and means of developing children's creative abilities in the teaching-learning process. The implications of creativity in educational experiences of children. (I)

## English Education (EED)

**520. Methods of Teaching English: Grades 7-12. Cr. 3**

Prereq: 18 credits in English beyond freshman composition; TED 516. Introduction to the purposes and methods of teaching English composition and literature in grades seven through twelve. (Y)

**612. English Composition in Secondary Schools. Cr. 3**

Prereq: EED 520 or teaching experience. Analysis of modes of writing; relationship of grammar and composition; integration with literature and reading; approaches to group and individualized instruction; relation of composition to perception, cognition, critical thinking, motivation, and self-awareness. (I)

**621. Linguistics and Learning. Cr. 3**

Prereq: directed or regular teaching. Intensive review of current linguistic theory; introduction to psycholinguistics application for teaching grammar, usage, and composition; development of teaching materials. (S)

**631. Literature for Adolescents. (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 (I 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)**

Prereq: I T 510 or 511. 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)**

Prereq: I T 512. 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)

**611. Systems Techniques in Educational Planning and Management. Cr. 4**

Prereq: I T 511. 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)

**613. Individualized Instruction. Cr. 3**

Individually paced course in the design and organization of individualized instruction. Current systems of individualized instruction, common individualized designs (including open curriculum), different bases for individualization, and specific designs in the preparation of individualized materials. (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)

**550. Introduction to Modern Languages in Secondary Schools: Methods I. Cr. 3**

Prereq. or coreq: TED 355 and EDP 331 or TED 515 and EDP 531. Fundamental theory and practice of modern foreign language instruction. Basic classroom management techniques and preparation of teaching devices. Students micro-teach lessons which emphasize the listening and speaking language skills. (I)

**551. Teaching Modern Languages in Secondary Schools: Methods II. Cr. 3**

Prereq: LED 550; coreq: TED 356. Foreign language teaching techniques and the preparation of teaching devices for student teaching. Students micro-teach lessons which emphasize the reading and writing language skills. (I)

**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**

Prereq: LED 652. 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)

**661. Internship in Teaching English as a Second/Foreign Language. Cr. 1-12**

Prereq: admission to TESL/TEFL Internship. Offered for S and U grades only. Internship in a TESL/TEFL setting; assessment of cultural, educational, and linguistic needs of students with limited English-speaking ability; implementation of programs to meet those needs. (I)

## Mathematics Education (MAE)

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

No graduate credit; credit only in College of Education. Basic concepts of elementary school mathematics; set, systems of numeration, mathematical systems, real numbers and their applications, introduction to algebra. (F,W)

**506. (MAT 517) Mathematics for Elementary School Teachers II. Cr. 3**

No graduate credit; credit only in College of Education. Introduction to geometry, topics in algebra, topics in probability and statistics, computer applications in elementary school mathematics. (F,W)

**510. (MAT 518) Mathematics for Middle and Junior High School Teachers I. Cr. 3**

No graduate credit; credit in College of Education only. Basic concepts of geometry; elementary concepts of topology; introduction to elementary functions and their applications. (F)

**511. (MAT 519) Mathematics for Middle and Junior High School Teachers II. Cr. 3**

Elementary functions and their applications; analytical geometry; intuitive concepts of differential and integral calculus; computer applications in middle and junior high school mathematics. (W)

**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. 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**  
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**  
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**  
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. 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**

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**

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**

Offered for S and U grades only. 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. Offered for S and U grades only. 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). 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. (SPD 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: MR/POHI. Cr. 3**

Specialized instructional approaches, evaluation, techniques, curriculum and instructional aids for the mildly- to profoundly-impaired learner. (Y)

**514. Behavior Management: MR/POHI. 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. (SPD 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. (SPD 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. (SPD 508) Phonetics. Cr. 3**

Multisensory study of sounds of the English language, emphasizing acoustic, physiologic, kinesiological approaches. (F)

**533. (SPD 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. (SPD 536) Clinical Practice in Speech Pathology. Cr. 2 (Max. 8)**

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. (SPD 532) Normal Acquisition and Usage. 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. Cr. 3**

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

**541. (SPM 544) Practicum in Audiology. (AUD 544). Cr. 1**

Prereq: SPM 450. No credit for graduate students in audiology. Material fee as indicated in *Schedule of Classes*. Supervised training and practice for clinical certification. (I)

**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)

**632. (SPD 632) Organization and Methods in Speech Pathology. Cr. 3**

Class organization, management, materials, teaching aids, techniques. (I)

**636. (SPD 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. (SPD 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)

**660. (SPD 660) Introduction to Articulation Disorders. Cr. 3**

Prereq: SED 530. An introduction to basic concepts related to acquisition and manifestations of articulation disorders in children and adults. (F)

**661. (SPD 661) Introduction to Stuttering. Cr. 3**

Prereq: SED 530. An introduction to basic concepts related to acquisition and manifestations of stuttering disorders in children and adults. (F)

**662. (SPD 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. (W)

**664. (SPD 664) Language Pathology: Etiology and Diagnosis. Cr. 3**

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

**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. 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)



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 are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET). Curriculum accreditation is based upon careful periodic appraisal of the faculty, educational program, and facilities of the College. This approval provides assurance of an up-to-date, high quality education pertinent to the engineering profession. Such accreditation is recognized by other universities, prospective employers, and state professional licensing agencies.

## Location of the College

The College is located in the heart of Detroit, Michigan, renowned as a center of automotive engineering and production. This industrial center provides a wealth of examples of modern engineering practice and opportunities to explore the latest in vehicle design and production, automation design, steel production, transportation planning, hydraulic and pneumatic controls, electric power generation, and computer design and production. The many industries of southeastern Michigan provide engineering students with rich and varied work experiences through full or part-time employment or through the Cooperative Education Program described on page 100.

The College is affiliated with eleven other schools and colleges of Wayne State University. The University setting, with its 25,000 students, provides a broad selection of educational opportunities on an interdisciplinary basis.

## Degree Programs

### *Bachelor of Science in*

- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering
- Metallurgical Engineering

### *Bachelor of Engineering Technology—with a major in*

- electrical/electronic engineering technology
- manufacturing/industrial engineering technology
- mechanical engineering technology

### *\* Master of Science in*

- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Electronics and Computer Control Systems
- Industrial Engineering
- Operations Research
- Mechanical Engineering
- Metallurgical Engineering

### *\* Doctor of Philosophy in*

- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Industrial Engineering
- Operations Research
- Mechanical Engineering
- Metallurgical Engineering

### *\* Certificate in Hazardous Waste Management*

\* For information consult the Wayne State University Graduate School Bulletin.

# BACHELOR OF SCIENCE

## Degrees in Engineering

### 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
Electives.....	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.

### 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 Undergraduate Programs 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 admissions 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 and a minimum of sixteen credits from a list of 200- and 300-level engineering science 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 science 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, 343 Mackenzie Hall, 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 potential in writing at Wayne State by taking the English Placement Examination. Students whose score on the English Placement Examination indicates need for additional instruction and practice in composition must elect and pass English 101 and/or English 102. This examination is not a replacement for the English Composition Proficiency Examination (see page 21).

### — 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 136 credits (138 credits for chemical or metallurgical engineering) 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, noting that 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 of this bulletin (pages 105-133). 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 20 of this Bulletin. 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 98. 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 page 99.

### — 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 biological course from an approved list of courses.

## — Socio-Humanistic 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 20 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. Students should consult an adviser concerning these restrictions.

## — English and Mathematics Proficiency

See page 20 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:** 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. Note that successful completion of the English Proficiency Examination is a prerequisite to English 305.

**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 Co-operative Education Program. In this program, full-time study terms are alternated with full-time work assignments in co-operating industries. The program may be entered at the beginning of the junior year. Special co-operative 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. Also, a limited number of internship scholarships sponsored by General Motors Corporation and the American Natural Resources Company are available on a competitive basis. Applications for these scholarships are available through the Assistant Dean's Office.

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 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.

# DIVISION OF ENGINEERING

## Academic Procedures

*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 16 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 (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 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 may 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. He/she should not make the request, however, unless he/she can provide evidence of extenuating circumstances which might be unknown to the Assistant Dean.

### 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 29,30 of this bulletin for University policies relating to repeating courses and credit by special examination.

## Withdrawal From Courses

General rules governing the withdrawal from courses and changes of program can be found on page 29. 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 of 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.

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 School Bulletin.

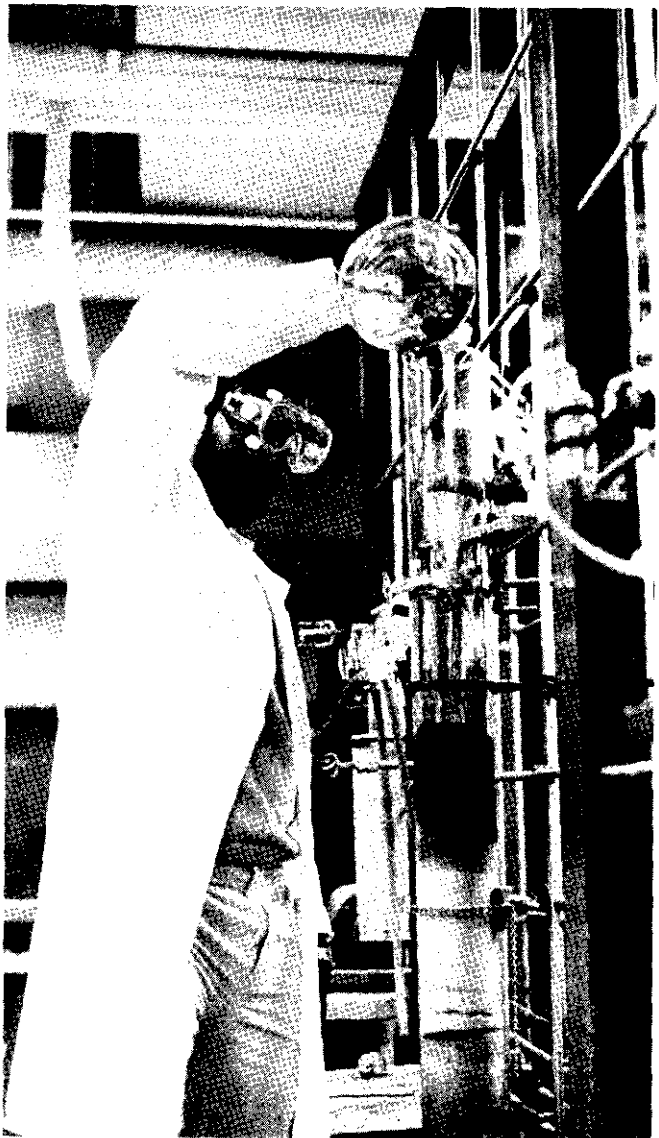
The Michigan Conference of Engineering Deans has entered into an agreement endorsing the exchange of guest privileges between ABET-accredited engineering curricula in Michigan. For further information call the Engineering Dean's Office; 577-3780.

## 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. Most 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.





# FINANCIAL AIDS

## Scholarships

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; see page 19 and page 103.

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

Ansui Corporation Scholarship  
BASF Wyandotte 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 and Metallurgical Engineering

Detroit Edison Co-op Scholarship  
The Detroit Edison Scholarships in Engineering  
Dow Chemical Corporation Co-op Scholarship  
Dow Corning Scholarship  
Ex-Cel-O Corporation Co-op Scholarship  
The Ford Motor Company Scholarship Program  
The General Motors Scholarship Program  
Giffels Associates, Inc., Scholarship  
The Graduate Professional Scholarship  
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

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

## College of Engineering Directory

*Dean* Room 1100, Engineering Building; 577-3775  
*Assistant Dean—Undergraduate Programs* Room 1100, Engineering Building; 577-3780  
*Associate Dean—Graduate Programs and Research* Room 1100, Engineering Building; 577-3861  
*Administrative Officer* Room 1100, Engineering Building; 577-3817  
*Director, Engineering Technology* 4855 Fourth Avenue; 577-0800  
*Director, Special Programs* Room 1100, Engineering Building; 577-3812  
*Coordinator, Cooperative Education* University Placement Office, Mackenzie Hall  
*Manager, Off-Campus Programs* Room 1100, Engineering Building; 577-4707  
*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  
*Industrial Engineering and Operations Research* Room 3100, Engineering Building; 577-3821  
*Mechanical Engineering* Room 2100, Engineering Building; 577-3845  
*Metallurgical Engineering* Room 1100, Engineering Building; 577-3800  
*Research Institute for Engineering Sciences* Room 1200, Engineering Building; 577-3867  
*Energy Center* Room 1100, Engineering Building; 577-3811  
*Bio-Engineering Center* Room 418, Health Sciences Building; 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.

Mailing address for all offices:

College of Engineering  
Wayne State University  
5050 Anthony Wayne Drive  
Detroit, MI 48202

# STUDENT ACTIVITIES AND ORGANIZATIONS

**The Engineering Student-Faculty Board** coordinates and is responsible for all organized student activities in the College. In addition, it sponsors certain college-wide programs including the College of Engineering Open House.

**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.

**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.

**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.

**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 Engineering  
Society of Automotive Engineers

## COURSES OF INSTRUCTION<sup>1</sup> (B E)

### 100. Introduction to the Profession of Engineering. (Lct: 4). Cr. 2

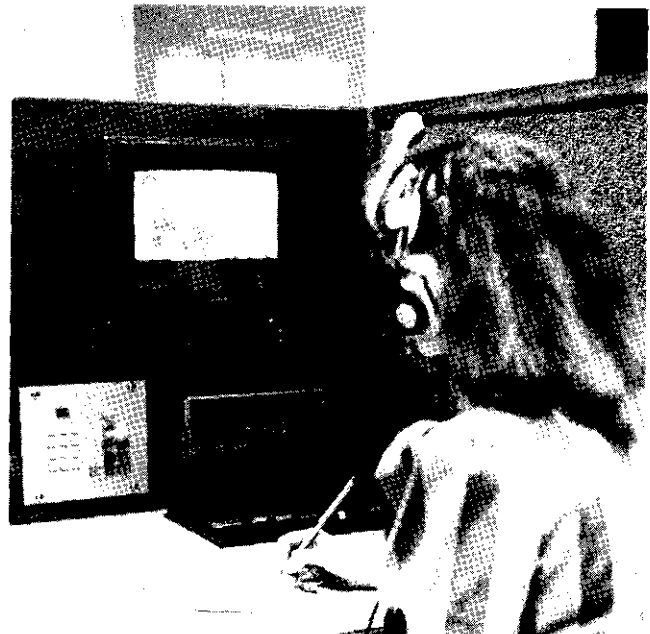
Required of all entering undecided engineering freshmen. An introduction to the profession of engineering. The engineering method and computation procedures. Problems, papers including a term paper required. (Y)

### 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)

### 350. Engineering Internship Record. (Ind: ). Cr. 0

Prereq: sophomore standing and consent of coordinator. Offered for S and U grades only. Engineering practice under supervision in cooperative education program. (T)



<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

# CHEMICAL ENGINEERING

Chairperson: R. H. Kummler

Associate Chairperson: J. H. McMicking

## Professors

H.G. Donnelly (Emeritus), E. Gulari, R.H. Kummler, R. Marriott, E. W. Rothe, S.K. Stynes

## Associate Professors

D.A. Crowl, C.B. Leffert (Emeritus), J.H. McMicking, R.W. Mickelson

## Assistant Professors

S. Ng, S.O. Salley

## Adjunct Professors

J. Jorne, J. Louvar, R. Powitz, B. Shorthouse, P. Warner

## Degree Programs

### Bachelor of Science in Chemical Engineering

- \* Certificate in Hazardous Waste Management
- \* Master of Science in Chemical Engineering
- \* 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 page 98.

**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 20), 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 20-31 and 98-102, 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 — Introduction to the University & its Libraries .....	1
MAT 201 — Calculus I .....	4
CHM 107 — Principles of Chemistry I .....	4
Visual and Performing Arts course .....	3
CSC 105 — Computer Science Laboratory for Engineers .....	1
Philosophy and Letters course .....	3
<b>Total:</b>	<b>16</b>

#### Second Semester

MAT 202 — Calculus II .....	4
PHY 217 — General Physics .....	4
CHM 108 — Principles of Chemistry II .....	5
American Society and Institutions course .....	3
Historical Studies course .....	3
<b>Total:</b>	<b>19</b>

### Sophomore Year

#### First Semester

	Credits
MAT 203 — Calculus III .....	4
PHY 218 — General Physics .....	4
MET 130 — Science of Engineering Materials .....	4
CHM 224 — Organic Chemistry I .....	4
<b>Total:</b>	<b>16</b>

#### Second Semester

MAT 204 — Calculus IV .....	4
CHE 230 — Thermodynamics I .....	3
CHE 280 — Material and Energy Balances .....	3
CHE 304 — Computational Methods in Engineering .....	3
IE 322 — Probability and Statistics in Engineering .....	3
CHM 236 — Organic Chemistry II: for Chemical Engineers .....	2
<b>Total:</b>	<b>18</b>

### Junior Year

#### First Semester

	Credits
CHE 322 — Measurements Laboratory .....	2
CHE 330 — Thermodynamics II: Chemical Equilibria .....	3
CHE 320 — Chemical Process Engineering I .....	4
CHM 544 — Physical Chemistry .....	4
MET 260 — Introduction to Metallurgical Engineering .....	3
ENG 305 — Technical Communication I .....	3
<b>Total:</b>	<b>19</b>

\* For information consult the Wayne State University Graduate Bulletin.

*Second Semester*

ENG 306 – Technical Communication II.....	3
* Life Science course .....	3
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
Foreign Culture course.....	3
	Total: 18

**Senior Year**

*First Semester*

	Credits
Social Science course.....	3
ECE 330 – Introduction to Electrical Circuits.....	3
M E 240 – Statics.....	3
CHE 420 – Chemical Process Engineering II.....	3
CHE 426 – Chemical Engineering Seminar II.....	0
CHE 460 – Process Dynamics and Simulation.....	3
Chemistry Technical Elective .....	2
	Total: 17

*Second Semester*

C E 360 – Elementary Mechanics of Materials.....	3
ECE 331 – Electrical Circuits I: Laboratory.....	1
CHE 486 – Chemical Engineering Seminar III.....	1
Chemical Engineering Technical Elective.....	3
CHE 480 – Chemical Process Integration.....	3
Chemical Engineering Design Elective .....	4
	Total: 15
TOTAL CREDITS.....	138

**COURSES OF INSTRUCTION<sup>1</sup> (CHE)**

**200. Introduction to Chemical Engineering. Cr. 4**

Prereq: MAT 201, CHM 108. No credit for chemical engineering majors. The field of chemical engineering, including stoichiometry, industrial equipment, fluid flow, heat transfer, evaporation, distillation, absorption and extraction and other unit operations; brief overview of economics and plant design. (1)

**230. Thermodynamics I. Cr. 3**

Prereq: MAT 202 and PHY 217. Material fee as indicated in *Schedule of Classes*. An introduction to the first and second laws of thermodynamics. Conversion between internal, chemical and mechanical energies. (F,W)

**280. Material and Energy Balances. Cr. 3**

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: CSC 105; coreq: MAT 204. Student computer account required. 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 230. 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. 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 II: Chemical Equilibria. Cr. 3**

Prereq: CHE 230, 280, MAT 204. 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 204. 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. I (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. 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. Chemical Process Engineering III: Economics and Design. Cr. 3**

Prereq: CHE 380 and 340. Student computer account required. The overall chemical process. Economic analysis of the process and the optimum-economic design of process. (F)

**426. Chemical Engineering Seminar II. Cr. 0**

Prereq: CHE 386. Required for graduation. Offered for S and U grades only. Material fee as indicated in *Schedule of Classes*. (T)

**456. Chemical Engineering Senior Research. Cr. 4-6**

Prereq: CHE 386; coreq: 426. Student computer account required. Research project. 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

\* Must be an approved upper level course.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

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 204, 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. (MET 509) Physical Ceramics. Cr. 3**

Prereq: MET 260 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. 3**

Prereq: M E 420 or CHE 320. Introduction to operating principles and design features of modern boilers, furnaces, gas turbine combustors and advanced continuous combustion systems. Application of basic thermodynamic and heat transfer calculations to testing and design. Classified as a CHE Design elective. (B)

**532. (OE 732) 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)

**535. Polymer Engineering. (MET 535). Cr. 2**

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. (MET 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 Industrial 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. Chemical Engineering design elective. (F)

**552. (OE 720) 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. Classified as a CHE design elective. (Y)

**554. Law and Administration in Industrial Waste Management. 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. Chemical Engineering chemistry elective. (F)

**555. (OE 705) Environmental Science I: Introduction to Air Pollution. Cr. 3**

Prereq: CHE 230 and MAT 204. 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. Classified as a CHE chemistry elective. (W)

**557. Safety in the Laboratory. 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. Classified as a Chemistry elective. (F)

**558. Land and Ocean 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. Classified as a CHE design elective. (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. Classified as a CHE design elective. (I)

**560. (MET 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. Classified as a CHE Design elective. (B)

**561. (MET 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)

**563. Tribology. (MET 555). Cr. 2**

Prereq: CHM 544, CHE 340. The laws of friction, the nature of polymeric and solid surfaces and their frictional interaction and the process of lubrication. Chemical Engineering Chemistry elective. (B)

**566. Equilibrium-Stage Separation Operations. Cr. 3**

Prereq: CHE 304, 380. Design of units for the principles involved in separation of mixtures with equilibrium stage operations, including distillation and absorption operations. Classified as a CHE design elective. (B)

**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. (MET 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. (MET 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. Chemical Engineering design elective. (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)

**605. Design of Chemical Process Experiments II. Cr. 3**

Prereq: CHE 505. Review of chemical process industry techniques in evolutionary operations, mixture design, regression analysis strategy, critical path methods and time series analysis. Chemical Engineering design elective. (W)

**613. (NFS 413) Food Preservation. (NFS 713). Cr. 3 or 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)

**625. Advanced Process Dynamics and Simulation. Cr. 2**

Prereq: CHE 460. Adaptation of the principles of process analysis and simulation to complex chemical processing systems. Discussion of topics related to process computer control. Classified as a CHE Design elective. (B)

**635. Polymer Processing. (MET 635). Cr. 2**

Prereq: MAT 204. 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)

**640. Optical Spectroscopy in Chemical Engineering Research. Cr. 3**

Prereq: CHM 544, CHE 340. Material fee as indicated in *Schedule of Classes*. Principles of operation for laser based techniques to measure physical and chemical properties, such as photon correlation spectroscopy, laser Doppler velocimetry, Fraunhofer diffraction analysis, Raman spectroscopy and Fourier transform infrared spectroscopy. Classified as a Chemistry elective. (I)

**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)

**647. Fermentation Technology. Cr. 2**

Prereq: CHE 645. Design and operation of fermentors; extends subject matter introduced in CHE 645. Chemical Engineering design elective. (I)

**650. Transport Phenomena in Living Systems. Cr. 3**

Prereq: CHE 380, 340. Application of momentum and mass transfer to mammalian systems; techniques of modelling of living processes. Chemical Engineering Chemistry elective. (I)

**651. Public Issues of Hazardous Waste. Cr. 2**

Prereq: senior standing. Offered for S and U grades only. No credit in engineering graduate degree programs. Discussion and analysis of current issues related to hazardous waste control. Topics to be announced in *Schedule of Classes*. Classified as a Chemistry Elective. (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)

**665. Electrochemical Engineering. (MET 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)

**680. Chemical Process Analysis and Improvement. Cr. 3(Max. 6)**

Prereq: CHE 420 or equiv. Course may be repeated for different content with consent of chairperson. Case studies of the analysis of existing chemical processes. Visiting industrial representatives will bring actual problems to the classroom and describe the industrial approach to their solution. Students will apply similar methods to real problems posed by their instructor. Chemical Engineering design elective. (I)

**685. (MET 685) Corrosion. Cr. 3**

Prereq: senior standing in engineering. Material fee as indicated in *Schedule of Classes*. 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. Classified as a 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

*Chairperson:* S. Khasnabis

## *Professors*

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

## *Associate Professors*

H. M. Aktan, T. T. Arciszewski, T. M. Heidtke, T. Kagawa

## *Assistant Professors*

R. A. Dusseau, C. J. Miller

## 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; and they have traditionally been leaders in many aspects of urban development. 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 construction of structural systems; water resources planning; the treatment and ultimate disposal of noxious solid and liquid wastes; design of building systems which will provide adequate housing for urban dwellers, commerce and industry; the development of adequate transportation systems; construction 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, transportation, hydraulics, and 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 instruction and research, and 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 page 98.

**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 20), 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 20-31 and 98-102, 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. However, students should consult an academic adviser for verification of current requirements.

### Freshman Year

#### *First Semester*

	<i>Credits</i>
MAT 201 — Calculus I .....	4
CHM 107 — Principles of Chemistry I .....	4
CSC 105 — Fortran Laboratory for Engineers .....	1
C E 101 — Introduction to Civil Engineering .....	1
UGE 100 — Introduction to the University & its Libraries .....	1
Visual and Performing Arts course .....	3
Philosophy and Letters course .....	3
<b>Total:</b>	<b>17</b>

#### *Second Semester*

MAT 202 — Calculus II .....	4
PHY 217 — General Physics .....	4
MET 130 — Science of Engineering Materials .....	4
American Society and Institutions course .....	3
Historical Studies course .....	3
<b>Total:</b>	<b>18</b>

### Sophomore Year

#### *First Semester*

	<i>Credits</i>
MAT 203 — Calculus III .....	4
PHY 218 — General Physics .....	4
C E 240 — Statics .....	3
Life Sciences course .....	3
I E 322 — Probability and Statistics in Engineering .....	3
<b>Total:</b>	<b>17</b>

#### *Second Semester*

MAT 204 — Calculus IV .....	4
C E 325 — Applied Fluid Mechanics .....	3
C E 360 — Elementary Mechanics of Materials .....	3
CHE 304 — Computational Methods in Engineering .....	3
ENG 305 — Technical Communication I .....	3
<b>Total:</b>	<b>16</b>

\* For information consult the Wayne State University Graduate Bulletin.

## Junior Year

### First Semester

	Credits
C E 401 — Civil Engineering Analysis .....	3
Social Sciences course .....	3
C E 430 — Structures I .....	2
C E 445 — Civil Engineering Materials .....	3
ECE 330 or ECE 331	
—Introduction to Electrical Circuits .....	3
—Electrical Circuits I: Laboratory .....	1
M E 340 — Dynamics .....	3
Total: 18	

### 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
Foreign Culture requirement .....	3
Total: 20	

## Senior Year

### First Semester

	Credits
C E 422 — Environmental Engineering .....	3
C E 436 — Reinforced Concrete I .....	3
C E 464 — Transportation Design .....	4
* Civil Engineering Design Elective .....	3
ENG 306 — Technical Communication II .....	3
Total: 15	

### Second Semester

* Civil Engineering Design Elective .....	3
C E 485 — Engineering Economy & Decision Theory in C E Systems .....	3
* Technical Electives .....	9
Total: 15	

TOTAL CREDITS ..... 136

**Socio-Humanistic Electives:** See page 100 for socio-humanistic requirements.

**Science Electives:** Civil Engineering students are required to complete four credits of science electives. Faculty advisers should be consulted for specific recommendations.

**Technical Electives:** Civil Engineering students are required to complete at least nine credits of technical electives. In addition, students are required to complete two courses from C E 551, C E 528 and/or design elective courses. Students should consult their faculty advisers for an appropriate list of technical and design elective courses.

\* C E 528 or C E 551 is required.

## COURSES OF INSTRUCTION<sup>1</sup> (C E)

### 101. Introduction to Civil Engineering. Cr. 1

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. 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. (Let: 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. 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. 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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations



**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 process encountered in the treatment of water and waste water. (I)

**525. Sanitary Engineering Laboratory. (Lct: 2; Lab: 4). Cr. 3**

Prereq: C E 421. Material fee as indicated in *Schedule of Classes*. Physical, chemical and biological analyses of water and waste water and discussion and interpretation of results as they pertain to treatment processes and stream pollution control. (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. (W)

**558. (CHE 558) Land and Ocean 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. Classified as a CHE design elective. (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. Classified as a CHE design elective. (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. (B)

**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. (B)

**613. Engineering Hydraulics. Cr. 3**

Prereq: C E 325 or equiv. Student computer account required. Fluid mechanics applied to engineering problems. Dimensional analysis and similitude. Open channel flow, non-uniform flow and hydraulic structures. (W)

**615. Hydrology. Cr. 3**

Prereq: C E 613. Student computer account required. Precipitation and runoff, probability applications to hydrological data. Stream flow and storage reservoirs; flood control and flood routing; drainage; ground water and well flows; evaporation and water budgets. (B)

**619. Ground Water. Cr. 4**

Prereq: C E 325. Historical background, aquifers and aquitards, saturated and unsaturated flow, sources of ground water contamination, artificial recharge of ground water, development of ground water basins and efficient use of ground water resources. (Y)

**633. Advanced Structural Analysis I. Cr. 3**

Prereq: C E 431. Student computer account required. Effect of axial loads on stiffness of flexural members. Buckling of trusses and rigid frames. Introduction to plastic analysis. Matrix method of analysis. Computer applications. (F)

**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. (B)



# ELECTRICAL AND COMPUTER ENGINEERING

*Chairperson:* Michael P. Polis

*Associate Chairpersons:* Harpreet Singh, Yudah Wallach

## *Professors*

R. D. Barnard, F. E. Brammer (Emeritus), J. Meisel, M. B. Scherba (Emeritus), M. P. Shaw, H. Singh, Y. Wallach, F. H. Westervelt

## *Associate Professors*

R. Arrathoon, J. S. Bedi, R. F. Erlandson, P. Siy, J. R. Woodyard

## *Assistant Professor*

M. Aslam

## *Lecturer*

R. R. Johnston

## *Adjunct Professor*

M. A. Rahimi

## *Adjunct Associate Professors*

D. R. Schneider, A. K. Sood

## *Adjunct Assistant Professors*

P. M. Nefcy, A. R. Spitzer

## Degree Programs

*Bachelor of Science in Computer Engineering*

*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 large computers, minicomputers, microprocessors, and other data processors, and their utilization in a growing range of system applications; the growing use of data communication and sophisticated satellite communication systems; the discovery 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 growing application of electronics to health care and diagnostics (such

\* For information consult the Wayne State University Graduate Bulletin.

as noninvasive measurements and ultrasound imaging); and energy conversion devices such as solar cells.

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, 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 bioengineering. 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 page 98.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Science degree must complete 137 credits in course work, including satisfaction of the University General Education Requirements (see page 20), 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 20-31 and 98-102, 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. 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 permit the student to specialize in one or more areas. These electives are chosen under the guidance of a faculty adviser. Alternately, the student may elect the computer option, in which a planned program of computer engineering courses replaces the electives and a few of the required courses in the regular program.

## ELECTRICAL ENGINEERING CURRICULUM

### Freshman Year

#### First Semester

	<i>Credits</i>
CHM 107 — Principles of Chemistry I.....	4
CSC 206 — Introduction to Fortran.....	3
MAT 201 — Calculus I.....	4
Visual and Performing Arts course.....	3
UGE 100 — Introduction to the University & its Libraries.....	1
	Total: 15

#### Second Semester

MAT 202 — Calculus II.....	4
PHY 217 — General Physics (with lab).....	5
ECE 262 — Introduction to Microcomputers.....	4
Historical Studies course.....	3
	Total: 16

### Sophomore Year

#### First Semester

	<i>Credits</i>
MAT 203 — Calculus III.....	4
PHY 218 — General Physics (with lab).....	5
M E 240 — Statics.....	3
MET 130 — Science of Engineering Materials.....	4
Basic Social Science course.....	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 — Technical Communication I.....	3
MAT 204 — Calculus IV.....	4
	Total: 17

### Junior Year

#### First Semester

	<i>Credits</i>
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 305 — Technical Communication II.....	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 — Microcomputer Interfacing Design.....	4
Engineering Science Elective.....	3
	Total: 17

## Senior Year

### First Semester

	Credits
ECE 447 — Control Systems I .....	4
ECE 470 — Introduction to Communication Theory.....	4
Life Science course .....	3
Foreign Culture course.....	3
American Society and Institutions course .....	3
Total:	17

### Second Semester

ECE 480 — Electromagnetic Fields and Waves .....	4
Electrical and Computer Engineering Electives .....	8
ECE Design Laboratory Elective .....	2
Philosophy and Letters course .....	3
Total:	17

TOTAL CREDITS ..... 137

**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.

**Engineering Science Elective:** Choose from the department-approved list.

**Laboratory Requirements:** At least twelve credits of laboratory courses are required. These credits include two credits in physics laboratories, one laboratory credit in ECE 262, plus the nine credits of listed ECE laboratories.

**Course Material Fee:** A course material fee is charged for laboratory courses using expendable materials.

## Bachelor of Science in Computer Engineering

**Admission Requirements:** see page 98.

**DEGREE REQUIREMENTS:** The undergraduate curriculum for the Bachelor of Science in Computer Engineering is the same as the Bachelor of Science in Electrical Engineering curriculum given above, with the following exceptions:

## Senior Year

### First Semester

	Credits
<i>Substitute the following for ECE 447 and 470:</i>	
ECE 461 — Introduction to Logical Design of Computers .....	4
ECE 468 — Computer Organization .....	4

### Second Semester

*The following course may be taken as an alternate to ECE 480:*

ECE 470 — Introduction to Communication Theory.....	4
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## COURSES OF INSTRUCTION<sup>1</sup> (ECE)

**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; prereq. or coreq: MAT 204. 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**  
Prereq. or 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 304. 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. 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: MAT 204; prereq. or coreq: ECE 361. 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)

**400. Electrical and Computer Engineering Laboratory. (Lab: 3). Cr. 1**  
Prereq: senior standing; approval of project outline by faculty member prior to registration. Material fee as indicated in *Schedule of Classes*. Experimental project under supervision of faculty member. (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,

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

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; coreq: 460; 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. Microcomputer Interface Design. (Lct: 4). Cr. 4**

Prereq: ECE 361; coreq: 434. 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. 1-2(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. (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. (Lct: 4). Cr. 4**

Prereq: M E 340 or ECE 433. 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)

**540. Electrical Machinery: Principles and Applications. (Lct: 4). Cr. 4**

Prereq: ECE 433, 480. Transformers and rotating electromagnetic machines. Steady-state and transient response of d.c. machines, steady-state operation of three-phase induction and synchronous machines, single-phase induction machines. (I)

**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)

**546. Electrical Energy by Direct Conversion. (Lct: 4). Cr. 4**  
Prereq: ECE 357 and 480. Methods of converting thermal, nuclear, solar and chemical energy directly into electrical energy. Characteristics of thermoelectric devices and materials, converters, magnetohydrodynamic engines, photovoltaic devices and fuel cells. (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 541) 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)

**565. (CSC 638) Microprogrammed Computer Design. (Lct: 4). Cr. 4**  
Prereq: CSC 531 or ECE 460. Student computer account required. Introduction to microprogramming techniques and discussion of their implementation. Consideration of control word formats and microinstruction coding. Use of microprogrammable computers to emulate other computers. Implementation of microprogramming including control-store timing, capacity and cost. (I)

**568. Switching Circuits. (Lct: 4). Cr. 4**  
Prereq: ECE 468. Threshold, symmetric functions, and iterative networks. Multivalued and fuzzy logic. Complex sequential machine realization. State equivalence and minimization. Automata and linear machines. State identification and fault detection. (T)

**570. Analog and Digital Communication Circuits. (Lct: 4). Cr. 4**  
Prereq: ECE 457 and 470. Student computer account required. Amplitude, frequency, pulse modulation and digital modulation. Detection, operational amplifiers; introduction to linear integrated circuits. Digital modulation. (I)

**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. Bioinstrumentation. (ME 618)(IE 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)

**644. Linear Dynamic Systems. (Lct: 4). Cr. 4**  
Prereq: ECE 448, 547. Student computer account required. General axiomatic formulation of dynamical systems, models using vector differential and difference equations, state variables, canonical forms, input-output descriptions. Linear system response. Controllability, observability. Introduction to stability theory and classical optimal control formulations. (Y)

**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)

**665. Fault-Tolerant Computer Architecture. (CSC 632). (Lct: 4). Cr. 4**

Prereq: ECE 568 or CSC 531. Student computer account required. Survey of current literature in fault-tolerant design and fault diagnosis of combinational circuits. Use of redundancy in the form of majority logic or interwoven logic to prevent errors in spite of certain types of faults. Consideration of graphical and calculus methods for determining fault-finding experiments. Multi-valued and threshold logic. (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 ENGINEERING AND OPERATIONS RESEARCH

Office: 640 Putnam

Chairperson: Leonard R. Lamberson

## Professors

Kailash C. Kapur, H. Allan Knappenberger, Leonard R. Lamberson, Francis E. Plonka, Vinod K. Sahney

## Associate Professor

Kenneth R. Chelst

## Assistant Professor

Hyun-Myung Shin

## Degree Programs

### *Bachelor of Science in Industrial Engineering*

\* *Master of Science in Industrial 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*

Industrial engineers are involved in the design of systems related to producing a product or providing a service. Relevant to this work, industrial is interpreted to include manufacturing, financial, retail, health, governmental and other service industries.

In manufacturing organizations, the industrial engineer is involved in the design of a wide variety of systems. These systems may be as small as a work station consisting of one man and a machine or they may involve an entire plant, including the systems to control the production, inventory and quality of complex products.

The skills of the industrial engineer are also useful in the design of better systems to care for hospital patients, provide faster and more accurate mail distribution, provide fast and accurate airline reservations, control large space projects, and reduce air and water pollution. Industrial engineers are being called upon in increasing numbers to design systems which provide services beneficial to a society at a reasonable cost.

There are many similarities in the academic preparation for various careers in engineering. All engineers are required to take courses in mathematics, physics, chemistry, mechanics, materials, and electricity. There are also important differences in the academic preparation for each of the engineering disciplines. Since many of the systems of concern to the industrial engineer involve a human component, an understanding of the physiological and psychological capabilities of humans is important. Thus, the industrial engineering curriculum includes courses in human performance. To cope with this increased

\* For information consult the Wayne State University Graduate Bulletin.

complexity a special set of mathematical tools and a methodology have emerged in recent years, a body of knowledge labeled operations research, the importance of which to the discipline of industrial engineering, is reflected in the name of this department. The computer has also become a powerful tool in the design, management and control of these complex systems. Consequently, the use of the computer and the design of computer based systems is an important component of many undergraduate courses.

## Bachelor of Science in Industrial Engineering

**Admission Requirements:** see page 13.

**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 20), 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 20-31 and 98-102, 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.

### Freshman Year

#### First Semester

	<i>Credits</i>
MAT 201 — Calculus I.....	4
CHM 107 — Principles of Chemistry I.....	4
Foreign Culture course.....	3
UGE 100 — Introduction to the University & its Libraries.....	1
Historical Studies course.....	3
<b>Total:</b>	<b>15</b>

#### Second Semester

MAT 202 — Calculus II.....	4
PHY 217 — General Physics.....	4
MET 130 — Science of Engineering Materials.....	4
CSC 105 — Fortran Laboratory for Engineers.....	1
American Society and Institutions course.....	3
<b>Total:</b>	<b>16</b>

### 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
CSC 102 — Computer Science I.....	4
<b>Total:</b>	<b>18</b>

#### Second Semester

MAT 204 — Calculus IV.....	4
ENG 305 — Technical Communication I.....	3
CHE 230 — Thermodynamics I.....	3
M E 340 — Dynamics.....	3
ECE 262 — Introduction to Microcomputers.....	4
<b>Total:</b>	<b>17</b>

### Junior Year

#### First Semester

I E 556 — Operations Research I.....	4
I E 487 — Engineering Economy.....	3
I E 312 — Work Design and Measurement.....	4

ECE 330 — Introduction to Electrical Circuits.....	3
Philosophy and Letters course.....	3
<b>Total:</b>	<b>18</b>

#### Second Semester

I E 525 — Engineering Data Analysis.....	4
I E 431 — Production Control.....	4
CHE 304 — Computational Methods in Engineering.....	3
ENG 306 — Technical Communication II.....	3
Social Sciences course.....	3
ECE 331 — Electrical Circuits Laboratory.....	1
<b>Total:</b>	<b>18</b>

### Senior Year

#### First Semester

C E 360 — Elementary Mechanics of Materials.....	3
I E 341 — Systems Simulation.....	4
I E 311 — Human Factors in Design.....	4
Visual and Performing Arts course.....	3
Elective.....	3
<b>Total:</b>	<b>17</b>

#### Second Semester

I E 433 — Facilities Design.....	4
Life Sciences course.....	3
I E Elective.....	3
I E 441 — Computer Aided Manufacturing I.....	4
Technical elective.....	3
<b>Total:</b>	<b>17</b>

TOTAL CREDITS..... 136

## COURSES OF INSTRUCTION<sup>1</sup> (I E)

### 311. Human Factors in Design. Cr. 4

Prereq: I E 322. Student computer account required. Anthropometric, physiologic, psychologic and biomechanical characteristics of people which affect the performance of man-machine systems. Sensory, information processing and motor abilities of people. Systematic consideration of human factors in engineering. A design project is required. (Y)

### 312. Work Design and Measurement. Cr. 4

Prereq: I E 322. Control, operation and design of manned industrial and service systems. Analysis and evaluation of processes and operations. Methods and techniques to measure work performance and strain of the human operator. Principles and procedures to design and operate systems that involve people for maximal safety, job satisfaction and efficiency. (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. 4

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, stresses, energy, tolerances in such processes as forging, casting, welding and metal cutting. Metrology, automation, cutting forces and cutting speeds. Lab phase includes industrial plant visits, hands-on experience in the machine shop with projects such as metal removal rates, cutting forces, machine-tool demonstrations and films of manufacturing operations.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations



- (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. Production Control. Cr. 4**  
Prereq: I E 341, 556. 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 556, 587. 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: I E 341, ECE 262 and ECE 330. Student computer account required. Material fee as indicated in *Schedule of Classes*. 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)
- 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. Cr. 4**  
Prereq: ECE 430 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. Cr. 4**  
Prereq: M E 340 or ECE 433. 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)
- 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)
- 577. Operations Research II. Cr. 4**  
Prereq: I E 556. Student computer account required. Advanced concepts in deterministic modeling. Network models and algorithms
- and formulation of integer and nonlinear programming models. Advanced concepts in applied probability. Decision analysis, Markov chains, and decision processes. (I)
- 587. Engineering Economy. Cr. 4**  
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)
- 618. (ECE 618) Bioinstrumentation. 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 531 or I E 533. Fundamental theories and concepts in the design and operation of production systems for manufacturing and service organization. (W)
- 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)
- 644. (CSC 618) Simulation Languages and Methodology. Cr. 3**  
Prereq: CSC 518 and MAT 221. Student computer account required. In-depth study of simulation languages and software for discrete event and combined models. Issues in simulation methodology including random variate generation, model calibration, model validation and data acquisition in sample systems. (I)

# MECHANICAL ENGINEERING

*Chairperson:* K. A. Kline

*Associate Chairperson:* T. Singh

## *Professors*

A. Akay, C. N. DeSilva, 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*

D. D. Ardayfio, M. G. Koenig, G. P. Loweke (Emeritus), E. C. Zobel (Emeritus)

## *Assistant Professors*

J. C. Ku, M. C. Lai, S. A. Lantz, H. M. Uras, A. A. Zeid

## *Adjunct Professors*

R. S. Levine, E. M. Petrick, E. A. Saibel

## *Adjunct Associate Professors*

D. Bowen, F. Einaudi, D. Hrovat, D. Viano

## *Adjunct Assistant Professors*

R. Haut, T. Khalil, J. Tustaniwskyj

## 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 diverse and virtually unlimited. The broad variety of career possibilities includes research and development, design analysis and synthesis, manufacturing and production engineering, testing, sales engineering, maintenance and administration. The challenge of a mechanical engineer may lie in the perfection 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.

These fields include such important areas as biomechanics, energy conversion, combustion engines, emissions controls, solar energy, computer graphics, structural analysis, automatic controls, vehicle dynamics and design, continuum mechanics, fluid dynamics, environmental design, mechanisms, acoustics and noise control, and optimum mechanical design. Faculty members in the Department are currently engaged in state-of-the-art research and teaching 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 page 13. 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 136 credits in course work, including the University General Education Requirements (see page 20), 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 20-31 and 98-102, respectively. Non-engineering entries, cited below by subject rather than by individual course number, indicate courses to be selected in fulfillment of University General Education Requirements.

A minimum of three elective credits in an engineering science cognate course, which is defined as an engineering course taught in the College which is not in the department in which the degree is being sought, is required. (Courses cross-listed with the major department may be used to satisfy this elective.)

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

<i>First Semester</i>	<i>Credits</i>
MAT 201 — Calculus I .....	4
CHM 107 — Principles of Chemistry .....	4
M E 114 — Engineering Graphics .....	2
Historical Studies course .....	3
CSC 105 — Fortran Laboratory for Engineers .....	1
American Society and Institutions course .....	3
UGE 100 — Introduction to the University and its Libraries .....	1
	Total: 18

\* For information consult the Wayne State University Graduate Bulletin.

*Second Semester*

MAT 202 — Calculus II.....	4
PHY 217 — General Physics.....	4
M E 100 — Introduction to Mechanical Engineering.....	2
MET 130 — Science of Engineering Materials.....	4
Foreign Culture course.....	3
Total:	17

**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
Basic Social Science course.....	3
Total:	17

*Second Semester*

M E 360 — Elementary Mechanics of Materials.....	3
M E 340 — Dynamics.....	3
M E 220 — Thermodynamics I.....	3
MAT 204 — Calculus IV.....	4
ECE 330 — Introduction to Electrical Circuits.....	3
Total:	16

**Junior Year**

*First Semester*

ECE 331 — Electrical Circuits I: Laboratory.....	1
M E 345 — Manufacturing Processes.....	4
M E 330 — Fluid Mechanics.....	4
M E 320 — Thermodynamics II.....	3
M E 341 — Vibrations I.....	4
ENG 305 — Technical Communication I.....	3
Total:	19

*Second Semester*

M E 348 — Design of Machine Elements.....	4
M E 440 — Analysis and Control of Dynamic Systems.....	4
M E 491 — Measurements, Instrumentation & Data Analysis Lab.....	2
CHE 304 — Computational Methods in Engineering.....	3
Philosophy and Letters course.....	3
ENG 306 — Technical Communication II.....	3
Total:	19

**Senior Year**

*First Semester*

M E 445 — Mechanical Engineering Design I.....	4
M E 493 — Mechanical Systems and Test Planning Laboratory.....	2
M E 420 — Heat Transfer.....	3
Visual and Performing Arts course.....	3
Technical Elective.....	3
Total:	15

*Second Semester*

M E 450 — Mechanical Engineering Design II.....	4
Life Science course.....	4
Technical Electives.....	7
Total:	15
TOTAL CREDITS.....	136

**Technical Electives:** Technical electives are restricted to courses in the College of Engineering and at least two must be selected from the Mechanical Engineering Department at the 500 level.

**COURSES OF INSTRUCTION<sup>1</sup> (M E)**

**100. Introduction to Mechanical Engineering. Cr. 2**

Prereq: CSC 105. Research activities of faculty, history of the field, professional society activities, ethics, and product liability. Problem solving, team design projects, tours of engineering facilities, films, industrial tours and presentation of senior project results. (W)

**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)

**220. Thermodynamics I. Cr. 3**

Prereq: MAT 202. 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. (T)

**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, 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. 4**

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

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

harmonic excitation: vibration isolation, critical speeds of shafting, systems with two degrees of freedom. Introduction to vibrations of continuous media. (F,W)

**345. Manufacturing Processes I. (I E 335). Cr. 4**

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, stresses, energy, tolerances in such processes as forging, casting, welding and metal cutting. Metrology, autoegrees of freedom. Introduction to vibrations of continuous media. r efficiency. nsional objects and revolution of lines and surfaces. nd child abuse. onsent of instructor. s of some areas. in the tax law of tomorrow. QUOTE > rights, death penalty. (F,W)

**347. 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)

**348. Design of Machine Elements. Cr. 4**

Prereq: M E 360. Analysis and design of common mechanical elements such as gears, springs, clutches, brakes, shafts, belts, bearings, etc. Problem laboratory for more complex design problems and for introduction to computer-aided design. Limitations on design imposed by safety, manufacturability, cost and material properties. (F,W)

**360. Elementary Mechanics of Materials. 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. 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)

**440. Analysis and Control of Dynamic Systems. Cr. 4**

Prereq: MAT 204 and M E 340. 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 frequency domain methods. Introduction to state-space concepts. (F,W)

**445. Mechanical Engineering Design I. Cr. 4**

Prereq: M E 348, 341, 330, 420, 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. Mechanical Engineering Design II. Cr. 4**

Prereq: M E 348, 445. Student computer account required. 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: ECE 330, ECE 331, M E 340, consent of chairperson. Student computer account required. 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 and consent of chairperson. Student computer account required. 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)

**505. Applied Finite Element Methods. Cr. 4**

Prereq: M E 360 or equiv. Review of solid mechanics, stress-strain relations, Matrix stiffness methods, truss elements, assembly procedures, boundary conditions, stress computation. Energy formulations. Beam, plate and solid elements. (I)

**510. Engineering Physiology. (ECE 510) (I E 510). Cr. 4**

Prereq: ECE 433 or M E 340. The basic principles of human physiology presented from the engineering viewpoint. Bodily functions, their regulation and control discussed in quantitative terms and

- illustrated by simple mathematical models when feasible. (F)
- 516. Biomechanics I. (ECE 516) (I E 516). Cr. 4**  
Prereq: ECE 433 or M E 340. 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)
- 524. Industrial Combustion Systems. (CHE 524). Cr. 3**  
Prereq: M E 420 or CHE 320. Introduction to operating principles and design features of modern boilers, furnaces, gas turbine combustors, and advanced continuous combustion systems. Application of basic thermodynamics and heat transfer calculations to testing 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)
- 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. 3**  
Prereq: senior standing. Material fee as indicated in *Schedule of Classes*. Design, analysis and synthesis of passenger vehicles and their major subsystems. (B:F)
- 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. 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)
- 551. Optimum Design of Mechanical Systems I. Cr. 4**  
Prereq: M E 345 or equiv. Student computer account required. Analytical and numerical methods for the optimum design of mechanical systems. Linear programming, simplex, exhaustive search, method of steepest descent, Lagrange multipliers. Introduction to geometric programming. Practical examples in the design of machines and structures. (B:F)
- 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. (B:F)
- 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)
- 564. Applied Plasticity. Cr. 4**  
Prereq: M E 360. Introduction to the theory of plasticity. General approach to stress analysis in plasticity. Empirical equation to stress-strain curves. Three-dimensional stress system. Mohr's circles for three-dimensional stress systems. Yield criteria of metals. Prandtl-Reuss equations. Levy-Mises equations. Methods of determining work-hardening characteristics. Elementary analyses of the elastic-plastic bending of beams, rings and plates. Elastic-plastic problems with spherical or cylindrical symmetry. Mechanics of metal forming. (I)
- 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)

**580. Combustion Engines. Cr. 4**

Prereq: M E 320 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)

**583. Solar Energy Utilization and Energy Conservation in Building. Cr. 4**

Prereq: M E 582 or consent of instructor. Solar radiation characteristics of opaque materials and partially transparent material, flat plate solar collector analysis, energy storage, analysis and design of solar water heating, solar heating and cooling systems, solar assisted heat pump system, economics of solar system, energy analysis of building operations; energy conservation by design of building envelope, by design of air conditioning system, by operating practices. (B:W)

**595. Special Topics in Mechanical Engineering I. Cr. 1-4**

Prereq: consent of chairperson. Maximum of four credits in Special Topics may be elected in any one degree program. Topics to be announced in *Schedule of Classes*. (I)

**618. (ECE 618) Bioinstrumentation. 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)

# METALLURGICAL ENGINEERING

*Chairperson:* R. H. Kummeler

*Professors*

C. L. Corey, L. Himmel, P. K. Rol

*Associate Professor*

S. Putatunda

*Adjunct Professors*

E. Kennedy, M. Semchyshen

## Degree Programs

*Bachelor of Science in Metallurgical Engineering*

\* *Master of Science in Metallurgical Engineering*

\* *Doctor of Philosophy—with a major in Metallurgical 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. As a result, the ancient profession of metallurgy has been revolutionized in recent years. Metallurgical engineers must master the science that enables them to understand the behavior of metals and 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 extraction of metals from their ores, processing of materials into useful products or controlling and improving the properties themselves.

The metallurgical engineering curriculum combines the study of this relationship between the structure and properties of materials with the engineering aspect of metal 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 Metallurgical Engineering

**Admission Requirements:** see page 98. 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 138 credits in course work, including satisfaction of the University General Education Requirements (see page 20), as

\* For information consult the Wayne State University Graduate Bulletin.

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 20-31 and 98-102, 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.

### METALLURGICAL ENGINEERING CURRICULUM

#### Freshman Year

##### First Semester

	Credits
UGE 100 — Introduction to the University & its Libraries .....	1
MAT 201 — Calculus I .....	4
CHM 107 — Principles of Chemistry I .....	4
Visual and Performing Arts course .....	3
CSC 105 — Fortran Laboratory for Engineers .....	1
American Society and Institutions course .....	3
Total:	16

##### Second Semester

MAT 202 — Calculus II .....	4
PHY 217 — General Physics .....	5
CHM 108 — Principles of Chemistry II .....	5
Historical Studies course .....	3
Total:	17

#### Sophomore Year

##### First Semester

MAT 203 — Calculus III .....	4
PHY 218 — General Physics .....	5
MET 130 — Science of Engineering Materials .....	4
IE 322 — Probability and Statistics in Engineering .....	3
CE 240 — Statics .....	3
Total:	19

##### Second Semester

MAT 204 — Calculus IV .....	4
CHE 230 — Thermodynamics I .....	3
CHE 280 — Material and Energy Balance .....	3
MET 260 — Introduction to Metallurgical Engineering .....	3
Social Science course .....	3
Total:	16

#### Junior Year

##### First Semester

MET 330 — Metallurgical Thermodynamics .....	3
MET 340 — Physical Metallurgy I .....	4
MET 342 — Physical Metallurgy Laboratory I .....	1
CE 360 — Elementary Mechanics of Materials .....	3
CHE 304 — Computational Methods in Engineering .....	3
ENG 305 — Technical Communications I .....	3
Total:	17

##### Second Semester

ENG 306 — Technical Communications II .....	3
* Life Science course .....	3
MET 360 — Physical Metallurgy II .....	4
MET 362 — Physical Metallurgy Laboratory II .....	1
MET 370 — Mechanical Behavior of Metals .....	3
CHE 320 — Chemical Process Engineering I: Fluid Flow and Heat Transfer .....	4
Total:	18

#### Senior Year

##### First Semester

* Foreign Culture course .....	3
MET 400 — Modern Methods of Structural Analysis .....	3
MET 430 — Processing and Fabrication of Metals .....	3
MET 426 — Senior Project I .....	2
MET Advanced Science Elective .....	3
ECE 330 — Introduction to Electrical Circuits .....	3
Total:	17

##### Second Semester

MET 450 — Materials Selection and Design .....	3
MET 460 — Principles of Extractive Metallurgy .....	3
MET 486 — Senior Project II .....	2
MET Technical Electives .....	6
Philosophy and Letters course .....	3
ECE 331 — Electrical Circuits I: Laboratory .....	1
Total:	18

TOTAL CREDITS: ..... 138

**Technical Electives:** Consult with the departmental adviser; at least half of the technical elective credits must be in Metallurgical Engineering courses.

## COURSES OF INSTRUCTION<sup>1</sup> (MET)

### 130. Science of Engineering Materials. 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)

### 260. Introduction to Metallurgical Engineering. Cr. 3

Prereq: MET 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. 3

Prereq: CHE 230, MET 260. 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. 4

Prereq: MET 260; 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 MET 360. (F)

### 342. Physical Metallurgy Laboratory I. Cr. 1

Prereq. or coreq: MET 340. Material fee as indicated in *Schedule of Classes*. Laboratory investigations of topics covered in MET 340 and related areas. (F)

### 360. Physical Metallurgy II. Cr. 4

Prereq: MET 340. Continuation of MET 340, with applications to

\* Must be an approved upper level course.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

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 or coreq: MET 360 and 370. Material fee as indicated in *Schedule of Classes*. Laboratory investigations of topics covered in MET 360 and MET 370 and related areas. (W)

**370. 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: MET 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)

**426. Senior Project I. Cr. 2**

Prereq: MET 360, 370. Organization of a research project: literature survey; equipment specification; presentation of a written proposal; and initiation of the the laboratory investigation. (F,W)

**430. Processing and Fabrication of Metals. Cr. 3**

Prereq: MET 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)

**450. Materials Selection and Design. Cr. 3**

Prereq: MET 360 and 370. 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: MET 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)

**486. Senior Project II. Cr. 2**

Prereq: MET 426. Completion of the laboratory investigation begun in MET 426. Preparation of a comprehensive written report on the research project. Final oral report to the department staff. (F,W)

**490. Directed Study. Cr. 1-6**

Prereq: consent of adviser. Student selects some field of metallurgical engineering 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 metallurgical engineering 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)

**509. Physical Ceramics. (CHE 509). Cr. 3**

Prereq: MET 260 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. 2**

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: MET 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: MET 340, 370. Behavior of metals at elevated temperatures from the microstructural point of view; concepts of creep and failure mechanism at elevated temperatures. (Y)

**555. (CHE 563) Tribology. Cr. 2**

Prereq: CHM 544, CHE 340. The laws of friction, the nature of polymeric and solid surfaces and their frictional interaction and the process of lubrication. (B)

**560. Composite Materials. (CHE 560). Cr. 3**

Prereq: MET 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: MET 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: MET 360. Advanced study of the properties of ferrous castings and solidification mechanisms. (B)

**565. Metal Surfaces. Cr. 3**

Prereq: MET 260, 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)

**580. Powder Metallurgy. Cr. 3**

Prereq: MET 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 Metallurgical Engineering I. Cr. 1-4**  
Prereq: MET 360, 370. Maximum of twelve credits in Special Topics may be elected in any one degree program. Consideration of special subject matter in metallurgical engineering. Topics to be announced in *Schedule of Classes*. (Y)

**635. (CHE 635) Polymer Processing. Cr. 2**  
Prereq: MAT 204. 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: MET 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)



## DIVISION OF ENGINEERING TECHNOLOGY

Office: 4855 Fourth Avenue

Telephone: (313) 577-0800

Director: Donald V. Stocker

### Professor

Howard M. Hess (Emeritus)

### Associate Professors

Karl O. Anderson, Seymour Cuker, Harry P. Hale (Emeritus), Vladimir Sheyman, Donald V. Stocker, John G. Wright (Emeritus)

### Part-Time Faculty

Ron Ceselli, Kenneth Christensen, Mohamed Fahs, Don Gulock, John Hayden, Charles Loehner, Charles Neff, Sandra Overway, Jeffrey Pasquinnelli, Andrew Seleno, Ahmad Sereshteh, Anthony Slominis, Joseph Welch, Mark Zachos

## Degree Program

*Bachelor of Engineering Technology—with majors in electrical/electronic engineering technology, manufacturing/industrial engineering technology, and mechanical engineering technology*

Engineering technology is a profession closely related to engineering and deals with the application of knowledge and skill to industrial processes, production, and management. Technologists are organizers of people, materials, and equipment for the effective planning, construction and maintenance of technical facilities and operations. They are responsible for work requiring technical and practical knowledge. They can apply their abilities in using technical equipment, selling technical products, serving as manufacturers' technical representatives, or supervising varied construction projects and manufacturing processes. They work with engineers in many aspects of project development, production planning, and final testing of industrial, military, or consumer products. Their talents are used in virtually every activity where technical expertise is required. They may be involved with electronic and mechanical instruments, experimental equipment, computing devices, tool design, manufacturing, or drafting. Technical skills in the use of electronic equipment, machinery, tools, and drafting instruments are characteristic of this type of work. Thus, engineering technology students can find challenging employment in business and industry.

## BACHELOR OF ENGINEERING TECHNOLOGY

**Admission Requirements:** This program is designed to admit students with an associate degree, or equivalent, in an engineering-related technology area (see individual major programs below for recommended backgrounds), and to provide them with the junior and senior years of a four-year curriculum. A minimum honor point average of 2.50 is required for admission to the program. However, students with an honor point average of at least 2.0 but less than 2.5 who have completed, with grades of 'C' or better, both MAT 180 and PHY 213 (or equivalents) may be admitted to the pre-professional engineering technology program until they satisfy either of the conditions stated immediately above.

**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 the Bachelor of Engineering Technology must complete 123 to 124 credits (depending upon the area of specialization), including satisfaction of the University General Education Requirements for transfer students (see page 20) and the requirements outlined in the major programs presented 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 20-31 and 131, respectively. The University requires a minimum 2.0 ('C') honor point average in the total residence credit at graduation and the Division of Engineering Technology requires a minimum 2.0 ('C') honor point average in the total work taken in technical courses.

**Residence:** A maximum of sixty-four credits may be transferred from a two-year college, thus students from such institutions must earn at least fifty-nine to sixty credits in residence at Wayne State University. Students transferring from four-year colleges must complete at least thirty credits in residence at Wayne.

Due to the wide variation in backgrounds of admitted students and different rates of progress made by full-time and part-time students, an individually tailored *Plan of Work* will be developed in conjunction with the Division Director. Thus, courses can be selected in the best order considering the student's academic preparation, individual course prerequisites, and proposed course scheduling.

**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 127. Students with an associate degree in electrical or electronic technology from a community college may be admitted to the bachelor's 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 of the following areas will be required to remove the deficiencies before electing any EET courses: computer programming in either BASIC or FORTRAN; DC and AC circuits; analog electronic circuits; instrumentation laboratory.

**PROGRAM REQUIREMENTS:** The major program in electrical/electronic engineering technology, leading to the Bachelor of Engineering Technology degree, requires 124 credits as outlined in the following curriculum; also see above under Degree Requirements, page 128.

#### COMMUNICATIONS, HUMANITIES, AND SOCIAL SCIENCE

	<i>credits</i>
English electives.....	6
P S 101 – American Government.....	4
PSY 101 or PSY 102	
– Introductory Psychology.....	4
– Elements of Psychology.....	3
PSY 350 – Industrial-Organizational Psychology.....	3
SPB 101 – Oral Communication: Basic Speech.....	3
Electives.....	4-5
<b>Total:</b>	<b>24</b>

#### BASIC SCIENCE AND MATHEMATICS

MAT 180 – Elementary Functions.....	4
MAT 340 – (E T 340) Applied Statistics.....	3
MAT 342 – (E T 342) Applied Calculus I.....	3
MAT 344 – (E T 344) Applied Calculus II.....	3
E T 346 – Applied Engineering Analysis.....	3
PHY 213 – General Physics.....	4
PHY 214 – General Physics.....	4
<b>Total:</b>	<b>24</b>

#### TECHNICAL SCIENCE, TECHNICAL SPECIALTY, AND ELECTIVES

E T 114 – Engineering Graphics I.....	2
E T 303 – Statics.....	3
E T 305 – Dynamics.....	3
E T 387 – Engineering Economic Analysis.....	3
EET 310 – Digital Circuits.....	3
EET 330 – Network Analysis I.....	3
EET 340 – Network Analysis II.....	3
EET 370 – Microprocessor Fundamentals.....	3
EET 400 – Electronic Communication Circuits.....	3
EET 410 – Advanced Network Analysis.....	3
EET 420 – (MCT 420) Control Systems.....	3
EET 430 – Electromagnetic Fundamentals and Design.....	3
EET 440 – Transmission and Propagation of Energy and Signals.....	3

EET 450 — Energy and Electrical Machines .....	3
<sup>1</sup> Technical Specialty Elective .....	3
<sup>2</sup> Electives.....	32
	Total: 76
Total minimum semester credits for the degree.....	124

## — 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 127. Students entering this program would normally have an associate degree from a community college 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 computer programming in either BASIC or FORTRAN will be required to remove the deficiency before completing fifteen credits in technical science and technical specialty courses.

**PROGRAM REQUIREMENTS:** The major program in manufacturing/industrial technology leading to the Bachelor of Engineering Technology degree requires 123 credits as outlined in the following curriculum; also see above under Degree Requirements, page 128.

<sup>1</sup> This elective MUST be selected with permission of the adviser and would normally be an electrical/electronic engineering technology course. However, another technology course may be approved where appropriate.

<sup>2</sup> These electives would normally be associate degree transfer credit with the majority from electrical/electronic technology or related areas. If the student has not had high school chemistry, it is recommended that a chemistry course be included.

## COMMUNICATIONS, HUMANITIES, AND SOCIAL SCIENCE

	<i>credits</i>
English electives.....	6
P S 101 — American Government.....	4
PSY 101 or PSY 102	
— Introductory Psychology.....	4
— Elements of Psychology .....	3
PSY 350 — Industrial-Organizational Psychology.....	3
SPB 101 — Oral Communication: Basic Speech.....	3
Electives.....	4-5
	Total: 24

## BASIC SCIENCE AND MATHEMATICS

CHM 102 — General Chemistry I.....	4
MAT 180 — Elementary Functions .....	4
MAT 340 — Applied Statistics (E T 340).....	3
MAT 342 — Applied Calculus I (E T 342).....	3
MAT 344 — Applied Calculus II (E T 344).....	3
PHY 213 — General Physics .....	4
PHY 214 — General Physics.....	4
	Total: 25

## TECHNICAL SCIENCE, TECHNICAL SPECIALTY, AND ELECTIVES

E T 114 — Engineering Graphics I .....	2
E T 303 — Statics.....	3
E T 305 — Dynamics.....	3
E T 310 — Mechanics of Materials.....	3
E T 320 — Engineering Materials.....	2
E T 387 — Engineering Economic Analysis.....	3
EET 300 — Introduction to Electrical Technology.....	3
EET 301 — Electrical Instrumentation.....	2
MIT 360 — Process Engineering.....	3
MIT 401 — Product Design.....	2
MIT 476 or MIT 478	
— PDGS Computer-Aided Design.....	3
— MEDUSA Computer-Aided Design and Manufacturing .....	3
MCT 340 or MCT 360	
— Design of Machine Elements.....	3
— Fluid Systems .....	3
<sup>3</sup> Technical Specialty Elective .....	6
<sup>4</sup> Laboratory experience: welding, casting, forming .....	3
<sup>2</sup> Laboratory experience: machine tool operations .....	3
<sup>5</sup> Electives.....	30
	Total: 74
Total minimum semester credits for the degree.....	123

## — 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 Engineering Technology (Mechanical) 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

<sup>3</sup> These electives MUST be selected with consent of the adviser.

<sup>4</sup> These courses should be taken at a community college.

<sup>5</sup> These electives will be associate degree transfer credits for most students with the majority in the individual's specialty area.

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 127.

Students having an associate degree 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 computer programming in either BASIC or FORTRAN will be required to remove the deficiency before completing fifteen credits in technical science and technical specialty courses.

**PROGRAM REQUIREMENTS:** The major program in mechanical engineering technology leading to the Bachelor of Engineering Technology degree requires 123 credits as outlined in the following curriculum; also see above under Degree Requirements, page 128.

*COMMUNICATIONS, HUMANITIES, AND SOCIAL SCIENCE*

	<i>credits</i>
English electives.....	6
P S 101 – American Government.....	4
PSY 101 <i>or</i> PSY 102	
– Introductory Psychology.....	4
– Elements of Psychology.....	3
PSY 350 – Industrial-Organizational Psychology.....	3
SPB 101 – Oral Communication: Basic Speech.....	3
Electives.....	4-5
	Total: 24

*BASIC SCIENCE AND MATHEMATICS*

MAT 180 – Elementary Functions.....	4
MAT 340 – (E T 340) Applied Statistics.....	3
MAT 342 – (E T 342) Applied Calculus I.....	3
MAT 344 – (E T 344) Applied Calculus II.....	3
E T 346 – Applied Engineering Analysis.....	3
PHY 213 – General Physics.....	4
PHY 214 <i>or</i> CHM 102	
– General Physics.....	4
– General Chemistry I.....	4
	Total: 24

*TECHNICAL SCIENCE, TECHNICAL SPECIALTY, AND ELECTIVES*

E T 114 – Engineering Graphics I.....	2
E T 303 – Statics.....	3
E T 305 – Dynamics.....	3
E T 310 – Mechanics of Materials.....	3
E T 320 – Engineering Materials.....	2

E T 387 – Engineering Economic Analysis.....	3
EET 300 – Introduction to Electrical Technology.....	3
EET 301 – Electrical Instrumentation.....	2
MIT 351 <i>or</i> MIT 360	
– Manufacturing Analysis.....	3
– Process Engineering.....	3
MCT 311 – Thermodynamics I.....	3
MCT 312 – Thermodynamics II.....	3
MCT 321 <i>or</i> MCT 341	
– Heat Transfer.....	3
– Applied Kinematics.....	3
MCT 340 – Design of Machine Elements.....	3
MCT 360 – Fluid Systems.....	3
<sup>1</sup> Technical Specialty Electives.....	6
<sup>2</sup> Electives.....	30
	Total: 75

Total minimum semester credits for the degree..... 123



<sup>1</sup> These electives MUST be selected with consent of the adviser. While they would normally be mechanical engineering technology courses, certain other technology courses may be approved where appropriate.

<sup>2</sup> These electives will be associate degree transfer credit for most students with the majority in the individual's specialty area.

# ACADEMIC PROCEDURES

## 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 sub standard performance. The implications of this are particularly significant in the science, mathematics and technology 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 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.

## Withdrawal from Course

University rules covering withdrawal from courses and changes of program can be found on page 29 of this bulletin. In addition, the Division of Engineering Technology does *not* permit withdrawal from courses after the end of the twelfth week of classes. Furthermore, withdrawals from courses from the beginning of the fifth week through the end of the twelfth week of classes are permitted only if approved in writing by each instructor and by the Director of the Division of Engineering Technology.

## Professional Registration

Bachelor of Engineering Technology students may be allowed to take the examination to become a Registered Professional Engineer in some states. Currently the Michigan State Board of Registration for Professional Engineers reviews each application from engineering technologists and may require additional course work (primarily in mathematics but occasionally in other areas) prior to granting approval to take the examination.

# COURSES OF INSTRUCTION<sup>1</sup>

## 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)

**115. Engineering Graphics II. (M E 115). (Lct: 1; Lab: 3). Cr. 2**  
Prereq: E T 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, revolution of lines and surfaces. (I)

**303. Statics. (Lct: 2; Dsc: 2). 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: MAT 342 and E T 303. 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)

**310. Mechanics of Materials. (Lct: 3). Cr. 3**  
Prereq: E T 303. The elastic behavior of load bearing materials. Tension, compression, shear, combined stress, bending, tension and columns. Failure analysis. (F,W)

**320. 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)

**340. (MAT 340) Applied Statistics. (Lct: 3). Cr. 3**  
Prereq: college algebra. No degree credit in College of Liberal Arts. Student computer account required. Application of probability concepts and statistical theory in the use of engineering data. (T)

**342. (MAT 342) Applied Calculus I. (Lct: 3). Cr. 3**  
Prereq: MAT 180. No degree credit in College of Liberal Arts. The application of differential and integral calculus and analytical geometry to engineering problem situations. (F,W)

**344. (MAT 344) Applied Calculus II. (Lct: 3). Cr. 3**  
Prereq: MAT 342. No degree credit in College of Liberal Arts. A continuation of MAT 342 including the application of ordinary differential equations to engineering problem situations. (F,W)

**346. Applied Engineering Analysis. Cr. 3**  
Prereq: E T 344. Application of constant coefficient linear differential equations, including nonhomogeneous equations, and Laplace transforms to the analysis of dynamic systems. Fourier series analysis of periodic waveforms. (F,W)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**387. Engineering Economic Analysis. (Lct: 3). Cr. 3**  
Prereq: MAT 180. Techniques to economically evaluate major engineering projects, including 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)

## Electrical/Electronic Engineering Technology (EET)

**300. Introduction to Electrical Technology. (Lct: 3). Cr. 3**  
Prereq: MAT 180, PHY 213. For non-electrical majors. Kirchoff'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)

**301. Electrical Instrumentation. (Lct: 1; Lab: 3). Cr. 2**  
Prereq: EET 300 or equiv. Material fee as indicated in *Schedule of Classes*. Theory and use of electrical instruments, power supplies, bridges, potentiometers, oscilloscopes, electronic instruments and transducers. (F,W)

**310. Digital Circuit Analysis and Design. (Lct: 2; Lab: 2). Cr. 3**  
Prereq: junior standing. Material fee as indicated in *Schedule of Classes*. Applied Boolean algebra and number systems. Logic families, combinational and sequential logic, flip-flops, counters, shift registers, arithmetic circuits, multiplexers and demultiplexers, memory systems, read-outs and displays. (W)

**330. Network Analysis I. (Lct: 3). Cr. 3**  
Prereq. or coreq: MAT 342. Kirchoff'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, introduction to energy conversion. (F,W)

**340. Network Analysis II. (Lct: 3). Cr. 3**  
Prereq: EET 330; prereq. or coreq: MAT 344. 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)

**370. Microprocessor Fundamentals. (Lab: 3). Cr. 3**  
Prereq: CSC 100 or CSC 206 or equiv. 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 micro-computer system architecture. Computer programming design projects. (F)

**372. Microprocessor Programming. Cr. 1**  
Prereq: background in other microprocessor systems. No credit after EET 370. Material fee as indicated in *Schedule of Classes*. Programming and interfacing fundamentals using 8085 and Z80 microprocessors; for students familiar with other microprocessor architecture. (F)

**400. Electronic Communication Circuits. (Lct: 3). Cr. 3**  
Prereq or coreq: EET 340. Review of electronic devices. Analysis and design of multistage amplifiers, oscillators, modulators, demodulators, integrated circuits, AM, FM, and pulse modulation

systems. Power, efficiency, distortion, input and output impedance, frequency response. (F,W)

**410. Advanced Network Analysis. (Lct: 3). Cr. 3**  
Prereq: EET 340; or prereq. or coreq: E T 346, CSC 100 or CSC 100 or CSC 206 or equiv. Student computer account required. Total response in first- and second-order systems, Fourier-series analysis, complex frequency, Bode plots, Laplace transform, computer solutions. (F,W)

**420. Control Systems. (Lct: 3). Cr. 3**  
Prereq: E T 305, EET 300 or EET 340; prereq. or coreq: E T 346. Representation and analysis of control components and systems for control of speed, flow, position, temperature, etc. Classical and Laplace methods of setting up and solving system differential equations. Stability analysis by Bode, Nyquist, and Routh. Design of stable control systems. (F,W)

**430. Electromagnetic Fundamentals and Design. (Lct: 2; Lab: 2). Cr. 3**  
Prereq: PHY 214; prereq. or coreq: EET 340. Forces and design in static electric and magnetic fields; design analysis of resistors, capacitors, inductors, transformers, solenoids, relays, and tractive magnets. Thermal and economic factors in electrical design. Design of electrical elements and simple systems. (F,W)

**440. Transmission and Propagation of Energy and Signals. (Lct: 3). Cr. 3**  
Prereq: EET 430; prereq. or coreq: 410. 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. (F,W)

**450. Energy and Electrical Machines. (Lct: 3). Cr. 3**  
Prereq. or coreq: EET 430. 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. (F,W)

**460. Power System Performance. (Lct: 3). Cr. 3**  
Prereq: EET 450; prereq. or coreq: 440. 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)

**480. Microprocessor Interfacing. (Lct: 2; Lab: 2). Cr. 3**  
Prereq: EET 310, 370 or 372. Material fee as indicated in *Schedule of Classes*. A continuation of EET 370 with emphasis on interfacing. Introduction to 16-bit microprocessors. Laboratory and computer programming design projects. (W)

**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)

- 200. Materials and Processes of Industry I. (Lct: 3). Cr. 3**  
Open only to students from Center for Creative Studies. No degree credit. Material fee as indicated in *Schedule of Classes*. Theory and practical application of manufacturing processes as related to the industrial design process. (F)
- 201. Materials and Processes of Industry II. (Lct: 3). Cr. 3**  
Prereq: MIT 200. Continuation of MIT 200. (W)
- 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: MAT 340. Basic production scheduling and inventory management. Production planning, project management, inventory functions, and inventory costs. (I)
- 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 Analysis. (Lct: 3). Cr. 3**  
No credit for MIT students. Material fee as indicated in *Schedule of Classes*. Comprehensive study of manufacturing processes including casting, forming, machining, welding and fabrication of common materials. (F)
- 360. Process Engineering. (Lct: 3). Cr. 3**  
Prereq: experience operating lathes and milling machines. Material fee as indicated in *Schedule of Classes*. Processing functions. Methods of manufacturing analysis. Manufacturing sequence, mechanization. Selection of tooling and equipment. Planning the process of manufacture. (W)
- 370. Numerical Control. (Lct: 3). Cr. 3**  
Prereq: MIT 351 or equiv. 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)
- 372. Manual Numerical Control Programming. (Lct: 2; Lab: 2). Cr. 3**  
Prereq: MIT 370 or equiv. Material fee as indicated in *Schedule of Classes*. Theory and practice in manual part programming for point-to-point and continuous path numerically controlled manufacturing equipment. Includes 2-, 3-, and 4-axis tape preparation considerations. (I)
- 380. Quality Control I. (Lct: 4). Cr. 4**  
Prereq: MAT 340. Introduction to total quality systems design and to basic analytical techniques for quality control. (I)
- 401. Product Design and Liability. (Lct: 2). Cr. 2**  
Design philosophy. Analysis and design of elements to perform specified functions. Limitations imposed by manufacturing processes, cost, material properties, and liability factors. (F,W)

### 476. PDGS Computer-Aided Design. Cr. 3

Prereq: CSC 100 or CSC 206 or equiv. Fundamentals of three-dimensional, computer-aided design techniques using FORD Product Design Graphics System (PDGS) software. Individual student project on menu-driven industrial graphics system; use of light pen. (W)

### 478. MEDUSA Computer-Aided Design and Manufacturing. Cr. 3

Prereq: CSC 200 or CSC 206 or equiv.; MIT 351 or equiv. Student computer account required. Fundamentals of computer-aided drafting using PRIME MEDUSA software. Two- and three-dimensional applications using materials properties package and MEDUSA macro programming. Introduction to 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)

### 311. Thermodynamics I. (Lct: 3; Quz: 1). Cr. 3

Prereq: MAT 342 and PHY 213. The first and second laws of thermodynamics with applications to gas and vapor processes and an introduction to cycles. Equations of state and general thermodynamics properties. (Y)

### 312. Thermodynamics II. (Lct: 3). Cr. 3

Prereq: MCT 311. Power and refrigeration cycles, gas and vapor mixtures, nozzle and blade passage flow and combustion. Introduction to compressible flow. Direct energy conversion. (Y)

### 321. Heat Transfer. (Lct: 3). Cr. 3

Prereq: MAT 344 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)

### 340. Design of Machine Elements. (Lct: 2; Lab: 2). Cr. 3

Prereq: E T 305, E T 310 and E T 320. 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)

### 341. Applied Kinematics. (Lct: 2; Lab: 2). Cr. 3

Prereq: E T 305. Velocity and acceleration determination of moving parts in machine elements and mechanisms using graphical and analytical techniques. Cam, gear and gear train design and analysis. (Y)

### 360. Fluid Systems. (Lct: 3). Cr. 3

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)

### 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)





# **School of Fine and Performing Arts**

*DEAN: KATHRYN A. MARTIN*

# Foreword

The School of Fine and Performing Arts conducts instruction, creative activity, and research in the various creative arts disciplines and serves the academic interests of a diverse student population. Degree programs and courses are offered in studio arts and art history; in church music, composition, jazz studies, performance, theory, music industry management, music therapy, and music education; in theatre performance and technical theatre; and in dance performance and dance education.

An integral part of study in the arts is the opportunity to perform and the School of Fine and Performing Arts includes various performance ensembles: the Hilberry Repertory Theatre Company, the Jazz Lab Band Group, Choral Union, Women's Chorale, Chamber Orchestra, Men's Glee Club, Symphonic Band, and the WSU Dance Company. The University's Community Arts Gallery is regularly used to exhibit the work of students, faculty and touring exhibits, and serves as an important resource in the areas of curriculum and instruction. Additionally, the School offers students opportunity to work not only with artist/faculty, but also with visiting artists. Contributing to this is the School's unique proximity to major cultural institutions; adjunct faculty from both the Detroit Institute of Arts and the Detroit Symphony Orchestra provide a strong nucleus of artists in the Departments of Music and Art. The Theatre and Dance Departments of the School also work closely with artists resident in the Detroit area.

Students in the School of Fine and Performing Arts are continuously involved in both theoretical and practical training. For example, theatre students perform in student- and faculty-directed works, design and work on sets and perform in music ensembles. They have their work critiqued as well as participate in the critiques of other work; a process of analysis and criticism which is fundamental to the study of the arts.

The undergraduate program of the School 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 School of Fine and Performing Arts students, but to the students of the entire University.

The goals of the School of Fine and Performing 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	theatre
design and merchandising	

### *Bachelor of Fine Arts—with majors in*

art	theatre
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### *Bachelor of Music—with majors in*

church music	music industry
composition	management
jazz studies and contemporary media	music therapy
music education	performance
theory	

### *Bachelor of Science—with a major in dance*

#### *\* Master of Arts—with majors in*

art	music
art history	theatre
design and merchandising	

#### *\* 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
-----	---------

#### *\* Doctor of Philosophy—with a major in theatre*

## Directory

### *Dean*

Kathryn A. Martin ..... 5104 Gullen Mall; 577-5342

*Associate Dean* ..... 5104 Gullen Mall; 577-5342

### *Administrative Officer*

Joan M. Ferguson ..... 5104 Gullen Mall; 577-5363

*Development Officer* ..... 5104 Gullen Mall; 577-5362

*Degree Certification* ..... 5104 Gullen Mall; 577-5364

*Personnel Records* ..... 5104 Gullen Mall; 577-5365

### *Departmental Offices*

#### *Art and Art History*

Richard J. Bilaitis ..... 150 Community Arts; 577-2980

#### *Dance*

Georgia Reid ..... 125 Matthaehi Building; 577-4273

#### *Music*

Peter J. Schoenbach ..... 105 Schaver Music Building; 577-1795

#### *Theatre*

Howard Burman ..... 95 W. Hancock; 577-3508

Mailing address for all offices:

(Department Name), School of Fine and Performing Arts, Wayne State University, 5980 Cass Avenue, Detroit, MI 48202

\* For specific requirements, consult the Wayne State University Graduate School 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 and Performing Arts and all Fine and Performing Arts 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 and Performing Arts Group Requirements. 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.

All students in the College of Fine and Performing 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 on page 20. 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 (see page 20) modified by the additions and limitations cited below. The College Group Requirements exceed the 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 cultural studies course, and 4) three courses in a foreign language, which may be used to satisfy the University General Education Requirement in foreign culture.

## NATURAL SCIENCE

**Physical Science** as specified in the University General Education Program (see page 22) but with the following limitations: all students in the College of Fine and Performing Arts must successfully complete

one course from the fields of chemistry, physics, or physical science (a combination of chemistry and physics), with the exception of AST 201. Physical science options include: CHM 100, 102, 105, 107, 131; PHY 101, 102, 104, 213, 217, 310.

**Life Science** as specified in the University General Education Program (see page 22), with the exception of NFS 203. Approved courses include: ANT 211; BIO 101, 103, 105; PSY 101, 102.

**Natural Science III:** All students in the College of Fine and Performing 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 fields other than those used to fulfill the physical or life science components of the requirement. Natural Science III options consist of all courses cited in the University General Education Group Requirement in Physical Science and Life Science plus AST 201; NFS 203, 221; and PSY 405. Approved courses include: ANT 211; AST 201; BIO 101, 103, 105; CHM 100, 102, 105, 107, 131; GEL 101; NFS 203, 221; PHY 101, 102, 104, 213, 217, 310; PSY 101, 102, 405.

**HISTORICAL STUDIES** as specified in the University General Education Program (see page 22) but with the exception of HIS 287. Approved courses include: ANT 320; HIS 110, 120, 130, 140, 150, 160, 161, 195, 304; NE 368, 369; P S 353.

## SOCIAL SCIENCE

**American Society and Institutions** as specified in the University General Education Program, see page 23. Approved courses include: HIS 103, 105; P S 101, 103.

**Social Science I** as specified in the University General Education Program, see page 22. Approved courses include: ANT 210; ECO 100, 101, 102, 180; GEG 110, 313, 320; P S 100, 224; SOC 200, 202, 204, 330, 410; U S 200.

**Social Science II** as specified in the University General Education Program (see page 22), except that students in the College of Fine and Performing Arts must successfully complete two courses in this category — one from each of two different social science disciplines. Approved courses include those cited in the list of approved options for Social Science I, above.

**FOREIGN CULTURE:** Students in the College of Fine and Performing 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.

**Foreign Language:** All students in the College of Fine and Performing 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 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, 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 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 23. Approved courses include: AH 100, 101, 111, 112; DNC 231; FLM 201, 202; 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 23. Approved courses include: CLA 101, 210, 220; ENG 216, 217, 219, 220, 250, 272, 299, 311, 312, 314; FRE 270 (or GER 270; ITA 270; RUS 270; or SPA 270); HUM 210, 211, 220, 222, 302; PHI 101, 103, 210, 211, 232, 350, 355, 370; P S 351, 352; RUS 365, 465; SOC 216, 219.

**Cultural Studies:** All students in the College of Fine and Performing Arts must successfully complete one course from the fields of American studies, black 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 University departments of languages and literatures. Approved courses include: A S 201; CBS 210, 211; ENG 260, 291, 360; CLA 200; FRE 271; GER 271, 272; HUM 301; NE 200, 201; RUS 351.

**THE UNIVERSITY AND ITS LIBRARIES** as specified in the University General Education Program.

## University Requirement in American Government

See General University Information, page 23.

## 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 21,24.

## 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 School 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 School of Fine and Performing Arts.

Course requirements vary with each curriculum. Exceptions are permitted to the School 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 142 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 School. The specific course requirements or areas for majors are listed in this bulletin under each of the departments of the School. A major in art, dance, music, or theatre requires intensive study. Students who plan to elect one of these majors should consult with a departmental adviser during the freshman year. The student officially declares a major at the beginning of the 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. 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 School of Fine and Performing Arts Dean's Office. 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, 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 School of Fine and Performing 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 Architecture, Metalsmithing, Painting, Photography, Print-making, Sculpture (Bachelor of Fine Arts Degree); Design and Merchandising—Interior Design, Apparel Design, Fashion

Merchandising (Bachelor of Arts Degree)

**Dance:** Choreography and Performance, Dance Education (Bachelor of Science Degree)

**Music:** Church Music, Composition, Jazz Studies and Contemporary Media, Music Education, Music Industry Management, Music Therapy, Performance, Theory (Bachelor of Music Degree)

**Theatre:** Performance, Production (Bachelor of Arts and 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 Hearing Clinic 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 School of Fine and Performing 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 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 cooperation with the College of Education and prepares the student for a teaching major in grades K-12 and a teaching minor in grades 9-12. In this curriculum the student takes the first two years of work in the School of Fine and Performing Arts. Courses in the third and fourth years are taken concurrently in Education and Fine and Performing Arts. Students interested in this program should consult a departmental academic adviser who will supply a curriculum outline.

**Degree in the School of Fine and Performing Arts:** The student will remain registered in the School of Fine and Performing Arts and officially elects a departmental major at the beginning of the junior year. The student then applies to the College of Education for official admission to the combined curriculum for secondary teaching and *must be approved* by the College of Education as a candidate for teacher certification. During junior and senior years the program requests will be signed by both a School of Fine and Performing Arts major adviser and by the appropriate adviser in the College of Education.

## Second Degree

A student who has received a Fine and Performing 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 School of Fine and Performing 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 School of Fine and Performing Arts. A student from another institution must be admitted to the School 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 School and satisfy all School 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 School 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 138.)

## Restrictions on Credit

*The School 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 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

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 32.

## Advanced Courses

At least fifteen credits in courses numbered 300 or above must be earned.

## Residence

To qualify for a baccalaureate degree in the School of Fine and Performing Arts a minimum of thirty credits must be earned in the School. 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 School of Fine and Performing Arts Dean's Office; however, when the candidate has less than the minimum thirty credits of residence in the School of Fine and Performing Arts, no such exceptions are permitted.



# ACADEMIC PROCEDURES

*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 School of Fine and Performing Arts.*

## Recommended High School Preparation

The School of Fine and Performing Arts strongly supports the University's recommendations concerning academic preparation. See page 13.

## 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 full listing of available honors courses, see page 258 of the bulletin.

Students enrolled in the School of Fine and Performing Arts who are interested in pursuing a University Honors degree should refer to page 27 of the bulletin. Further information regarding the Honors Program is available in the Honors Program Office located in room 258 Mackenzie Hall.

## 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. Graduate with Distinction will be indicated on the student's diploma and on the transcript.

Graduation with Distinction will recognize at each graduation the top 20 percent of students in the School of Fine and Performing Arts who have earned the highest honor point average in the School 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 School 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 3.6 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, see pages 31,32.)

## 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 School 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 School. 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 School.

**Readmission:** After one year of exclusion, the student may apply for readmission to the School. 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 School of Fine and Performing 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, second floor, Mackenzie Hall, 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.

# ART AND ART HISTORY

Office: 150 Community Arts Center, 450 Reuther Mall  
 Chairperson: Richard J. Bilaitis  
 Academic Services Officers: Agnes Aoki, John Slick

## Professors

William A. Allen (Emeritus), Wayne Andrews (Emeritus), Mary Jane Bigler (Emerita), Richard J. Bilaitis, Robert Broner (Emeritus), Olga Constantine, Phillip G. Fike, Peter J. Gilleran, Bernard M. Goldman, Joseph Gutmann, John G. Hegarty, David A. Mitchell (Emeritus), James Nawara, Louise J. Nobili (Emerita), Thomas Parish, William E. Pitney (Emeritus), Patricia A. Quinlan, G. Alden Smith (Emeritus), Robert J. Wilbert, William T. Woodward (Emeritus)

## Associate Professors

Thomas P. Fitzgerald, Urban Jupena, John C. Mills, James M. Raymo, Melvin Rosas, Stanley L. Rosenthal, Jeanne Galloway Stiller, Horst Uhr, Joseph B. Zajac, Marilyn Zimmerman

## Assistant Professors

Phyllis A. Ashinger, Robert J. Martin, Mary Jo McNamara

## Instructor

Carolyn J. Hooper

## Adjunct Professor

Samuel Sachs II

## Adjunct Associate Professors

William Peck, Ellen Sharp

## Adjunct Assistant Professors

Alan Darr, Linda Downs, Suzanne Mitchell, Nancy Rivard Shaw, Davira Taragin

## Degree Programs

*Bachelor of Arts—with a major in art, art history, design and merchandising.*

*Bachelor of Fine Arts—with a major in art and a concentration in one of the following: Advertising Design, Ceramics, Design, Design and Merchandising, Drawing, Fibers, Industrial Design, Interior Architecture, Metal Arts, Painting, Photography, Printmaking, or Sculpture.*

\* *Master of Arts—with a major in art and a specialization in one of the following: Advertising Design, Ceramics, Design, Drawing, Fibers, Industrial Design, Interior Architecture, Metal Arts, Painting, Photography, Printmaking, or Sculpture.*

\* *Master of Arts—with a major in art history.*

\* For information consult the Wayne State University Graduate School Bulletin.

\* *Master of Fine Arts—with a major in art and specialization in one of the following: Ceramics, Design, Drawing, Fibers, Metal Arts, Painting, Photography, Printmaking, or Sculpture.*

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 13.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Arts in Art must complete 120 credits including satisfaction of the University General Education Requirements (see page 20) and forty-two to forty-eight credits in art courses, including the Core Requirements and Departmental Requirements cited below. All course work must be completed in accordance with the regulations of the University and the School governing undergraduate scholarship and degrees.

### CORE REQUIREMENTS:

	<i>credits</i>
ADR 105 — Drawing I.....	3
ADR 106 — Drawing II.....	3
ADE 120 — Design I.....	3
ADE 121 — Design II.....	3
A H 111 — Paleolithic Through Gothic Art Survey.....	3
A H 112 — Renaissance Through Modern Art Survey.....	3

### DEPARTMENTAL REQUIREMENTS

ADR 207 — Life Drawing.....	3
APA 210 — Painting.....	3
ASL 215 — Sculpture.....	3
ADE 220 — Design III (or craft course).....	3
Three-credit course in printmaking or photography.....	3
Art History elective (200 level or above).....	3
Art History 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 13.

**DEGREE REQUIREMENTS:** Candidates must complete 120 credits, including satisfaction of the University General Education Requirements (see page 20) and the major requirements listed below. All course work must be completed in accordance with the regulations of the University and the School governing undergraduate scholarship and degrees; see pages 20-31 and 137-141, respectively.

Students may elect this major as part of an undergraduate curriculum in either the College of Liberal Arts or the School of Fine and Performing Arts. Those electing the major in the College of Liberal Arts must fulfill the general requirements of that College; see page 191.



**Major Requirements:** Students must complete a minimum of thirty-three credits in art history, which includes six credits in the basic surveys (A H 111, 112), three credits from the non-western surveys and at least twenty-four credits in advanced courses, of which a minimum of fifteen credits must be at the 500 level or above. These courses should be selected to ensure exposure to the major periods and areas: ancient, medieval, renaissance-baroque, nineteenth and twentieth centuries, Oriental and ethnographic. It is recommended that students who intend to pursue graduate work in Art History elect A H 509. 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 interior design, apparel design, and fashion merchandising.

**Admission Requirements** for this program are satisfied by the general requirements for undergraduate admission to the University; see page 13.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Arts degree must complete 120 credits including satisfaction of the University General Education requirements (see page 20) and all departmental and area requirements as indicated below. All course work must be completed in accordance with the regulations of the University and the School governing undergraduate scholarship and degrees; see pages 20-31 and 137-141, respectively.

**Interior Design:** This curriculum prepares students for professional interior design practice with interior design studios, governmental agencies, manufacturers of home furnishing and equipment, home planning firms, and other organizations concerned with the creative and functional aspects of the interior environment.

The following courses are *required*: ADR 105, 106; ADE 120, 121, 220; A H 111, 112; AIA 539; Philosophy (PHI) 370.

The following courses are *recommended*: AIA 435, 436, 535; Economics (ECO) 102; Management (MGT) 566; Marketing (MKT) 530; Sociology (SOC) 200, 550; Speech (SPB) 200.

Requirements vary for each area; students are responsible for meeting program requirements as outlined in curriculum guides available from the Department of Art and Art History office.

**Clothing and Textiles:** This curriculum provides the basic understanding and skills for students in apparel design, production, and marketing. The program includes courses in textiles, clothing construction, historical and socio-psychological aspects of clothing and merchandising practices related to fashion goods.

### 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, home economics, and custom tailoring.

The following courses are *required*: ADR 105, 106; ADE 120, 121; A H 111, 112. In addition, students are encouraged to take supporting courses in art history, sociology, and anthropology. Requirements vary for each area; students are responsible for meeting program requirements as outlined in curriculum guides 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. Requirements vary for each area; students are responsible for meeting program requirements as outlined in curriculum guides 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 13.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Fine Arts degree must complete 120 credits including satisfaction of the University General Education Requirements (see page 20), Core and Departmental requirements as cited above under Bachelor of Arts with a Major in Art, as well as the major requirements below. The student has the option to omit either the foreign language OR the Natural Science III course requirement, but all other School group requirements must be met. NOTE, these are not exceptions to the University General Education Requirements.

**Major Requirements:** Students must complete 21 to 51 credits (depending on areas of specialization) in art courses, 18 of which must be at the advanced level. 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 Architecture |
| 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

	<i>credits</i>
ADE 221 — Applied Design Concepts.....	3
AGD 225 — Advertising Design I.....	3
AGD 325 — Intermediate Advertising Design.....	3
AGD 425 — Graphic Design Specialties.....	3
AGD 525 — Advanced Advertising Design.....	12

### CERAMICS

* ACR 255 — Ceramics & Pottery Design I.....	3
* ACR 256 — Ceramics & Pottery Design II.....	3
ACR 355 — Beginning Ceramics.....	3
ACR 455 — Intermediate Ceramics.....	3
ACR 555 — Advanced Ceramics.....	6-12

\* Students who have completed first year core program may start with ACR 355/455, and repeat ACR 555.

## DESIGN

	Credits
ADE 220 — Design III: Three-Dimensional .....	3
ADE 320 — Applied Design Projects .....	3
ADE 520 — Advanced Design .....	3
ADE 521 — Experimental Art Processes .....	3
ADE 522 — Art Processes .....	3
ADE 520 or ADE 521	
—Advanced Design .....	3
—Experimental Art Processes .....	3
ADE 583 — Directed Projects .....	9-15

## DRAWING

ADR 207 — Beginning Life Drawing .....	3
ADR 307 — Intermediate Life Drawing .....	3
ADR 508 — Still Life & Landscape Drawing .....	3
ADR 506 — Advanced 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

ADE 221 — Applied Design Concepts .....	3
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 ARCHITECTURE

AID 331 — Basic Presentation .....	3
AIA 235 — Drafting & Perspective .....	3
AIA 435 — Interior Architecture: Design Introduction .....	3
AIA 436 — Interior Construction .....	3
AIA 535 — Interior Architecture: Adaptive Use .....	3
AIA 536 — Survey of Construction Technology .....	3
AIA 539 — Interior Lighting Design .....	3
AIA 537 — Environment as an Art Form .....	3
AIA 538 — Interior Architecture: Construction Design .....	3
AIA 635 — Interior Architecture: Senior Projects .....	6

## METAL ARTS

AME 260 — Metal Arts and Jewelry Design .....	3
AME 360 — Intermediate Metal Arts & Jewelry Design .....	3
AME 560 — Advanced Metal Arts & Jewelry Design (Junior year) .....	6
AME 560 — Advanced Metal Arts & 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 & Other Media .....	3
APA 510 — Painting Seminar .....	3
300-level Painting Elective .....	3
500-level Painting Electives .....	9

## PHOTOGRAPHY

	Credits
APH 240 — Introductory Photography .....	3
APH 241 — Beginning Photography .....	3
APH 340 — Evolution of Photography .....	3
APH 341 — Intermediate Photography .....	3
APH 441 — Advanced Photography .....	3
APH 442 — View Camera .....	3
APH 443 — Color Photography .....	3
500-level Photography Electives .....	6

## PRINTMAKING

300-level APR courses .....	6
500-level Printmaking courses .....	12
500-level Advanced Printmaking courses .....	6

## SCULPTURE

ASL 316 or ASL 317	
— Intermediate Sculpture: Non-Figurative .....	6
— Intermediate Sculpture: Figurative .....	6
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.

## COURSES OF INSTRUCTION<sup>1</sup>

*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)

### 425. Graphic Design Specialties. Cr. 3(Max. 6)

Prereq: ADE 325. Material fee as indicated in *Schedule of Classes*. Course in three equal units taught by professionals in the field, to

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations.

provide breadth and range in graphic design; content and instructor change each semester. (Y)

**525. (AGD 325) Advanced Advertising Design. 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. 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). 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). 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). 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. 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)

**320. Applied Design Projects. Cr. 3**  
Prereq: ADE 121. Language, techniques and concepts of environmental design. (I)

**520. Advanced Design. Cr. 3-6(Max. 6)**  
Prereq: ADR 106 and ADE 121. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Advanced problems in chromatic media to broaden and deepen the understanding of color as a structural component in the visual arts. (I)

**521. Experimental Art Processes. Cr. 3-6(Max. 6)**  
Prereq: ADE 320. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Advanced study in two- and three-dimensional structure with emphasis on multi-media. Development of individual projects which extends the student's conceptual vocabulary. (I)

**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. 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, for beginning students. No prior computer experience necessary. (I)

**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) (ADR 507) (ADR 707). 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. (ADR 207) Advanced Life Drawing. (ADR 307). 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. Studio work and field trips. (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)
- 355. The Consumer and the Market. Cr. 3**  
No credit after FAC 555. Economics of consumption as related to consumer purchases of goods and services. The consumer viewpoint regarding advertising, market practices, food, transportation, consumer protection, legislation and fraud. (T)
- 443. Fashion Illustration. Cr. 2**  
Prereq: ADR 105. Basic fashion rendering techniques using a variety of media. (B)
- 455. Consumers and Their Money. Cr. 3**  
Economic principles and problems related to money and credit management. Insurance, saving and investing, personal taxes, retirement, and estate planning. (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. Material fee as indicated in *Schedule of Classes*. Survey of historic costumes from prehistoric to present. (F)
- 544. Fashion Design: Flat Pattern. Cr. 3**  
Prereq: AFA 242. Material fee as indicated in *Schedule of Classes*. Original designs from a basic sloper. (Y)
- 545. Fashion Design: Draping. Cr. 3**  
Prereq: AFA 242. 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)
- 555. Trends in Consumer Affairs. Cr. 3**  
Prereq: ECO 101. No graduate credit after former FAC 355 or AFA 355. Research project required for graduate students. Consumer economic problems regarding regulation, responsibility, advocacy and protective legislation, consumer behavior, advertising and marketplace decisions. (T)
- 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)
- 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**  
Prereq: consent of instructor. Topics to be announced in *Schedule of Classes*. (F,W)
- 693. Study Tour. Cr. 2 (Max. 4)**  
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 266) (AFI 365) (AFI 366) (AFI 565) (AFI 566). 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. (AFI 265) Introduction to Fibers. Cr. 3(Max. 6)**

Material fee as indicated in *Schedule of Classes*. Emphasis on color, design and composition. Natural and chemical dyeing, block printing, resist methods, soft sculpture, basketry. (T)

**365. (AFI 265) Intermediate Weaving. (AFI 266). 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 265) Intermediate Fibers. (AFI 266) (AFI 365). 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)

**367. Historical Study of Textiles and Techniques. Cr. 3**

Lecture and demonstration. (I)

**565. (AFI 265) Weaving: Senior Project. (AFI 266) (AFI 365) (AFI 366). 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 265) Fibers: Senior Project. (AFI 266) (AFI 365) (AFI 366) (AFI 565). 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 work 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, and industrial design; architecture, decorative and graphic arts. (W)

## Interior Architecture (AIA)

**235. 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)

**435. Interior Architecture: Design Introduction. (AIA 635). Cr. 3(Max. 12)**

Prereq: ADE 221, AIA 235. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Step-by-step process for design of complex interior human environments. All aspects from programming through furniture selection. Lectures, studio, jury presentation. (F,W)

**436. Interior Construction: Materials and Systems. Cr. 3**

Manufactured architectural components: partitions, ceilings, cabinets, furniture systems, accessories and equipment; specification writing. (B)

**535. Interior Architecture: Adaptive Use. Cr. 3-6(Max. 6)**

Prereq: AIA 235, 435. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Imaginative re-design of existing buildings for new uses: measured drawings, plans, building sections. (Y)

**536. Survey of Construction Technology. Cr. 3**

Prereq: AIA 235. Introduction to modern structural, air

conditioning, plumbing, electrical and acoustical engineering principles as applied to architectural interiors. Designer-engineer relationships. (Y)

**537. Environment as an Art Form. Cr. 3-6(Max. 6)**

Prereq: AIA 235, 435. Election of more than three credits per semester requires written consent of instructor. Design of interior spaces as sculpture and painting. Emphasis on form, color, light, proportion and emotional impact. Sketches, models, model photography. (I)

**538. Interior Architecture: Construction Drawings. Cr. 3-6(Max. 6)**

Prereq: AID 435, AID 436, AID 437. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Preparation of detailed architectural working drawings for interior spaces. (W)

**539. Interior Lighting Design. Cr. 3**

Prereq: AIA 235. Light sources, fixtures, selection and application in architectural interiors; energy efficiency, comfort, basic calculations. (F)

**591. Directed Projects: Interior Architecture. Cr. 3-6(Max. 9)**

Prereq: written consent of instructor. Individual problems. (F,W)

**635. (AIA 435) Interior Architecture: Senior Projects. Cr. 3-6(Max. 12)**

Election of more than three credits per semester requires written consent of instructor. Complete interior architectural solution to problem chosen by student. (F,W)

## Interior Design and Housing (AIH)

**260. Introduction to Interior Design and Housing. Cr. 3**

Functional, aesthetic, financial and psychological aspects of the home and its furnishings, problems in evaluating floor plans and selecting and arranging furnishings. (F)

**261. Interior Design Studio I. Cr. 4**

Prereq: AIH 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. Interior Design Studio II. Cr. 4**

Prereq: AFA 241, AIH 261, ADE 121. Open to CLL students with written consent of instructor. Material fee as indicated in *Schedule of Classes*. Fundamental knowledge of color lighting and space planning, understanding of their application to the solution of interior residential problems and the use of skills for professional presentation. (W)

**460. Introduction to Environmental Design. Cr. 3**

Prereq: three courses in sociology and/or psychology. Functional basis of design, theories of proxemics and anthropometrics. Human factors, thermal conditions, color, and light as they affect human comfort and performance. (W)

**461. Interior Design Studio III. Cr. 4**

Prereq: AIH 361, ART 220, ART 235 or equiv. Material fee as indicated in *Schedule of Classes*. Intermediate level exploration and synthesis of lighting, color, human factors, space planning, selection of furnishings; application to the interior environment using skills for professional presentations. (F)

**490. Directed Study. Cr. 2-4**

Prereq: written consent of instructor. (F,W)

**560. History of Furniture and Interiors. Cr. 4**

Prereq: junior standing or successful completion of two courses in art history or consent of instructor. Material fee as indicated in *Schedule of Classes*. History of furniture and interiors from ancient periods to the present. (F)

**565. Interior Design Studio IV. Cr. 3**

Prereq: completion of first two years of interior design curriculum, AIH 460 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Materials and systems. Understanding interior design systems and materials, and practical applications to the interior design process. (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)

**661. Interior Design Studio V. Cr. 4**

Prereq: AIH 460, 461, 565. For interior design majors. Material fee as indicated in *Schedule of Classes*. Advanced problems in residential and contract design. (W)

**665. Interior Design: 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. Seminar. 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. 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 speciality 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. 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. 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. 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. 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)

**251. Relief and Collagraph 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/Collagraph 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 collagraph. 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. 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. 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. Experimental 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)

**552. Cliche Verre Printmaking. Cr. 3-6(Max. 15)**

Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Image making with light. Traditional and experimental use of light-sensitive materials to produce black and white and color hand-made images. (B)

**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)

**554. Seminar in Printmaking. Cr. 3-6(Max. 9)**

Prereq: any 500-level course in printmaking. Election of more than three credits per semester requires written consent of instructor. Introduction to the professional printmaking activities. Lectures and field trips to publishing workshops, museums and galleries. (I)

**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)

**654. The Print Process: History and Technology. Cr. 3**

Prereq: any 500-level art course. History and development of the various print media. Lecture and demonstration. (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. 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). 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. 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 liasons, 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). 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 photofolio of work and professional plans. (T)

**617. (ASL 317) Figurative Sculpture. (ASL 517). 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)

**619. Selected Problems in Sculptural Concepts. Cr. 3-6(Max. 18)**

Prereq. or coreq: ASL 616 or 617. Open only to seniors and graduate students. Election of more than 3 credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Content varies each term, focusing on one aspect of spatial concepts and forms. Primarily for sculpture majors; open to any senior or graduate art student with consent of adviser. (I)

## Special Classes (ACS)

**100. Studio Art for Non-Majors. Cr. 3**

Basic studio experiences in one of the art media. Area of concentration to be announced in *Schedule of Classes*. (I)

**500. Foreign Study in Studio Art. Cr. 3-6**

Number of credits to be taken depends on study tour. Studio art offered in a specific location. Perceptive experiences within the cultural environment of a foreign country combined with studio. (I)

## 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)

**286. Survey of Arts of China. Cr. 3**

Major monuments and styles. (I)

**287. Survey of Arts of Japan. Cr. 3**

Major monuments and styles. (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)

**340. Medieval Architecture. Cr. 3**

Prereq: A H 111 or equiv. Principles of early medieval architecture: formulae of the buildings and the evolutionary development of the great gothic cathedrals. (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)

**372. Contemporary American Art. Cr. 3**

Major developments in American painting and sculpture from the Armory Show to the 1970s.

**389. The Japanese Print. Cr. 3**

Development of techniques, styles, and themes in the history of Japanese prints from the seventeenth to the nineteenth century. (I)

**509. Introduction to Art Historical Research. Cr. 3**

Introduction to art historical sources and resources, research methods and problems in a variety of fields, including methods of paper writing, publication and presentation. (I)

**510. Biblical Archaeology. Cr. 3**

The Bible and archaeology in the light of recent research. (B)

**514. Art of the Ancient Near East. Cr. 3**

Neolithic through Achaemenian art. (B)

**520. Classical World: Minos to Alexander. Cr. 3**

Art and architecture from the Minoan to the classical period. (B)

**521. Hellenistic and Roman Art. Cr. 3**

Discussion of the art and architecture of the Hellenistic and the Roman Empires. (I)

**530. Early Christian and Byzantine Art. Cr. 3**

The evolution of Christian imagery. (B)

**540. Art and Architecture of the Early Middle Ages. Cr. 3**

Art and architecture in Western Europe from the Dark Ages through the twelfth century. (I)

**541. Gothic Art and Architecture. Cr. 3**

Gothic art and architecture in Western Europe from 1140 to 1400, including manuscripts, metalwork, stained glass, as well as the architectural context in which they were used. (I)

**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 c. 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)

**574. Surrealism. Cr. 3**

Literary and artistic history of these movements; their development in Germany, France and America. (B)

**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 Beckmann, Kokoshka, and Barlach. (B)

**590. Directed Study. Cr. 3**

Open only to art history majors. Supervised advanced reading and research in the history of art. (F,W)

**670. Nineteenth Century German Painting. Cr. 3**

Winkelman, Goethe, Mengs; Novalis and Schelling; Friedrich and Rubge; the Nazarenes and the revival of panel and fresco painting; the "German Romans", Feuerbach, Bibklin, von Marees; Liebermann and Klimt. (B)

**692. Art Archives Practices. Cr. 3-6(Max. 9)**

Prereq: consent of adviser and director of Archives of American Art. Open only to majors. Election of more than three credits per semester requires written consent of instructor. On-the-job training in the Archives of American Art, Detroit Institute of Arts. (I)

**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)



# Dance

Office: 125 Matthaei Building  
 Chairperson: Georgia Reid

## Assistant Professors

Eva Jablonowski Powers, Georgia Reid, Ann Zirulnik (Emeritus)

## Lecturer

Anita Surma

## 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, post degree, and graduate 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 School of Fine and Performing Arts.

*Dance sequence* within any major in the School of Fine and Performing Arts or the College of Liberal Arts.

## Bachelor of Science

### With a Major in Dance

The dance curriculum is intended for students who have had previous dance training and who wish to pursue careers in choreography and performance, dance history, labnotation, and movement analysis and dance education.

**Admissions Requirements** include the general requirements for undergraduate admission to the University (see page 13) 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 School of Fine and Performing Arts (see page 137); as well as the University General Education Requirements (see page 20) and the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the School of Fine and Performing Arts; see pages 20-31 and 137-141, respectively. Company members are required to take a technique class four days per week. Fifty-two 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

	<i>credits</i>
DNC 201 – Technique Laboratory I .....	4
DNC 221 – Intermediate Ballet .....	2
DNC 231 – Historical Perspectives of Dance .....	3
DNC 242 – Music Theory & Appreciation for Dancers.....	2
DNC 311 – Ethnic Dance Forms.....	2
DNC 331 – Dance Productions .....	2
DNC 398 – Assisting in Dance .....	1
DNC 401 – Technique Laboratory II .....	4
DNC 455 – Choreography I .....	3
DNC 481 – Methods in Modern Dance & Ballet .....	3
DNC 540 – Survey of the Dance Discipline.....	2
DNC 541 – Dance Notation I .....	2
DNC 555 – Choreography II .....	3
* DNC 561 – Dance Company I.....	4
DNC 581 – Creative Dance for Children .....	3

### Cognate Requirements

BIO 287 – Anatomy and Physiology .....	5
P E 358 – Kinesiology.....	3

**Minor in Dance Education:** The dance education minor requires twenty-five credits to meet Departmental and State Certification requirements for teaching in grades K-12. Required courses include:

DNC 111 – International Folk Dances I.....	1
DNC 201 – Technique Laboratory II.....	2
DNC 221 – Intermediate Ballet.....	1
DNC 231 – Historical Perspectives of Dance .....	3
DNC 311 – Ethnic Dance Forms.....	2
DNC 331 – Dance Production.....	2
DNC 401 – Technique Laboratory II.....	2
DNC 455 – Choreography I .....	3
DNC 481 – Methods in Modern Dance & Ballet .....	3
DNC 561 – Dance Company I.....	4
DNC 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.

\* For information consult the Wayne State University Graduate School Bulletin.

\* All majors are required to be members of the Dance Company for four semesters (one credit per semester of DNC 561).

# COURSES OF INSTRUCTION<sup>1</sup>

## 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)

### 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. 1(Max. 8)

Prereq: DNC 122 or equiv. Continuation of DNC 122 on a more advanced technical level with emphasis on placement. (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)

### 242. Music Theory and Appreciation for Dancers. Cr. 2

Elements of music relevant to the artistic growth of dancers. Rudimentary music theory with emphasis on rhythm, concepts of style, historical survey, music listening skills. Musical examples, especially music composed for dance. (B)

### 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)

### 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. 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. 1(Max. 8)

Prereq: DNC 201 or equiv. Modern dance technique, intermediate and advanced level. (F,W)

### 455. Choreography I. Cr. 3

Prereq: DNC 102 or equiv. Construction of motifs and dance studies based on music, properties, nonliteral and literal thematic materials. Form and structural concepts. (B)

### 481. Methods in Modern Dance and Ballet. (DNE 481). Cr. 3

Prereq: DNC 102 and 122 or equiv. Analysis of instructional methods and materials in modern dance and ballet, including technique, improvisation, composition, curriculum planning and evaluation. (W)

### 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)

### 540. Survey of the Dance Discipline. Cr. 2-4(Max. 16)

Examination of the profession, focusing on current practice and professional preparation. (W)

### 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. Movement and Dance in the Music Class. (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 of Orff Schulwerk which stresses the elemental relationships among language, music and movement. (W)

### 555. Choreography II. Cr. 3

Prereq: DNC 455 or equiv. Selection of dance themes, construction of dances, small group studies. Aesthetic considerations, form and elements of performance. (B)

### 561. Dance Company I. Cr. 1(Max. 8)

Prereq: admission by audition. Coreq: DNC 401 or 601. Performing company. Open to students interested in performing and/or choreographing. Four credits required for dance majors. (F,W)

### 571. Workshop in Modern Dance. Cr. 1-6(Max. 12)

A concentrated period of advanced dance study in technique, composition and repertory, often with a visiting artist. (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, work of Artist-in-Residence. (F,W)

### 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)

### 582. Creative Dance Movement for the Pre-School Child. (TED 582). Cr. 3

Creative dance activities; manipulative, musical, imaginative and

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

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)

**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. 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. 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. (Fld: 14). Cr. 2-6**

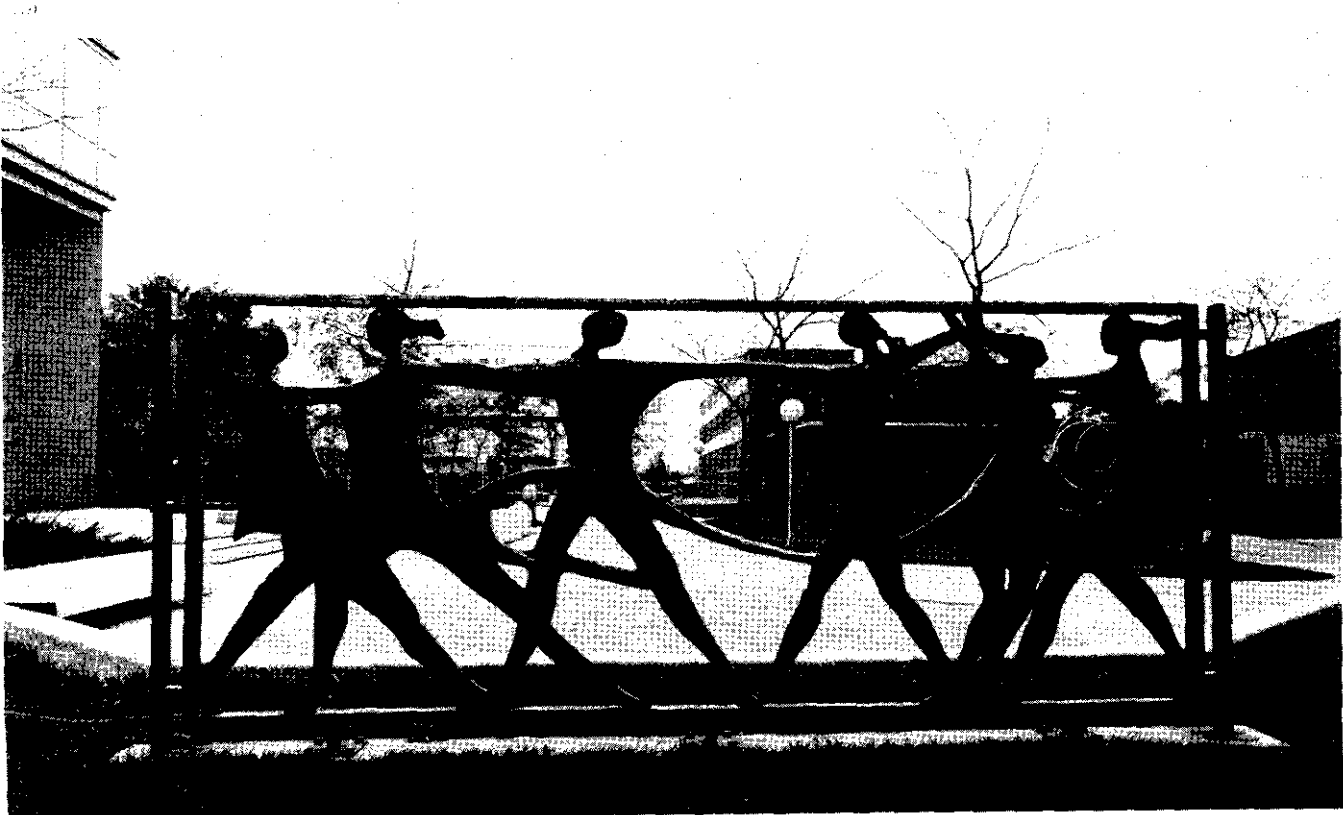
Prereq: 2.5 h.p.a. in major; admission to student teaching. Offered for S and U grades only. First experience in student teaching. (F,W)

**442. Student Teaching and Seminar II. (Fld: 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)



# MUSIC

*Office:* 105 Schaver Music Building  
*Chairperson:* Peter J. Schoenbach  
*Associate Chairperson:* Doris L. Richards  
*Assistant to the Chairperson:* Michael Zelenak  
*Academic Services Officer:* Margot Demarais

## *Professors*

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, Harry M. Langsford, Robert F. Lawson (Emeritus), Wilbur J. Peterson (Emeritus), Peter J. Schoenbach, Jason H. Tickton (Emeritus), Ruth S. Wylie (Emeritus), C. William Young (Emeritus)

## *Associate Professors*

Lillian J. Cassie (Emeritus), Carol J. Collins, Bohdan J. Kushnir (Emeritus), Doris Richards, Dennis Tini

## *Assistant Professors*

Frank Murch (Emeritus), Deborah Smith, Mary Wischusen, Michael Zelenak

## *Lecturer*

Andras Szentkiralyi

## *Adjunct Professors*

David DiChiera, Gunther Herbig

## *Adjunct Associate Professors*

Salvatore Rabbio, Paul Schaller, Eugene Wade

## *Divisional Directors*

Joseph Fava (guitar), Ray Ferguson (organ), Mischa Kottler (piano), Harry Langsford (voice), Matthew Michaels (jazz studies), Richard Piippo (strings), Salvatore Rabbio (percussion), Paul Schaller (woodwinds), Eugene Wade (brass)

## *Affiliated Classroom Faculty*

Jeffrey Cooper, Terry Herald

## *Affiliated Performance Faculty*

Emily Austin (violin), Italo Babini (violoncello), Donald Baker (oboe), Clement Barone (flute), Alvin Belknap (trumpet), Christopher Birg (guitar), Frances Brockington (voice), George Cailotto (free bass accordion), Marcy Chanteaux (violoncello), Douglas Cornelson (clarinet), Jeanette Dagger-Haviaras (voice), 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), William Horner (trumpet), Fedora Horowitz (piano), Elizabeth Ilku (harp), Elsie Inselman (voice), David Ireland (viola), Maxim Janowsky (string bass), Robert Jones (trombone and baritone), Edouard Kesner (violin), Muriel Kilby (piano), Edward Kingins (voice), Mischa Kottler (piano), Vladislav Kovalsky (piano), Gale Kramer (organ), Oscar LaCasse (tuba), Lawrence Liberson (clarinet), Homer Lindsay (bassoon), David Ludwig (voice), Jose Mallare (saxophone), Boris Maximovich (piano), Ervin Monroe (flute), Ronald Odmark (oboe), Ginka Ortega (flute), Sergio Pezzetti (voice), Richard Piippo (violoncello), Geraldine Powers

(voice), Salvatore Rabbio (percussion), Irv Sarin (trumpet), Paul Schaller (clarinet), Toma Schwartz (piano), Joseph Skrzyński (trombone and baritone), Robert Sorton (oboe), Anna Speck (voice), Gordon Stump (trumpet), Darwin Swartz (piano), Patricia Terry-Ross (harp), Eugene Wade (French horn)

## *Affiliated Faculty*

### *For Jazz Studies And Contemporary Media*

George Benson (woodwinds), Jack Brokensha (vibes), Buddy Budson (piano), Angelo Carlisi (woodwinds), Maurice Davis (trumpet), Earl DeForest (woodwinds), Kendon Everts (percussion), Davis Gloff (voice), Edward Gooch (trombone), Mike Grace (bass), Leo Harrison (trombone), James Hartway (piano), Billy Horner (trumpet), David Jones (history), Jerry Jones (percussion), Gary Leach (bass), Don Lewandowski (bass), Joe LoDuca (guitar), Jerry McKenzie (percussion), Matt Michaels (piano), Bruce Nazarian (guitar), Mark Nilan (recording techniques), Larry Nozero (woodwinds), Dan Pliskow (bass), Sal Rabbio (vibes), Richard Rattner (business/law), Joe Resnick (percussion), Ernie Rogers (woodwinds), Gordon Stump (trumpet), Dennis Tini (voice and piano), 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 industry 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 School governing undergraduate scholarship and degrees; see pages 20-31 and 137-141, 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 he/she is following, the course must be repeated until a grade of 'C' or better is earned, in order for the course to be counted toward graduation requirements.

\*For information, consult the Wayne State University Graduate School 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 13.

**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 20) and the School Group Requirements (see page 137), as well as the Music Core, Performance Ensemble, and Bachelor of Arts curriculum requirements cited below. 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, 283, 284, 285, 286, or 287 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 or 211
2. MUH 331 and 334

## 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 13) 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 191) and the School Group Requirements (see page 137), 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, including marching band
  2. Strings—MUA 281;
- (c) Bachelor of Music with a Major in Vocal Music Education—any vocal Performance Ensemble with at least four 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—any vocal Performance Ensemble with a minimum of four 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 four 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:
  - (a) Eight semesters of MUA 282;
  - (b) 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, 211;
- (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, 211, 212, 300, 310, 311, 504, 506 or 507 or 508; MUH 331, 334, 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) MUH 336 or 337 recommended;
- (c) 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;
- (d) MUA 267, and three 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 or 336 or 337;
- (c) MUA 170, 172, 267, 375, 475, 568, 571, 572, 574;
- (d) PSY331;
- (e) BIO 100 or 101, BIO 287;
- (f) SED 503;
- (g) SPD 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 in the senior year;
- (f) Specific additional requirements as follows:
  1. Piano—MUT 204, 211;
  2. Organ—MUT 204, 211; two semesters of MUA 573;
  3. Strings, winds or percussion—MUT 300
  4. Voice—MUT 508; proficiency in two foreign romance 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, 569;
- (e) Additional music electives, senior recital or project selected with the assistance of the Divisional Director.

#### Music Industry 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;
- (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 or 337;
- (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 72.

#### 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, 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, 283, 284, 285, and 287.

## COURSES OF INSTRUCTION<sup>1</sup>

### 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 Renaissance period with emphasis on the style of Palestrina. (F)

#### 211. Counterpoint II. Cr. 2

Prereq: MUT 210. Counterpoint of the Baroque period with emphasis on the style of J.S. Bach. (W)

#### 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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**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)

**504. History of Music Theory. Cr. 3**  
Prereq: junior standing. Comprehensive survey from ancient Greeks to present. (I)

**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 (harpichord, 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 media. 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)

**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. 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. Introduction to Musicology. Cr. 3**  
Prereq: graduate standing in music or consent of instructor. Music bibliography and research techniques. (F)

**535. Performance Literature. 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 School of Fine and Performing Arts, through the Music Department, offers private instruction in voice and specific musical instruments.

**22x Series Courses:** 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 electing these courses.

**Limitation:** Open only to students with less than ten semesters of private performance course work including transfer credit.

**Election for three credits:** Open only to students in a performance curriculum or a combined curriculum of performance and music education, or theory, or composition, or music therapy, or music industry 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 to equal eight credits, including MUP election. Performance ensembles in the MUA 28x series as required by the student's curriculum.

**Fees:** Special fees are arranged for these courses and are indicated in the University *Schedule of Classes*.

**Contact Hours:** Cr. 3: fourteen lessons — one per week; Cr. 1: seven lessons — one lesson per two-week period.

**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. 1-3**

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)

**52x Series Courses:** The following courses (52x series) are open only to jazz studies majors. One course per semester is the usual election for the MUP 52x series; however, some students may elect MUP 521 and MUP 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:** Department 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*.

**Contact Hours:** one lesson per two-week period.

**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)

**178. Classic Guitar Class I. Cr. 2**  
Open only to beginning students. Performance, basic posture and tone production. (I)

**179. Piano Proficiency: Level I. Cr. 2**  
Prereq: 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. (W)

**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. (F)

**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. Chamber Singers. 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**  
Offered for undergraduate credit only. A discussion of copyright law, performing rights organizations, contractual agreements, publishing and recording considerations, and other business concerns. (W)

**561. Recording and Electronic Techniques. Cr. 3**  
Prereq: major in jazz studies or music industry management. 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)

**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)

**575. Pedagogy for Performers. Cr. 3**  
Open only to performance majors or by written consent of chairperson. Instrumental or vocal pedagogy for students in the performance curriculum, to prepare them to teach as private or classroom applied music instructors. (I)

**577. Techniques of Piano Accompaniment. Cr. 2**  
Gives the advanced piano student various techniques of accompaniment among various types of literature. (I)

## Music Education (MED)

**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) Movement and Dance in the Music Class. 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)

**557. Music in Special Education. Cr. 3-4**  
Teaching techniques and music materials to meet the needs of special education students. (I)

**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

Chairperson and Director, University Theatres: Howard Burman

## Professors

Howard Burman, N. Joseph Calarco, Robert T. Hazzard, Leonard Leone (Distinguished Professor Emeritus), Kathryn A. Martin, Robert E. McGill, Russell E. Smith

## Associate Professors

Nira Pullin, Anthony B. Schmitt, Von H. Washington

## Assistant Professors

Sharon S. Campbell, Thomas Schraeder

## Lecturers

Victor McQuiston, Robin Ver Hage

## Theatre Support Staff

Philip Fox II, Francis T. Majeske, Margaret E. Spear, Janet Steele

## 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 the 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 13.

**Matriculation:** The following sequences 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 the B.F.A. adviser prior to their freshman year. Transfer students should consult the B.F.A. adviser immediately.

**DEGREE REQUIREMENTS:** Candidates must complete a minimum of 120 credits including the General Education Requirements (see page 20), the School Group Requirements (see page 137), and the major requirements cited below. All course work must be completed in accordance with the regulations of the University and the School governing undergraduate scholarship and degrees; see pages 20-31 and 137-141, 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.

### MAJOR REQUIREMENTS: B.F.A. ACTING

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 306
Technical Laboratory.....	THR 208 (Min. 4 credits)
Directing I.....	THR 505

### MAJOR REQUIREMENTS: B.F.A. DIRECTING

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 Core.....	THR 213, 305, 306, 501, 503
Technical Laboratory.....	THR 208 (Min. 4 credits)
Stage Management Laboratory.....	THR 218 (Min. 4 credits)

### MAJOR REQUIREMENTS: B.F.A. DESIGN

Structure and Analysis.....	THR 102
Development of Drama I and II.....	THR 512, 612
Theatre History I and II.....	THR 510, 521
Acting I.....	THR 104
Directing I.....	THR 505
Technical Theatre.....	THR 213, 305, 306, 501, 503
Scene Painting I and II.....	THR 514, 515
Technical Theatre Problems.....	THR 216 (Min. 12 credits)
Stage Design.....	THR 508
Advanced Stage Lighting.....	THR 607
Technical Laboratory.....	THR 214 (Min. 4 credits)

\* For information, see the Wayne State University Graduate School Bulletin.

# COURSES OF INSTRUCTION<sup>1</sup> (THR)

- 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**  
Prereq: THR 101 or 103. 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 first 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 first 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. 1-2(Max. 11)**  
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)**  
(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)
- 306. Stage Lighting. Cr. 3**  
Theory and practice in stage lighting units, control equipment, color aesthetics; their application to play production. Basic lighting design; laboratory projects coordinated with University Theatre productions. (F)
- 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)
- 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)

See page 429 for interpretation of numbering system, signs and abbreviations

- 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. 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 full-length play on the University Student Stage. (W)
- 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. 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, Film, and Television. Cr. 3(Max. 6)**  
Prereq: ENG 383. Comparative study of scripts for stage, radio, television plays, and motion pictures. Practice in writing either an original script or an essay on some phase of contemporary dramatic form. Actual production of some scripts in experimental theatre and radio studios. (I)
- 514. Introduction to Scene Painting. Cr. 3**  
Prereq: THR 213. 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. 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)
- 525. Playwriting I. Cr. 2**  
Introduction to the craft of writing for the stage. Students required to write a full-length dramatic script. (B)
- 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. (F)
- 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. (W)



**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)

**607. Advanced Stage Lighting Design. Cr. 3(Max. 6)**  
Prereq: THR 306. Light design, color, optics, instruments, and control as related to advanced problems in stage lighting. Laboratory projects coordinated with University Theatre productions. (I)

**608. Advanced Stage and Film Makeup. Cr. 2**  
Prereq: THR 305. Continuation of basic principles applied in THR 305; emphasis on new makeup materials; experimentation with prosthesis and design for problem makeup. (I)

**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)





# **Division of Health and Physical Education**

*ACTING DIRECTOR: FREDERICK A. MULHAUSER*

# Foreword

Health, physical education, and recreation, as integral parts of a general education, focus attention upon the vital needs of the human being to acquire attitudes, knowledge and skills necessary for regular participation in healthful living and physical and leisure-time activities. 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 and Physical Education is a separate, autonomous administrative unit of the University. It 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.

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.

In addition to instructional courses, provision for further participation in physical education activities is provided by the following co-curricular programs: co-recreational activities in sports and swimming; intramural athletics for men and women; and intercollegiate sports for men and women in team and individual sports.

The College of Education is the degree granting unit for all students majoring in a professional program.

## Degree and Certificate Programs

### *Bachelor of Science in*

*Education—with a major in physical education*

### *Bachelor of Arts in*

*Education—with a major in physical education*

### *Bachelor of Science in Recreation and Park Services*

### *Certificate in Health and Fitness Management*

- \* *Master of Education—with a major in health 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 in Recreation and Park Services*
- \* *Master of Arts in Education—with a major in sports administration and specializations in interscholastic athletic administration, intercollegiate athletic administration, professional sports administration, and commercial sports administration*

\* For information see the Wayne State University Graduate School Bulletin.

# ACADEMIC PROCEDURES

*For complete information regarding academic rules and regulations of the University, consult the General Information section of this bulletin beginning on page 5.*

*The College of Education is the degree-granting unit for students in the Division of Health and Physical Education. Thus, students must comply with the academic procedures of that college in pursuing degree programs, and students have access to the academic services of that college. Such procedures and services which are particularly relevant to students in the Division of Health and Physical Education are stated below. Students should also consult the College of Education section of this bulletin, beginning on page 63.*

## Accreditation

The programs of the College of Education have been accredited by the National Council for Accreditation of Teacher Education since 1959. The College has been reaccredited periodically since that time. Full accreditation for its programs was again granted in 1984 for a seven-year period.

## 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 University. 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 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.

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 toward the certificate may be accepted by transfer but at least fifteen credits must be completed at Wayne. (When a student already holds one type of certificate and is working on another, this residence requirement may be lowered.)*

## Division of Health and Physical Education Directory

Director.....	261 Matthaei; 577-4249
Assistant Director.....	267 Matthaei; 577-4249
Driver Education Department.....	267 Matthaei; 577-4249
Graduate Office.....	257 Matthaei; 577-4269
Health Education Department.....	262 Matthaei; 577-4265
Health Department.....	262 Matthaei; 577-4265
Physical Education Department.....	266 Matthaei; 577-4265
Recreation and Park Department.....	259 Matthaei; 577-4269
Intercollegiate Athletics.....	101 Matthaei; 577-4280
Mailing address for all offices: Wayne State University, Detroit, Michigan 48202.	

# HEALTH EDUCATION

Office: 262 Matthaei

Chairperson: Amos O. Aduroja

### Associate Professor

Robert Samaras

### Assistant Professor

Amos R. Aduroja

## Degree Program

### \*Master of Education—with a major in Health Education

Health education, a new field of specialization, is an educational leader 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 in schools employing the Model curriculum. 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.

**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 — Introduction to Human Anatomy.....	4
PSL 322 — Fundamentals of Physiology.....	4
HEA 231 — Dynamics of Personal Health.....	2-3
HEA 232 — Dynamics of Community & Environmental Health.....	2
H E 330 — Health of the School Child.....	2
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
<b>Total: 24</b>	

\*For information, see the Wayne State University Graduate Bulletin.

# COURSES OF INSTRUCTION<sup>1</sup>

## 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. 3**  
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. Fieldwork in Health Education. Cr. 1-3(Max. 3)**  
Prereq: professional courses in health education and consent of adviser; coreq: student teaching experience. Offered for S and U grades only. Seminar attendance required twice per semester. 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)

## 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 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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

# PHYSICAL EDUCATION

Office: 266 Matthaei

Chairperson: Mary L. Barnett

## Professors

Istvan J. Danosi (Emeritus), Chalmer G. Hixon (Emeritus), Leon A. Lande (Emeritus), Joel G. Mason (Emeritus), Frank Octavec (Emeritus), Lawrence E. Russell (Emeritus), William N. Wasson (Emeritus)

## Associate Professors

Mary L. Barnett, David L. Blievernicht, Jane C. Fink (Emerita), Vernon Gale, Frank McBride, Frederick A. Mulhauser, Robert White

## Assistant Professors

Sarah J. Erbaugh, Avanelle Kidwell, Peter A. Roberts, William W. Sloan, John C. Wirth

## Lecturer

Molly M. Sapp

## Athletic Coaches

Gary Bryce, David Farris, Charles Parker, Christ Petrouleas, Guglielmo Pezza, Allison K. Scruggs-Tookes

## Assistant Athletic Coach

Joseph Horn

## Degrees and Certificates

*Bachelor of Science in Education—with a major in Physical Education*

*Bachelor of Arts in Education—with a major in Physical Education*

*Certificate in Health and Fitness Management*

\* *Master of Education—with a major in Physical Education*

\* *Master of Arts in Education—with a major in Sports Administration*

## Bachelor of Science in Education with a major in Physical Education

**Admission Requirements (Junior College Level):** All students who enter the University directly from high school, or transfer to Wayne from other colleges with less than fifty-three semester credits and who declare their intent to major in physical education are admitted directly to the College of Education at the junior college level; for requirements, see page 69. Upon application, students should request admission into the physical education major program.

Students already admitted into any other college of Wayne State University with less than fifty-three credits must apply for transfer to the physical education program at the junior college level 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.)

**Senior College Level:** Upon completion of a minimum of fifty-three semester credits at an accredited institution, students must apply to the college of Education (Room 489 Education Building) for admission to the senior college professional program in physical education. Applicants who have completed fifty-three semester credits or more of college work at some institution other than Wayne State must file transcripts of such work in the College of Education, Division of Academic Services (Room 489 Education Building), not in the University Admissions Office.

Eligibility for admission to senior college professional work is based on the following criteria:

1. Satisfactory completion of fifty-three credits.
2. An overall honor point average of 2.5 or above. Students with an honor point average between 2.25 and 2.49 may be considered for conditional admission.
3. Satisfactory completion of the University English Proficiency Examination.
4. Satisfactory completion of English 102 or an acceptable equivalent.
5. Personal attributes most desirable for teachers including a high standard of moral conduct and an understanding of the nature of responsible citizenship.
6. 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 beginning course work in the College.

Post-degree students should follow the procedures for application to senior college 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: thirty-six to forty credits in general education (including satisfaction of the University General Education requirements, see page 20); a minimum of fifty credits in physical education; fourteen credits in health 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 options (see curricula below). 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 65 and 20-31, respectively. All physical education classes must be completed with grades of 'C' or better to meet the Departmental 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.

\* For information see the Wayne State University Graduate School Bulletin.

## HEALTH FOUNDATION SEQUENCE

(Required with each option)

	Credits
ANA 301 — Introduction to Human Anatomy .....	4
HEA 231 — Dynamics of Personal health .....	3
HEA 233 — First Aid/CPR .....	3
PSL 322 — Fundamentals of Physiology .....	4

## PHYSICAL EDUCATION CORE

(Required with each option)

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

## TEACHING CERTIFICATION OPTION

P E 258 — Physical Education: Individual Sports .....	4
P E 259 — Physical Education: Team Sports .....	4
P E 341 — Elementary Physical Education I .....	3
P E 342 — Elementary Education II .....	3
H E 330 — Health of the School Child (or P E elective) .....	3
P E 540 or P E 541 or P E 542	
— Introduction to P E for Exceptional Children & Adolescents .....	3
— P E for the Exceptional Student: Methods & Materials .....	3
— Sports & Recreation for Exceptional Children & Adolescents .....	3
Total:	20

## Physical Education Activity

PEA 170 or 175	
— Aikido: Beginning .....	2
— Karate: Beginning .....	2
PEA 119 — Lifesaving .....	2
PEA 120 — Water Safety Instructor .....	2
PEA electives .....	4
Total:	10

## Professional Education Requirements

P E 350 — Instructional Methods .....	4
P E 441 — Student Teaching and Seminar I .....	5
P E 442 — Student Teaching and Seminar II .....	5
EDP 331 — Educational Psychology .....	3
RDG 443 — Reading in the Content Areas .....	3
TED 516 — Secondary Teaching .....	3
Total:	23

## Teaching Minor/Second Major

Students in the teaching certification program must develop a teaching minor or second major of twenty to twenty-four credits in an approved area.

## EXERCISE SCIENCE OPTION

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

Physical Education Activity Electives ..... 10

## Professional Education Requirements

EDP 331 — Child Study .....	3
EER 561 — Foundations in Evaluation and Research .....	2
TED 602 — Computer Application in Teaching I .....	3
Electives .....	12
Total:	20

## ADULT FITNESS OPTION

P E 256 — Individual Problems in Physical Education .....	4
P E 435 — Internship in Fitness .....	4
P E 534 — Prevention and Care of Athletic Injuries .....	3
P E 632 — Fitness Leadership .....	3
H E 565 — Health and the Aging Process .....	3
Electives .....	3
Total:	20

## Physical Education Activity Requirements

PEA 128 or PEA 129 or PEA 130	
— Physical Fitness .....	2
— Aerobic Dance .....	2
— Aerobics: Running .....	1
PEA 177 — Personal Defense .....	1
PEA 170 or PEA 175	
— Aikido .....	2
— Karate: Beginning .....	2
PEA 119 — Lifesaving .....	2
PEA Electives .....	3-4
Total:	10

## Professional Education Requirements

Education Electives .....	9
Other Electives .....	11
Total:	20

## COACHING OPTION

P E 251 — Officiating Techniques .....	2
P E 452 — Field Experience in Coaching .....	4
P S 533 — Principles of Athletic Training .....	3
P E 534 — Prevention and Care of Athletic Injuries .....	3
P E 551 — Principles of Coaching .....	4
Elective .....	4
Total:	20

## Physical Education Activity Requirements

PEA 128 or PEA 129 or PEA 130	
— Physical Fitness .....	2
— Aerobic Dance .....	2
— Aerobics: Running .....	1
PEA Electives .....	8-9
Total:	10

## Professional Education Requirements

EDP 331 — Child Study .....	3
EDP 548 — Adolescent Psychology .....	3
TED 430 — Health of the School Child .....	3
Electives .....	11
Total:	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 at Room 211 Education Building and make an appointment with the coordinator of student teaching to complete the application forms. 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):* October 1 to January 31 of the preceding year.

*Term II (Winter Semester):* April 1 to July 31 of the preceding year.

After submitting the application to the college of Education, students must make an appointment with the physical education student teaching coordinator for placement. Students must have a satisfactory health record and a tuberculosis test within six months before the assignment begins.

3. 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 physical education courses taken in the Fall of 1986 or thereafter.

c) A 2.5 physical education major honor point average must be earned in all professional Physical Education courses, as well as: PEA 170 (or 175), PEA 120, PEA 119, ANA 301, PSL 322, and H E 330.

4. 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.

5. The following certifications are required:

a) Current Red Cross Lifesaving Certificate.

b) Current Water Safety Instructor Certificate must be completed before the secondary student teaching contact.

c) First Aid and CPR 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 82 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, 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 and should consult a Departmental adviser for guidance.

### 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 354 — Cultural Foundations of Physical Education.....	3
P E 355 — Motor Learning and Control.....	3
* P E 357 — Physiology of Exercise.....	3
* P E 358 — Kinesiology.....	3
P E 550 — Evaluation and Measurement in Physical Education.....	3

### SPECIALIZED TEACHING CORE (One of the following options required: 6-8 credits)

#### Secondary

P E 258 — Secondary Teaching: Individual Sports.....	4
P E 259 — Secondary Teaching: Team Sports.....	4

#### Elementary

P E 341 — Elementary Physical Education I.....	3
P E 342 — Elementary Physical Education II.....	3

**ELECTIVES: PEA and P E Courses.....4-6**

## 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 a teacher certification program. Endorsements will not be granted without a 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: MR/POHI.....	3
SED 511 or SED 715	
—Mental Retardation and the Cognitive Processes.....	3
—Educational Diagnosis & Interventions: Moderately/Severely Impaired..	3
Total: 24-28	

## Health and Fitness Management Certification

The certificate program in health and fitness management is a twenty-four credit post-baccalaureate curriculum designed to prepare entry-level personnel for the planning, implementation, and

\* Prerequisites are required for this course.

management of health and fitness programs in business industry, or a community setting. The emphasis is a multi-disciplinary approach involving health, physical education and recreation services and the departments representing these areas of study within the University. This allows for flexibility of specialization in the areas of health, fitness leadership, gerontology, and leisure activities.

**Admission Requirements:** Applicants for this program must hold a bachelor's degree from an accredited institution, and candidates will be enrolled in a post-bachelor status in the University. The minimum honor point average for admission is 2.6; however, conditional admission may be granted to applicants whose honor point average is between 2.25 and 2.59. Certificate admission application forms are available from the University Admissions Office.

**CERTIFICATE REQUIREMENTS** consist of twenty-four credits as outlined below and completed with a minimal honor point average of 2.5.

**REQUIRED CORE (Fourteen Credits)**

	<i>Credits</i>
R P 260 – Principles of Leadership and Recreation Programming .....	4
P E 357 – Physiology of Exercise .....	3
P E 632 – Fitness Leadership .....	3
H E 642 – Introduction to Health Education Program Design .....	3
R P 465 or P E 641	
– Recreation and Park Administration .....	3
– Introduction to Sports Administration .....	3
P E 435 or R P 462	
– Internship in Fitness .....	4
– Internship .....	4

## COURSES OF INSTRUCTION<sup>1</sup>

### 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. 1-4(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. 4**

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. 4**

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. 2-3**

Parks and Recreation majors elect two credits; Physical Education majors elect three credits. 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: admission to senior college. 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. Theory and Practice of Aquatics: Water Safety Instructor. (PEA 120). Cr. 2**

Prereq: PEA 119 or lifesaving certificate. Instructional methods and techniques in aquatics, water-safety and survival; swimming program development; pool and waterfront administration and management; leads to Water Safety Instructor's certificate. (F,W)

**350. Instructional Methods in Physical Education. Cr. 4**

Prereq: admission to senior college. 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. 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. 2-6**

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. (Fld: 15; Smr: 3). Cr. 2-6**

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

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**452. Field Experience in Coaching. Cr. 2-4(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: admission to senior college in physical education, recreation, or special education. 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: admission to senior college in physical education, recreation, or special education. 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: admission to senior college in physical education, recreation, or special education. 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. 1-4(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)

**103. Sports: Concepts and Conditioning. Cr. 1**

Theoretical and practical aspects of conditioning for sport and recreational activities. Principles of skill and strength development, diet related to activity, physiological factors underlying fitness, and psychological and sociological dimensions of sport and recreation. Personal fitness assessment included. (I)

**110. Swimming: Elementary. Cr. 2 (Max. 4)**

Fundamental skills and knowledge in aquatics for beginners. (T)

**111. Swimming: Continuing. Cr. 2 (Max. 8)**

Prereq: basic swimming skill. Proficiency in all swimming strokes; beginning diving techniques; deep water skills and endurance. Distance swimming. (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. Lifesaving. Cr. 2**

Prereq: advanced swimmer. Lifesaving and water safety procedures. Leads to lifesaving certification. (F,W)

**120. (P E 344) Theory and Practice of Aquatics: Water Safety Instructor. Cr. 2**

Prereq: PEA 119. 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 Water Safety Instructor's Certificate. (F,W)

**128. Physical Fitness. 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. 8)**

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. 1 (Max. 4)**

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. 1 (Max. 2)**

Analysis and practice of skills, information on scoring, rules, tournament competition. (F,W)

**133. Badminton. Cr. 1 (Max. 2)**

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

**135. Billiards: Beginning. Cr. 1 (Max. 2)**

Vendor's fee: \$10. Basic skills and technique; history, rules, equipment and game courtesy. (F,W)

**136. Billiards: Continuing. Cr. 1 (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. 1 (Max. 4)**

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

**140. Creative Relaxation. Cr. 2**

Analysis and practice of creative relaxation as applied to sport performance and other life functions. (F,W)

**141. Golf. Cr. 2 (Max. 8)**

Analysis and practice of fundamentals focused on development of correct form in the use of different clubs. (F,W)

**144. Gymnastics and Tumbling. Cr. 1 (Max. 6)**

Analysis and practice of basic gymnastic techniques and events; floor exercise and apparatus. (F,W)

**148. Yoga. Cr. 1 (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: Continuing. Cr. 2 (Max. 8)**

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

**157. Squash. Cr. 1 (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: Continuing. 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. 8)**

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

**166. Soft Tennis. Cr. 1 (Max. 2)**

Tennis played with a sponge-like soft ball and a racquet lighter and smaller than a traditional racquet; as suited to indoor play. (F)

**170. Aikido: Beginning. Cr. 2 (Max. 4)**

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

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

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

**172. Fencing: Advanced. Cr. 2 (Max. 8)**

Prereq: basic fencing skills. (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)

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

Prereq: PEA 170. Analysis and practice of more advanced skills, techniques and philosophy of Aikido as a modern martial art. (F,W)

**201. Basketball: Women. Cr. 1**

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

**202. Basketball: Men. Cr. 1**

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

**206. Power Volleyball. Cr. 1 (Max. 4)**

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

Office: 259 Matthaei Recreation Center

Chairperson: Diane Pick

## Associate Professor

Diane Pick

## Lecturer

Doris Finlay

## Degrees

### Bachelor of Science in Recreation and Park Services

#### \* Master of Arts—with a Major 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. By virtue of their major standing in the Department, all students are members of the Student Recreation and Park Association and twice-yearly Professional Development Seminars are offered by the Department to students and professionals in the area.

## Bachelor of Science in Recreation and Park Services

**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 13 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 2.0, 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 the 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 20), and sixty-two 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 65-70 and 20-31, 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 2.0 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 (Seventeen Credits)\*

	Credits
ENG 102 — Freshman Composition .....	4
ENG 280 — Techniques of Imaginative Writing .....	4
ENG 301 — Techniques of Expository Writing .....	3
SPB 101 — Oral Communication .....	2
SPC 210 or SPC 220	
— Persuasive Speaking .....	3
— Interpersonal Communication .....	3
UGE 100 — Introduction to the University Library .....	1

### HUMAN INTERACTION (Sixteen Credits)

PSY 101 — Introductory Psychology .....	4
SPC 520 — Group Communication and Human Interaction .....	3
Education Electives (chosen with adviser approval) .....	6
<sup>1</sup> PSY or SOC elective .....	3

### NATURAL SCIENCE (Three to Eleven Credits including one laboratory course)

<sup>2</sup> ANA 301 — Introduction to Human Anatomy .....	4
‡ PSL 322 — Fundamentals of Physiology .....	4
Life Science Requirement .....	3
Physical Science Requirement .....	3

### GENERAL EDUCATION (Eighteen Credits)

American Society and Institutions Requirement .....	3
Foreign Culture Requirement .....	3
Historical Studies Requirement .....	3
Philosophy and Letters Requirement .....	3
Social Science Requirement .....	3
Visual/Performing Arts Requirement .....	3

### EVALUATION AND MEASUREMENT (Three Credits)

P E 550 — Evaluation and Measurement .....	3
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### HEALTH AND PHYSICAL EDUCATION (Five Credits)

HEA 233 — First Aid/CPR .....	3
P E 340 — Human Growth and Development .....	2

### 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-two credits in Recreation and Park Services courses consisting of the following core

\* Additional course work may be needed for students having difficulty in this area.

<sup>1</sup> Required for the Recreation Programming Option only.

<sup>2</sup> Required for the Therapeutic Recreation Option only.

\* For information see the Wayne State University Graduate School Bulletin.

courses, a concentration in recreation programming or therapeutic recreation, and nine elective credits. Attendance at two departmental professional Development Seminars is also required prior to graduation.

**CORE REQUIREMENTS (Thirty-eight Credits)**

	<i>credits</i>
R P 260 — Principles of Leadership and Recreation Programming .....	4
R P 264 — Camp Leadership and Administration .....	3
R P 360 — Social Recreation .....	3
R P 362 — Introductory Field Work .....	3
* R P 367 — Introduction to Therapeutic Recreation .....	3-4
R P 462 — Internship .....	9
R P 463 — Philosophy of Recreation .....	3
R P 465 — Recreation and Park Administration .....	3
R P 664 — Legal Issues in Leisure Services Systems .....	4
R P 665 — Supervision and Management in the Leisure Services .....	4

**CONCENTRATIONS (Fifteen Credits in one of the following options)**

*Recreation Programming*

R P 265 — Cultural Arts in Recreation .....	3
R P 565 — Recreation Services for the Aging .....	3
R P 568 — Wilderness Leadership .....	3
R P 593 — Facility Planning and Design .....	3
R P 660 — Outdoor Education .....	3
R P 667 — Outdoor Recreation .....	3
R P 698 — Leisure Education .....	3

*Therapeutic Recreation (courses marked with an asterisk are required)*

R P 265 — Cultural Arts in Recreation .....	3
* R P 563 — TR: Program Development .....	3
R P 565 — Recreation Services for the Aging .....	3
R P 593 — Facility Planning and Design .....	3
R P 598 — TR: Mental Health .....	3
* R P 663 — TR: Program Implementation .....	3
* R P 698 — Leisure Education .....	3

**R P ELECTIVES (Nine Credits in any R P Courses)**

**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 19). 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.

**COURSES OF INSTRUCTION<sup>1</sup>**

**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. 1-3**

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. 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. 1-6(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)

\* Four credits in this course are required for those on the Therapeutic Recreation Option. The fourth credit may be counted under the electives section listed below.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**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. Wilderness Leadership. Cr. 3**

Prereq: basic course in first aid. Leadership of groups in wilderness settings; equipment, skills, preparation for trips. Weekend trip required. (B;S)

**593. 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)

**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)

## Driver Education (D E)

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

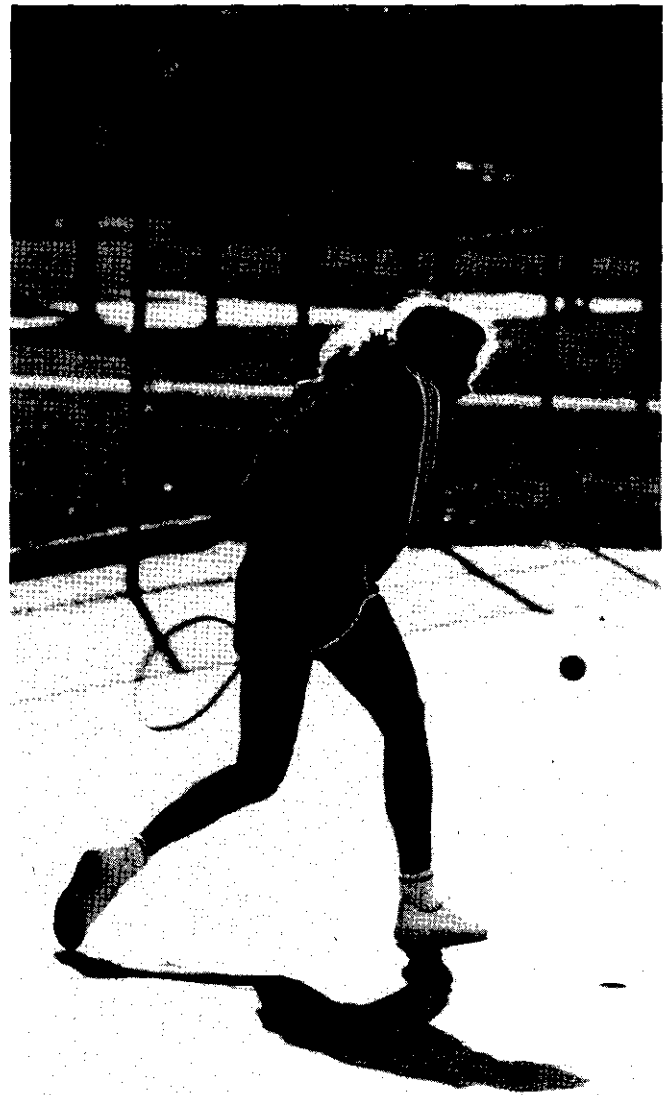
Prereq: valid Michigan driver's license. (F,W)

**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)







# **Law School**

*DEAN: JOHN REED*

# THE STUDY OF LAW AT WAYNE

*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 School 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, which would be helpful for future matriculation.*

## 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. At the time of its largest enrollment, the Law School had more than 1,000 students and a faculty of more than forty full-time professors. The present long-term plan calls for a student body of 700 and a full-time faculty of about thirty members.

Like all quality law schools, Wayne State pursues the two major goals of education and research. The primary 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, prosecutor's and defender's 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 molder 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, prosecutor's and defender's 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 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.

Wayne State University Law School has recently received national recognition for its decision to maintain the quality of its student body in the face of declining numbers of law school applicants. The faculty has intentionally reduced the size of the School by nearly one-third in order to maintain admissions standards, resulting in smaller first-year sections and improved access to specialized upper-level offerings. The decision to maintain student quality has resulted in a substantial improvement in the School's relative ranking among American law schools; the credentials of recent entering classes placed the Law School solidly in the top quarter of American law schools.

## 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 Clinical 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.

## 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, 231 Law Library, during regular office hours to consult the *Prelaw Handbook* and other Law School reference material.

## Requirements for Admission

*Wayne State University does not discriminate on the basis of race, color, religion, national origin, handicap, marital status, age, sex, or sexual orientation in the hiring of applicants for employment, in the treatment of University personnel or in the admission of students.*

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 Law School does not admit first-year classes for the January semester.

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.

The *Prelaw Handbook* includes information showing LSAT scores and grade point averages of persons accepted or rejected in the prior year by Wayne State University and other law schools.

Any person admitted to the first-year class whose undergraduate grade point average and LSAT score are substantially below the average admission factor may be required to enroll in and complete the First Year Summer Institute (including the writing of examinations) as a condition of eligibility to enroll in the fall semester and to continue as a law student.

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 April 15. Applications received later than April 15 will be considered after applications timely received or may be refused. It is the applicant's responsibility to ascertain that all credentials are in. 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 prior to the first 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. All applicants must *also* send an official transcript, when it is available, showing receipt of the bachelor's degree, directed to the Wayne State University Law School Admissions Office.

**RECOMMENDATIONS AND INTERVIEWS:** Applicants are urged to submit at least one letter of recommendation. Except in unusual circumstances, personal interviews are not required. 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. Junior or community college grades are not used in determining the factor, nor are grades from graduate programs.

**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 before registration 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 law school grade average is at least 'C'. 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.

Day students take two of the first-year required courses in the summer preceding the beginning of the regular academic year. If enrollment permits, there is also an evening program in which one first-year course is offered. Since credit is given for the successful completion of these courses, the program permits a lighter course load in the regular academic year. All Summer Institute participants also take a two-week non-credit orientation class—Introduction to Law Study. Attendance at the course is mandatory.

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.....	231 Law Library; 577-3937
LL.M. Program.....	395 Law Library; 577-3955
Cashier's Office .....	158 Administrative Services Building; 577-3650
Financial Aids.....	317 Law Library; 577-5142
Handicapped Student Services .....	450 Mackenzie Hall; 577-3398
Housing Office .....	700 Merrick; 577-2116
International Student Services.....	470 Mackenzie Hall; 577-3422
Military and Veterans' Affairs .....	5743 Woodward; 577-3374
Records and Registration, Law School .....	311 Law Library; 577-3931
Residency .....	156 Administrative Services Building; 577-3541
Supportive Services .....	195 Law School Annex; 577-3993

Letters should be addressed to the appropriate department and building at Wayne State University, Detroit, Michigan 48202. The telephone area code is 313.



# **College of Liberal Arts**

*DEAN: 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 cogent language. Students are stimulated to think and read critically and 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, Women's Studies, and Urban 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 Degrees— with majors in:*

Psychology

Sociology

### *Bachelor of Arts Degrees— with majors in:*

American Studies  
Anthropology  
Anthropology and Sociology  
Art History  
Biological Sciences  
Chemistry  
Classical Civilization  
Classics  
Computer Science  
Economics  
English  
Film Studies

Information Systems  
Italian  
Journalism  
Labor Studies  
Latin  
Linguistics  
Mathematics  
Near Eastern Languages  
Near Eastern Studies  
Nutrition and Food Science  
Philosophy  
Physics

French  
Geography  
Geology  
German  
Greek  
Hebrew  
History  
Human Development  
Humanities

Polish  
Political Science  
Psychology  
Public Relations  
Radio and Television  
Russian  
Slavic  
Sociology  
Spanish  
Speech Communication

### *Bachelor of Arts Honors Degrees— with majors in:*

Anthropology Honors	Latin Honors
Biological Sciences Honors	Near Eastern Languages Honors
Chemistry Honors	Near Eastern Studies Honors
Classical Civilization Honors	Nutrition and Food Science Honors
Classics Honors	Philosophy Honors
Economics Honors	Polish Honors
English Honors	Political Science Honors
French Honors	Public Relations Honors
Geography Honors	Radio and Television Honors
Geology Honors	Russian Honors
German Honors	Slavic Honors
Greek Honors	Sociology Honors
Hebrew Honors	Spanish Honors
History Honors	Speech Communication Honors
Human Development Honors	
Humanities Honors	
Italian Honors	
Journalism Honors	

### *Bachelor of Science Degrees— with majors in:*

Computer Science (as a second major)  
Geology  
Mathematics  
Nutrition and Food Science  
Psychology

### *Bachelor of Science Honors Degrees— 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'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 32.

## 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.

All students in the College of Liberal Arts to whom these requirements apply must successfully complete the following:

## Competency Requirements

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 on page 20. Competencies are required in Written Communication, Mathematics, Oral Communication, Computer Literacy, and Critical Thinking.

## 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 20) 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.

## NATURAL SCIENCE

**Physical Science** as specified in the University General Education Program (see page 22) but with the following limitations: all students in the College of Liberal Arts must successfully complete one course from the fields of chemistry, physics, or physical science (a combination of chemistry and physics) with the exception of AST 201. Physical science options include: CHM 100, 102, 105, 107, 131; PHY 101, 102, 104, 213, 217, 310.

**Life Science** as specified in the University General Education Program (see page 22) with the exception of NFS 203. Approved courses include: ANT 211; BIO 101, 103, 105; 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. Natural Science III options consist of all courses cited in the University General Education Group Requirement in Physical Science and Life Science plus AST 201; NFS 203, 221; and PSY 405. Approved courses include: ANT 211; AST 201; BIO 101, 103, 105; CHM 100, 102, 105, 107, 131; GEL 101; NFS 203, 221; PHY 101, 102, 104, 213, 217, 310; PSY 101, 102, 405.

**HISTORICAL STUDIES** as specified in the University General Education Program (see page 22) with the exception of HIS 287. Approved courses include: ANT 320; HIS 110, 120, 130, 140, 150, 160, 161, 195, 304; N E 368, 369; P S 353.

## SOCIAL SCIENCE

**American Society and Institutions** as specified in the University General Education Program, see page 23. Approved courses include: HIS 103, 105; P S 101, 103.

**Social Science I** as specified in the University General Education Program, see page 22. Approved courses include: ANT 210; ECO 100, 101, 102, 180; GEG 110, 313, 320; P S 100, 224; SOC 200, 202, 204, 330, 410; U S 200.

**Social Science II** as specified in the University General Education Program (see page 22). Students in the College of Liberal Arts must successfully complete two courses in this category — one from each of two different social science disciplines. Approved courses include those cited in the list of approved options for Social Science I, above.

**FOREIGN CULTURE:** 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

**Visual and Performing Arts** as specified in the University General Education Program, see page 23. Approved courses include: A H 100, 101, 111, 112; DNC 231; FLM 201, 202; 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 23. Approved courses include: CLA 101, 210, 220; ENG 216, 217, 219, 220, 250, 272, 299, 311, 312, 314; FRE 270 (or GER 270; ITA 270; RUS 270; SPA 270); HUM 210, 211, 220, 222, 302; PHI 101, 103, 210, 211, 232, 350, 355, 370; P S 351, 352; RUS 365, 465; SOC 216, 219.

**Cultural Studies:** All students in the College of Liberal Arts must successfully complete one course from the fields of American Studies, Black 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; ENG 260, 291, 360; CLA 200; FRE 271; GER 271, 272; 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 23).

## 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.

## Proficiency in English and Mathematics

All undergraduate students who registered 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 requirements applicable to registrants at the

University prior to and subsequent to Fall 1983, see the General Information section of this Bulletin, pages 21,24.

## University Requirement in American Government

See General University Information, page 23.

## 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 adviser's. Descriptions of the various curricula will be found in the Undergraduate Curricula section below, see page 194.

## 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. An up-to-date cumulative record of work completed 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 designated representative on the major declaration form and file the form in the Liberal Arts Declaration of Major/Curriculum Office, 582 Mackenzie Hall. 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.

## 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 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.

## Curricula and Co-Majors

*(Taken in conjunction with another major which leads to a Bachelor's Degree)*

Black Studies	Urban Studies
Chicano-Boricua Studies	Women's Studies
Peace and Conflict Studies	

### *Special Concentrations Available within Departments*

**Biological Sciences:** Bio-Physics and Molecular Biology (Bachelor of Science in Biological Sciences Degree)

**Speech:** Speech Communication, General Speech, Speech Communication Education, Communication Disorders and Sciences (Speech and Language Pathology), Oral Interpretation.

**Speech:** Advertising, Broadcast Journalism, News-Editorial.

**Speech:** Radio-TV-Film (Broadcasting).

## 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 Double Major, page 193.)

## 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 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 out dated. 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 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 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.

# UNDERGRADUATE CURRICULA

## 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.

## 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.

## 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.

*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	credits
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	credits
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 47. Students complete the following course as pre-business administration students in the College of Liberal Arts:

## Accounting

- ACC 301 (4 cr.).....Prereq: MAT 150; ECO 101,102.  
ACC 302 (4 cr.).....Prereq: ACC 301 and ALL ACC 301 prerequisites.  
ACC 351 (3 cr.).....Prereq: sophomore standing.

## Economics

- ECO 101 (3 cr.).....Note: Either ECO 101 or 102 will satisfy the basic  
ECO 102 (3 cr.) Social Science Group Requirement.

## English

- ENG 102 (4 cr.).....Prereq: placement examination.  
ENG 301 (3 cr.).....Prereq: ENG 102 and English Proficiency Exam.

## Mathematics

- MAT 150 (3 cr.).....Prereq: Qualifying Examination.  
or  
\* MAT 180(4 cr.).....Prereq: Qualifying Examination.

## Philosophy

- PHI 105 (3 cr.).....Prereq: none.

## Psychology

- PSY 101 (4 cr.).....Note: PSY 101 will satisfy the requirement for  
or a Natural Science laboratory, and the Life Science  
PSY 102 (3 cr.) Group Requirement.

## Speech

- SPB 101 (2 cr.).....Prereq: none.

## Statistics

- FBE 330 (3 cr.).....Prereq: MAT 150 or 180.  
or  
ECO 410 (3 cr.).....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.

	<i>credits</i>
Biology or Zoology with laboratory.....	16-17
Chemistry: Inorganic, including qualitative analysis, and 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 page 199.

## Pre-Engineering

— See page 99.

## 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: Economics 101, 102, 320; four courses in English; History 105, 204, 205, 516, 517, 561; Philosophy 101, 185; Political Science 101, 201, 304, 510, 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, Room 343, Mackenzie Hall.

## 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 (including genetics) with laboratory.....	16-17
Inorganic Chemistry (including qualitative analysis) with laboratory.....	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 Medicine, 4720 Montgomery Lane, Suite 609, Washington, D.C., 20014.

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, all of which must be completed prior to admission to the professional curriculum. For information regarding University General Education Requirements, see page 20.

<b>First Year</b>	<i>credits</i>
BIO 101 — Basic Biology I.....	4
CHM 105 or CHM 107	
— Introductory Principles of Chemistry.....	6
— Principles of Chemistry I.....	4
CHM 108 — Principles of Chemistry II.....	5
CSC 101 — Introduction to Computing.....	3
ENG 102 — Introductory College Writing.....	4
M T 208 — Medical Technology Seminar.....	1
MAT 180 — Elementary Functions.....	4
SPB 101 — Oral Communication: Basic Speech.....	2
UGE 100 — The University and Its Libraries.....	1

<b>Second Year</b>	
BIO 287 — Anatomy and Physiology.....	5
CHM 224 — Organic Chemistry I.....	4
CHM 510 — Survey of Analytical Chemistry.....	3
ENG 303 — Writing the Research Paper.....	3
* HIS 110 — The Ancient World.....	3
* P S 101 — American Government.....	3
* SOC 200 — 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, all of which must be completed prior to admission to the professional curriculum. For

\* Preferred course to satisfy General Education Requirement.

information regarding the University General Education Requirements, see page 20. Students transferring into Wayne State University are requested to contact the Department of Medical Technology (577-1386) for their recommended course sequence format.

<b>First Year</b>	<i>credits</i>
BIO 101 — Basic Biology I.....	4
BIO 287 — Anatomy and Physiology.....	5
* CHM 107 — Principles of Chemistry I.....	4
CHM 108 — Principles of Chemistry II.....	5
ENG 102 — Introductory College Writing.....	4
MAT 180 — Elementary Functions.....	4
SPB 101 — Oral Communication: Basic Speech.....	2
UGE 100 — The University and Its Libraries.....	1

<b>Second Year</b>	
BIO 102 — Basic Biology II.....	4
BIO 220 — Introduction Microbiology.....	4
BIO 271 — Comparative Vertebrate Zoology.....	4
CHM 224 — Organic Chemistry I.....	4
Electives.....	7
English (elective) 200-level, or 303.....	3
Humanities (elective).....	3

## 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 with a 'C' average or better at least fifty-two of the sixty credits required in pre-professional courses, including the required subjects listed below.

<b>First Year</b>	<i>credits</i>
BIO 101 — Basic Biology I.....	4
BIO 287 — Anatomy and Physiology.....	5
* CHM 107 — Principles of Chemistry I.....	4
CHM 108 — Principles of Chemistry II.....	5
ENG 102 — Introductory College Writing.....	4
MAT 180 — Elementary Functions.....	4
PHI 105 — Critical Thinking.....	3
SPB 101 — Oral Communication: Basic Speech.....	2
UGE 100 — The University and Its Libraries.....	1

<b>Second Year</b>	
BIO 102 — Basic Biology II.....	4
BIO 220 — Introduction Microbiology.....	4
BIO 271 — Comparative Vertebrate Zoology.....	4
CHM 224 — Organic Chemistry I.....	4
ENG 303 — Writing the Research Paper.....	3
HIS 110 — The Ancient World.....	3
P S 101 — American Government.....	3
Humanities Electives.....	6

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.

\* A qualifying examination in high school chemistry is a prerequisite electing CHM 107.

\* A qualifying examination in high school chemistry is a prerequisite electing CHM 107.

## Pre-Nursing

— See page 346.

## 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 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 admission to professional study in the Department of Occupational Therapy.

<i>PRE-PROFESSIONAL PROGRAM</i>	<i>credits</i>
BIO 101 — Basic Biology I.....	4
BIO 102 — Basic Biology II.....	4
CHM 102 — General Chemistry I.....	4
* CSC 100 — Introduction to Computer Science.....	3
ECO 101 — Principles of Macroeconomics.....	4
* ENG 102 — Introductory College Writing.....	4
* ENG 301 — Techniques of Expository Writing.....	3
* MAT 180 — Elementary Functions.....	4
* P S 101 — American Government.....	4
* PHI 105 — Critical Thinking.....	3
PSY 102 — Elements of Psychology.....	3
PSY 331 — Abnormal Psychology.....	4
* SOC 200 — Understanding Human Society.....	3
* SPB 101 — Oral Communication: Basic Speech.....	2
SPC 520 — Group Communication and Human Interaction.....	3
* UGE 100 — The University and Its Libraries.....	1
Electives (see below).....	6

**Electives:** The following courses are required for graduation and may be taken either in the pre-professional or the professional program. It is strongly recommended that these be taken as elective courses in the pre-professional years.

	<i>credits</i>
O T 201 — Survey of Occupational Therapy.....	2
O T 205 — Therapeutic Activities.....	2
O T 320 — Life Tasks.....	2
AED 526 — Methods and Materials: Wood, Metal, and Plastic.....	2

**General Education Requirements:** candidates for the bachelor's degree must complete twelve credits in the following subject areas to satisfy the University Requirements in General Education. While requirements in English composition, mathematics, and American government are fulfilled by courses cited in the pre-professional program above, the following subject areas are not.

	<i>credits</i>
Historical Studies.....	3
Foreign Culture.....	3

Students may satisfy these requirements by transfer credit or examination; however, no credits are earned by such placement.

### Humanities:

Visual and Performing Arts.....	3
Philosophy and Letters.....	3

## Pre-Optometry

Satisfactory completion of University General Education Requirements, College Group Requirements, a major field, and the courses listed below lead to the bachelor's degree and qualify a student for consideration by most schools of optometry. Although some schools will accept students who have completed only two years of undergraduate work, preference is given to those who have earned the bachelor's degree.

	<i>credits</i>
Biology, including microbiology, with laboratory.....	12-16
Inorganic chemistry with laboratory.....	8-10
Organic chemistry with laboratory.....	6-8
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, 1730 M Street, N.W., Washington, D.C., 20036.

## 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, page 360). 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 — Pre-Professional Core

	<i>credits</i>
BIO 101 — Basic Biology I.....	4
BIO 220 — Introduction to Microbiology.....	4
CHM 107 — Principles of Chemistry I.....	4
CHM 108 — Principles of Chemistry II.....	5
CHM 224 — Organic Chemistry I.....	4
CHM 226 — Organic Chemistry II.....	4
CSC 101 — Introduction to Computing.....	3
ECO 100 — Survey of Economics.....	4
ENG 102 — Introductory College Writing.....	4
ENG 2xx — Any 200 level elective.....	3
MAT 201 — Calculus I.....	4
PHY 213 — General Physics.....	4
PHY 214 — General Physics.....	4
P S 101 — American Government.....	4

(These requirements *must* be completed by the end of the Spring/Summer Term of the year for which admission is sought. Exceptions may be made in extraordinary cases in which application of these requirements constitutes a great injustice.)

For students applying to the Professional Program in 1987 and 1988, eighteen credits of electives (liberal arts courses other than the core courses specified above) should be distributed between humanities or social sciences. For students applying to the Professional Program in Fall 1989 and thereafter, the remaining eighteen credits must be elected from courses chosen to meet the University General Education Requirements not satisfied by the above-required core courses. Ideally, all of these credits should be completed prior to commencing professional study; however, up to thirteen credits may be completed during summer terms after admission into the professional program:

	<i>credits</i>
* Oral Communication (SPB 101).....	2
* Critical Thinking (PHI 105).....	3
Historical Studies.....	3
Foreign Culture.....	3
Visual and Performing Arts.....	3
Philosophy and Letters.....	3
The University and Its Libraries (UGE 100).....	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.

### First and Second Years

	<i>credits</i>
BIO 101 — Basic Biology I.....	4
BIO 102 — Basic Biology II.....	4
Advanced Biology (BIO 271 or BIO 561).....	4-5
BCH 101 or CHM 103	
— Introductory Biochemistry (strongly recommended).....	2
— General Chemistry II.....	4
CHM 107 or CHM 105	
— Principles of Chemistry I.....	4
— Introductory Principles of Chemistry.....	6
ENG 102 — Introductory College Writing.....	4
ENG 301 or ENG 303	
— Techniques of Expository Writing.....	3
— Writing the Research Paper.....	3

\* Can be waived by passing a competency examination, but equivalent number of credits must then be elected in humanities or social science courses.

Humanities Elective (PHI 111 highly recommended).....	3
MAT 180 — Elementary Functions.....	4
Introductory statistics (STA 102 or PSY 410 or EER 763 or PSL 767 suggested).....	4
PHY 213 — General Physics.....	4
PHY 214 — General Physics.....	4
PSY 101 — 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
<b>Total: 62-72</b>	

## Pre-Radiation Therapy Technology

Radiation Therapy Technology is a health care discipline which utilizes ionizing radiation for the treatment of malignant diseases. The Bachelor of Science program prepares students for the technical, theoretical and psychological aspects of the job.

This program requires four years of study: two years of pre-professional courses and two years of professional courses, comprising a minimum of 133 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 391). Students are admitted to the professional curriculum by the College of Pharmacy and Allied Health Professions in the fall semester 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.

### First and Second Years

	<i>credits</i>
BIO 101 — Basic Biology I.....	4
BIO 102 — Basic Biology II.....	4
BIO 271 — Comparative Vertebrate Zoology.....	5
CHM 102 — General Chemistry I.....	4
CHM 103 — General Chemistry II.....	4
CSC 100 or CSC 101	
— Introduction to Computer Science.....	3
— Introduction to Computing.....	3
ENG 102 — Introductory College Writing.....	4
ENG 301 — Techniques of Expository Writing.....	3
MAT 180 — Elementary Functions.....	4



PHY 213 — General Physics .....	4
PHY 214 — General Physics .....	4
P S 101 — American Government.....	4
PSY 101 — Introductory Psychology.....	4
PSY 230 — Psychology of Adjustment.....	4
SPB 101 — Oral Communication: Basic Speech.....	2
PHI 105 — Critical Thinking .....	3
UGE 100 — The University and its Libraries .....	1
* Foreign Culture Elective.....	3
* Historical Studies Elective.....	3
* Humanities Electives.....	6

*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.

### A. Social Sciences: The following distribution of courses is required.

1. Anthropology—3-4 credits†
2. Economics—3 credits (Principles of Macroeconomics, ECO 101, recommended)
3. History—3 credits\*
4. Political Science—3-4 credits
5. Sociology—two courses (generally 6 credits)\*

**B. Natural Science:** The following distribution of courses is required, including a laboratory course in one of the subject areas designated below.

1. Biology—3-4 credits
2. Psychology—three courses (generally 12 credits). Field practicum courses do not meet this requirement.
3. One course (3-4 credits) to be selected from the following: Physical Science, Chemistry, Geology, Astronomy, Mathematics 180 or above, Philosophy (logic courses: PHI 185, 186, 520, 535, 539), Computer Science.

### C. Humanities: The following distribution of courses is required.

1. Philosophy—3 credits (excluding logic)
2. One course (3 credits) to be selected from the following: Classics (excluding CLA 120, 124), Humanities, Music History, Art History, literature in a foreign language department, American Studies, English literature, Black Studies 20I, Chicano-Boricua Studies 210, 211, selected courses in Speech Communication and in Theatre (consult an adviser before registering to be certain the course will earn Humanities credit).

### D. English: The following distribution of courses is required.

1. Freshman Composition—4 credits
2. English Elective (200 level or above)—3 credits

### E. Basic Speech\*—2-3 credits

Additional Competency Requirements and Group Requirements must be satisfied either prior to or subsequent to admission to the professional program in social work.

A list of recommended electives is available from Academic Advising or the Department of Radiation Technology.

See pages 22,23 of this Bulletin for a list of approved courses which will fulfill University General Education Requirements.

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 101 — Basic Biology I.....	4
BIO 102 — Basic Biology II.....	4
BIO 561 — Vertebrate Embryology.....	4
CHM 105 or CHM 107	
— Introductory Principles of Chemistry.....	6
— Principles of Chemistry I.....	
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.....	
— Biochemistry I.....	3
MAT 180 — Elementary Functions.....	4
PHY 213 or PHY 217	
— General Physics.....	4
— General Physics.....	4-5
PHY 214 or PHY 218	
— General Physics.....	4
— General Physics.....	4-5

Additional requirements include courses which are available only at Michigan State University: Animal Husbandry, Poultry Science and Dairy Science. These may be taken there as a Guest Student. Other requirements in social sciences and humanities may be satisfied by meeting the Liberal Arts Group Requirements.

## 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 health re-check 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 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.

## 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 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.

All pre-education students are required to complete TED 225 prior to admission to 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 preparing to teach in bilingual classrooms should see an adviser in Room 215, Education 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 page 20.

*College of Education general requirements:* PSY 101, HEA 231 (or equivalent) and two credits in Physical Education.

*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/Mathematics Group:* three courses, one from each of the following areas: life science; physical science; and mathematics (MAT 150 or 180).

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 212, Education Building.

## Vocational Education Programs

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 page 20.

*College of Education general requirements:* PSY 101, HEA 231 (or equivalent), MAT 111 and 112.

*English/Speech Group:* ENG 102, a 200 level English course and SPB 101.

*Social Studies Group:* four courses from anthropology, economics, geography, history, political science, social science, or sociology, including the American Society and Institutions requirement, and Introductory Psychology (PSY 101).

*Science Group:* three courses, one each from the following areas: life science; physical science; and a laboratory science.

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 212, Education Building.

## Special Education

The curriculum in special education prepares teachers for work with exceptional children at all levels in day schools, residential institutions and diagnostic-clinical centers. The undergraduate majors are: visually impaired, multiple impaired (mental and physical impairments), and speech impaired.

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 page 20.

*College of Education general requirements:* PSY 101, HEA 233, MAT 111 and 112, and two credits in Physical Education.

*Special Education requirements:* BIO 100 and 187 and PSY 580 are required of all students prior to admission to the College of Education.

*English/Speech Group:* ENG 102, a 200-level English course and SPB 101. (ELE 320, Literature for Children, may be taken prior to admission to the College of Education.)

*Social Studies:* minor must be completed prior to admission to Education.

*American Government:* The American Society and Institutions requirement will be included within the social studies minor.

Students can obtain major/minor worksheets for Special Education in Room 212, Education Building.

## Counselor Education

The Bachelor of Science Degree in counselor education is designed to prepare individuals seeking employment in institutional, school, and agency settings which are concerned with educational and career counseling and educational program development. Students interested in guidance and counseling who enter Wayne State University directly from high school or transfer from other colleges with less than fifty-three credits are admitted by the University Admissions Office into the College of Liberal Arts where they pursue a pre-counseling curriculum. This includes courses in the counseling program at the freshman and sophomore levels. Program information can be obtained from the University Advising Center, or Room 311, Education Building.

# ACADEMIC PROCEDURES

*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 Liberal Arts.*

## Recommended High School Preparation

The College of Liberal Arts strongly supports the University's recommendations concerning academic preparation. See page 13.

## 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 offices at 401 or 471

Manoogian, or phone 577-4605.

The Wayne at Gordes 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 367 Manoogian, or telephone 577-3019.

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 577-3219.

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

The Honors Programs of the College of Liberal Arts are designed for highly motivated students with superior abilities. All students admitted to the University Honors Program (see page 27) may elect honors courses, honors sections, 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 including the core curriculum of the Honors Program that leads to graduation with University Honors. Admission into a departmental honors program is at the discretion of each department. Honors programs in the College vary from one department to another, but they all require fifteen credits of honors designated course work, including independent research, a senior honors thesis or essay, and at least one interdisciplinary seminar offered by the honors Program. A student who satisfactorily completes a departmental honors program graduates with honors in that department. Students who complete both the University Honors Program and a Departmental Honors Program will receive dual recognition on their transcripts and diplomas.

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 258 Mackenzie Hall. For information regarding courses, see page 258.

## 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, see pages 31,32.)

## 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.

**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 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. 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.

## College Directory

### Administration

#### Dean:

Dalmas A. Taylor ..... 554 Mackenzie Hall; 577-2514

#### Deputy Deans:

Louise M. Jefferson ..... 554 Mackenzie Hall; 577-2517

John P. Oliver ..... 554 Mackenzie; 577-2516

Claude Schochet ..... 576 Mackenzie Hall; 577-2522

#### Assistant to the Dean:

Sherwin Collins ..... 588 Mackenzie Hall; 577-2520

#### Administrative Assistant:

Mary A. Serowik ..... 585 Mackenzie; 577-2513

#### Administrative Officer:

Wafia Matta ..... 542 Mackenzie; 577-2515

### Service Areas

Bulletin and Scheduling ..... 592 Mackenzie Hall; 577-2542

Liberal Arts Graduate Office ..... 579 Mackenzie Hall; 577-2690

Major/Curriculum Office ..... 582 Mackenzie Hall; 577-3117

Personnel Records ..... 545 Mackenzie Hall; 577-2466

### Departmental Offices

American Studies ..... 411 State Hall; 577-3062

Anthropology ..... 137 Manoogian; 577-2935

Biological Sciences ..... 210 Science; 577-2873

Chemistry ..... 123 Chemistry; 577-2595

Computer Science ..... 532 Mackenzie Hall; 577-2477

Criminal Justice ..... 709 Mackenzie Hall; 577-2705

Economics ..... 960 Mackenzie Hall; 577-3345

English ..... 431 State Hall; 577-2450

Geography and Urban Planning ..... 225 State Hall; 577-2701

Geology ..... 201 Old Main; 577-2506

Greek and Latin ..... 431 Manoogian; 577-3032

History ..... 838 Mackenzie Hall; 577-2525

Honors Program ..... 258 Mackenzie Hall; 577-3030

Humanities ..... 631 Merrick Ave.; 577-3035

Linguistics ..... 422 State Hall; 577-3254

Mathematics ..... 646 Mackenzie Hall; 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 ..... 5229 Cass Ave.; 577-3453

Philosophy ..... 767 Mackenzie Hall; 577-2474

Physics and Astronomy ..... 135 Physics; 577-2721

Political Science ..... 856 Mackenzie Hall; 577-2630

Psychology ..... 71 West Warren Ave.; 577-2800

Romance and Germanic Languages ..... 487 Manoogian; 577-3002

Slavic and Eastern Languages ..... 443 Manoogian; 577-3024

Sociology ..... 762 Mackenzie Hall; 577-2930

Speech/Journalism ..... 585 Manoogian; 577-2943

Women's Studies ..... 431 State Hall; 577-2450

#### Mailing address for all offices:

(Department Name), College of Liberal Arts, Wayne State University,  
5980 Cass Avenue, Detroit, Michigan 48202

# AMERICAN STUDIES

Office: 462 State Hall

## Advisory Committee

*English:* Ross J. Pudaloff (Director), John Franzosa, Henry Golemba;  
*History:* Richard D. Miles, Alan Raucher; *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 Anthropology, Art History, Economics, English, Geography, History, Humanities, Philosophy, Political Science, Sociology, and some interdisciplinary programs, such as Black Studies, 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 13.

**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 191), 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 20-31 and 191-203, 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.

# COURSES OF INSTRUCTION<sup>1</sup> (A S)

## 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)



<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

# ANTHROPOLOGY

Office: 137 Manoogian

Chairperson: Mark L. Weiss

## Professors

Barbara C. Aswad, James B. Christensen, Bernice A. Kaplan, Bernard Ortiz de Montellano, Arnold R. Pilling, Victor A. Rapport (Emeritus)

## Associate Professors

Marietta L. Baba, Gordon L. Grosscup, Helen E. Hause (Emeritus), Mark L. Weiss

## Adjunct Professors

Morris Goodman, Gabriel W. Lasker (Emeritus), Madeleine Leininger, Eugene Perrin

## Adjunct Associate Professor

Guerin Montilus

## Adjunct Assistant Professor

Elizabeth Briody

## Adjunct Instructor

Charles Martinez

## 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*

\* *Doctor of Philosophy — with a major in anthropology and specializations in cultural anthropology, archaeology, ethnohistory, medical anthropology, physical anthropology and historical archaeology.*

Anthropology is a comparative social science which seeks to uncover principles that govern human behavior. It is divided into the fields of cultural, physical, and linguistic 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 planning to enter a public service profession such as nursing, medicine, pharmacy, mortuary science, education, law, or environmental studies; (3) those preparing for employment in historical, art, or natural science museums; (4) those seeking to enter the fields of cultural resource management; (5) those expecting to work with the general public and, therefore, requiring a broad grasp of the nature of society, group behavior and social change; (6) those looking forward to teaching anthropology or another of the social or behavioral sciences; (7) those preparing for a career in a foreign country, in international studies, or in foreign affairs; (8) those planning to pursue graduate studies in anthropology;

† specific requirements, see the Wayne State University Graduate School Bulletin.

(9) those seeking careers in police science or criminal justice; (10) those seeking careers in international business, corporate or business organizations and business enterprises serving specific ethnic communities.

For recommendations regarding major concentrations and elective curricula, students should consult with staff members. Students interested in social work should consult the designated adviser to undergraduates in the School of Social Work.

## Bachelor of Arts Degrees

The Department offers the Bachelor of Arts degree with a major in anthropology or a combined 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 13.

**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 191), 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 20-31 and 191-203, 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, 527, 531 or 532, and 638 or 639.

**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:** This program is open only to students who maintain a cumulative honor point average of at least 3.3 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'.

### — 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, Sociology 201 202, 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

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. Honors 420, 421, 422, or 423 offered by the Liberal Arts Honors Program.

7. A total of fifteen honors-designated credits including ANT 499, HON 420, 421, 422, or 423, 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, contact the departmental honors adviser.

## 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.

## COURSES OF INSTRUCTION<sup>1</sup> (ANT)

### 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. Role of hereditary and environmental factors, human genetics, meaning of "race" and racial classifications, fossil records, evolution of man. (T)

### 215. Ethnicity: A World View. Cr. 3

Comparative overview of ethnicity and the concepts relevant to the subject as used by anthropologists and other social scientists. (I)

### 250. Pre-Industrial Culture Systems. Cr. 3

Early human society and its evolution until the industrial period. Topics include early technological systems, small-scale economic and political systems, the development of agriculture and state systems, evolution and biology of early humans. (B)

### 310. Cultures of the World. Cr. 3-4

Prereq: sophomore standing. Only students in Honors Program may register for four credits. Selected representative cultures from Oceania, Islamic North Africa, Near East, Sub-Saharan Africa, Asia, American Indian. (T)

### 311. Detroit 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. (Y)

### 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)

### 350. Post-Industrial Culture Systems. Cr. 3

Prereq: ANT 250. Contemporary human problems and social systems; topics include development of industrialism, ecological problems, population demographics, appropriate technology, social systems and the organization of work, different cultural mores and beliefs. (B)

### 352. (FC) Stability and Change in Contemporary Africa. Cr. 3

Cultural and social change in Sub-Saharan Africa; impact of European and North African culture on the societies of the subcontinent. (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. (I)

### 510. Culture and Ecology. Cr. 3

Prereq: ANT 210 or consent of instructor. Ethnological approaches to interrelationship of environmental, demographic and socio-cultura

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations



variables. A survey of relevant ethnographic reports and theoretical and methodological problems. (I)

**512. Human Evolution. Cr. 3**

Prereq: ANT 211 or consent of instructor. Fossil, behavioral and molecular evidence for the evolution of the human species. Emphasis on a structural functional approach to the origins of modern human biology. Current theories and models explaining human evolution compared and evaluated. (I)

**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 man adapts 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. (Y)

**520. Social Anthropology. Cr. 3**

Prereq: SOC 201 or ANT 210. Types of social organization and cultural heritage; ancient, primitive and complex cultures analyzed, compared, contrasted. (Y)

**521. Methods in Anthropology. Cr. 3**

Prereq: ANT 210, 12 credits in anthropology, elementary statistics or consent of instructor. A survey of research techniques in anthropology. (Y)

**524. Anthropological Perspectives on the Role of Women. Cr. 3-4**

Prereq: ANT 210 or consent of instructor. Only students in Honors Program may register for four credits. Evolutionary and cultural bases of female roles using a world sample, division of labor, marriage and sexual behavior, power and ideology. (I)

**525. Retention of African Culture in the New World. Cr. 3**

Prereq: ANT 210 or SOC 201 or consent of instructor. African background of New World blacks; slave trade; and degree to which African culture has been retained in the New World. (I)

**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)

**529. The Structure of Language: Phonology. (LIN 529). Cr. 3**

Prereq: LIN 570. The sound systems of a variety of human languages compared and contrasted. Theories of the nature of sound systems and methods of analysis in phonology and morphophonology. (I)

**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)

**535. Economic Anthropology. Cr. 3**

Prereq: ANT 210 or 520 or SOC 201 or consent of instructor. Cross-cultural analysis for testing economic concepts. Technology, trade, incentives, rewards, division of labor, specialization, property in different societies and their interrelationships. (I)

**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. (I)

**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)

**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)

**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)

**611. Human Genetic Variation. Cr. 3**

Prereq: ANT 211 or consent of instructor. Genetic variation as a mechanism of human adaptation. Genetics of the evolutionary processes; techniques to assess variability and the operation of evolutionary forces. Genetic adaptation to environmental stressors. (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)

**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)

**631. Comparative Family Patterns of American Ethnic Groups. Cr. 3**

Prereq: ANT 210 or SOC 201 or consent of instructor. Courtship, marriage, division of labor within household, and other patterns between kinsmen. The old New England Puritan tradition, Amish, Irish, Polish, Black, Eastern European Jewish. (I)

**636. (HIS 786) Oral History: A Methodology for Research. (I.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)

**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)

**651. Latin American Prehistory. Cr. 3**

Prereq: ANT 210 or consent of instructor; 527 recommended. Prehistory of Latin America with emphasis on the beginnings and the more elaborate cultures, including the Inca, Chibcha, Olmec, Maya, Aztec and others. (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. (I)

# ART AND ART HISTORY

*Office:* 150 Community Arts Center, 450 Reuther Mall

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 School of Fine and Performing Arts. Those electing to earn the degree from the College of Liberal Arts must fulfill all requirements for undergraduate degrees in this College (see page 191).

For information relative to *Admission and Degree Requirements* and for *Courses of Instruction*, see the Department of Art and Art History, School of Fine and Performing Arts; pages 142-152.

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

# BIOLOGICAL SCIENCES

Office: 210 Science Hall

Interim Chairperson: Albert Siegel

Associate Chairperson: Stanley K. Gangwere

Academic Services Officers: Laura Lee Birnie, Zirka S. Clark, Linda R. VanThiel

## Professors

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## Associate Professors

Robert Arking, Kuo-Chun Chen, David M. DeForest (Emeritus), Hector R. C. Fernandez, D. Carl Freeman, V. Hari, Roman W. Harkaway (Emeritus), R. Anton Hough, Leo S. Luckinbill, Willis W. Mathews (Emeritus), Howard R. Petty, Ann Sodja, Robert S. Stephenson, Curtis J. Swanson, Rosario R. Teodoro (Emeritus)

## Assistant Professors

Allen W. Nicholson, Allen J. Rosenspire

## Adjunct Professors

Frank M. Butterworth, Michael Conrad, Thomas V. Getchell, Morris Goodman, Gloria Heppner, Kenneth V. Honn, Samuel B. Horowitz, Barbara J. McArthur, Eldon D. McArthur, Arun K. Roy, Eugene H. Studier, T. T. Tchen, Nalin J. Unakar, Frederick A. Valeriote

## Adjunct Associate Professors

John E. Gannon, Egbert W. Henry, Virinder K. Moudgil, Jeffery L. Ram, Bonnie F. Sloane, Daniel L. Van Dyke

## Adjunct Assistant Professors

Drew B. Buchanan, George J. Gamboa, Steve Graham, William R. Hammer, Karen M. Hunter, Stephen A. Sapareto, John W. Wireman

## 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; molecular and developmental biology; regulatory biology and biophysics*

The department consists of three divisions: Division of Environmental, Evolutionary and Systematic Biology; Division of Molecular 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 13. Admission to major status in this department requires completion of Biology 101 and 102 and hence is usually granted only after the freshman year.

Students must have an over-all honor point average of at least 2.0 (and at least a 2.0 average in previous biological sciences courses) before being admitted to the major program. A grade point average of C (2.0 h.p.a.) must be maintained for all work within the major field.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively.

**Biology Core Requirements:** Twenty-five credits beyond BIO 101 and 102 are required of the major, including BIO 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.

## 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 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively.

For specific requirements consult the Wayne State University Graduate School Bulletin.

**Major Requirements:** Twenty-five credits beyond BIO 101 and 102 are required of the major, including BIO 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 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.

**Foreign Language Requirement:** French, German, Italian, Russian, or Spanish are languages in which a substantial modern scientific literature exists, and any one of them may be selected to fulfill the language requirement for the Bachelor of Science program.

### Suggested Program

#### First Year

##### Fall Semester

Biology 101 .....	4
Chemistry 107 .....	4
Language..... <sup>1</sup>	4
English 102.....	4
Total: 16	

##### Winter Semester

Biology 102 .....	4
Chemistry 108 .....	5
Language.....	4
English elective .....	3
Total: 16	

#### Second Year

Biology elective .....	4
Chemistry 224 .....	4
Language.....	4
Mathematics 180 or 201 .....	4
Total: 16	

Biology 340 .....	3
<sup>2</sup> Chemistry 226 .....	4
Group Requirement .....	3
Mathematics 201 or 202 .....	4
<sup>2</sup> Chemistry 227 .....	2
Total: 16	

#### Third Year

Biology 507 .....	4 or 5
Physics 213 or 217 .....	4
Math 202 or elective .....	4
Group Requirement .....	3
Total: 15 or 16	

Biology 509 or Biology elective.....	3
Physics 214 or 218 .....	4
Group Requirement .....	4
Group Requirement .....	4
Total: 15	

#### Fourth Year

BIO 312 or BIO elective .....	4
Biology elective .....	3
Elective .....	3
Group Requirement .....	4
Total: 14	

Biology 594 .....	1
Biology elective.....	3
Electives .....	6
Group Requirement .....	4
Total: 14	

## — 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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively.

**Major Requirements:** Biological Sciences 101, 102, 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 through 204.
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

Biology 101 .....	4
Chemistry 107 .....	4
Language.....	4
English 102.....	4
Total: 16	

##### Winter Semester

Biology 102 .....	4
Chemistry 108 .....	5
Language.....	4
English elective .....	3
Total: 16	

<sup>1</sup> Language: French, German, Italian, Russian or Spanish required.

<sup>2</sup> Required for pre-professional schools. Certain medical schools also require Chemistry 312, Analytical Chemistry.

### Second Year

Biology elective .....	4	Mathematics 202 .....	4
Mathematics 201 .....	4	Chemistry 226 .....	4
Chemistry 224 .....	4	Chemistry 227 .....	2
Language .....	4	Group Requirement .....	3
<b>Total: 16</b>		Group Requirement .....	4
		<b>Total: 17</b>	

### Third Year

Mathematics 203 .....	4	Mathematics 204 .....	4
Physics 217 .....	4	Physics 218 .....	4
Biology 602 .....	4	Biology elective .....	3
Biology elective .....	3	Biology 604 .....	4
Biology 390 .....	1	Group Requirement .....	3
<b>Total: 16</b>		<b>Total: 18</b>	

### Fourth Year

Chemistry 542 .....	3	Chemistry 544 .....	4
Physics 330 .....	3	Biology 594 .....	1
Biology 616 .....	4	Biology 596 .....	2
Biology 596 .....	1	Group Requirement .....	4
Group Requirement .....	4	Group Requirement .....	4
<b>Total: 15</b>		<b>Total: 15</b>	

## 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 101 and 102.
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, one credit; BIO 599, Terminal Essay, two credits.
5. Complete one semester of HON 420, 421, 422, or 423, given by the Liberal Arts Honors Program.
6. A minimum of fifteen 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 had the Introductory Biology Honors sequence.

### Program Calendar

**Year I:** Completion of honors component in Biological Sciences 101 and 102; 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 HON 420, 421, 422, or 423, three credits; BIO 590 (maximum four credits); BIO 595 (Senior Seminar, one credit); BIO 599 (Terminal Honors Essay, two credits). The essay must be approved by the student's sponsor and the honors adviser.

## Minor in Biological Sciences

Completion of the minor in biological sciences requires twenty-one biology course credits including the following: BIO 105 or 101, 102, 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 twelve credits are required in biological sciences beyond Biological Sciences 101 and 102.

**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 Biology 101 and 102.

Determination of course equivalency will be made by the departmental undergraduate adviser in conjunction with the College of Liberal Arts Educational Adjustment Committee. The Department reserves the right for the final determination of course equivalency.

**Advanced Placement Credit:** Advanced placement examinations for BIO 101, 102, and 105 can be arranged through the departmental advising office.

## COURSES OF INSTRUCTION<sup>1</sup> (BIO)

*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.*

### 101. (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 101-BIO 102 sequence required of all biology majors. Material fee as indicated in *Schedule of Classes*. Factual and conceptual treatment of cell molecules, cell structure, metabolism, genetics, development and taxonomy. (T)

### 102. Basic Biology II. (Lab: 3; Lct: 3). Cr. 4

Prereq: BIO 101 or 105 with consent of instructor. BIO 101-BIO 102 sequence required of all biology majors. Material fee as indicated in *Schedule of Classes*. Ecology and evolution, their principles,

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

strategies and outcomes in both structure and function. (T)

**103. (LS) Human 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; Lct: 3). Cr. 3 or 4**

For the non-biology major and certain pre-professional programs. Material fee as indicated in *Schedule of Classes*. For the non-science major. A factual and conceptual treatment of modern biology at the cell, organismal, and population levels of organization. (T)

**120. Microbes and Human Affairs. (Lct: 2). Cr. 2**

Not for biology major credit. No credit after BIO 220. Role of microbes in food, agriculture, industry and medicine; novel uses in basic research. The evolution of infectious disease will be discussed with its impact on manners and mores. (I)

**181. From Darwin to DNA: Evolution for Non-Majors. (Lct: 3). Cr. 3**

Modern concepts of evolution for non-majors; scientific, non-technical information about the history of life, including man. (I)

**203. Human Ecology. (Lct: 3; Dsc: 1). Cr. 4**

Prereq: BIO 102. 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)

**211. Basic Biology I: Laboratory. Cr. 1**

Prereq: college-level lecture course in introductory biology and consent of Biological Sciences' undergraduate officer. Experiments on biomolecules, enzymes, respiration, photosynthesis, genetics and genetic control; microscopy and study of cells. (T)

**220. Introductory Microbiology. (Lab: 4; Lct: 3). Cr. 4**

Prereq: BIO 101 or 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. (I)

**271. Comparative Vertebrate Zoology. (Lab: 6; Lct: 3). Cr. 5**

Prereq: BIO 102. Material fee as indicated in *Schedule of Classes*. Morphological development of chordates. Dissection of vertebrate types to understand interrelations of adult structures in terms of inheritance, embryology, phylogeny. (T)

**287. Anatomy and Physiology. (Lab: 4; Lct: 3). Cr. 5**

Prereq: BIO 105 or 101. 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 skeletal and muscular systems, and life functions; digestion, circulation, respiration, reproduction, growth. (F,W)

**312. General Ecology. (Lab: 3; Lct: 3). Cr. 4**

Prereq: BIO 102. 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 102; 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.

**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. (B)

**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 arranged during semester preceding election of course. 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)

**500. Radiation Biology. (Lct: 3). Cr. 3**

Prereq: 18 credits in biology. Effects of radiation on living organisms; basic theoretical concepts, techniques and applications of radiation (isotopes, x-ray). (F)

**503. History of Biology. (Lct: 3). Cr. 3**

Prereq: 16 credits in biology. Development of science and philosophy of biology from earliest written records to the present. (I)

**504. Biometry. (Lab: 2; Lct: 3). Cr. 4**

Prereq: MAT 201, MAT 221 or equiv. Student computer account required. Material fee as indicated in *Schedule of Classes*. 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 102; 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 102 or 220. If elected for five credits, material fee as indicated in *Schedule of Classes*. Material fee as indicated in *Schedule of Classes*. Inheritance in plants and animals; experimental and statistical evidence from which genetic mechanisms are deduced. Laboratory experiments to demonstrate genetic principles. (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 102; one course in chemistry or physics. Physical, chemical and biological properties of freshwater environments. (B)

**511. Biogeography. (Lct: 3). Cr. 3**

Prereq: BIO 102. Introductory study of principles and patterns of plant and animal distribution. (I)

**513. Biological Fine Structure. (BIO 713). (Lct: 3). Cr. 3**

Prereq: 18 credits in biology. Advanced studies relating to how cellular components as revealed by electron microscopy can be correlated with recent biological information obtained using

membrane models, cyto-chemical and histochemical techniques, immunocytochemistry, gel electrophoresis, column chromatography and various biochemical techniques. (Y)

**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. (Y)

**519. Northwoods Field Investigations. Cr. 1-6(Max. 20)**

Prereq: BIO 101, 102. Field investigations in biological sciences at Northwoods Biological Station under direction of Northwoods staff. (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. (B)

**525. Food Microbiology. (Lab: 4; Lct: 3). Cr. 4**

Prereq: BIO 220. Material fee as indicated in *Schedule of Classes*. Characterization of the total microbial flora; microbes in foods and their significance in food spoilage. Theories and practice of food preservation. (F)

**526. Pathogenic Bacteriology. (Lct: 3). Cr. 3**

Prereq: BIO 220 and CHM 226. Introduction to characteristics of aerobic and anaerobic bacteria of the vertebrate host; emphasis on those concerned with endogenous infections; methods of isolation and cultivation mechanisms in pathogenesis. (I)

**527. Pathogenic Bacteriology Laboratory. (Lab: 6). Cr. 2**

Prereq. or coreq: BIO 526. Material fee as indicated in *Schedule of Classes*. Laboratory experience in culturing and identifying the common bacterial pathogens of humans. (I)

**531. Immunology. (Lct: 3). Cr. 3**

Prereq: BIO 220 and CHM 226. Antibody formation, antigen structure, antigen-antibody reactions. (B)

**546. Plant Physiology. (Lct: 3). Cr. 3**

Prereq: BIO 102; 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)

**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)

**551. Plant Morphology. (Lab: 3; Lct: 2). Cr. 3**

Prereq: BIO 102. Anatomy and general morphology of tracheophytes. (I)

**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. (B)

**561. Vertebrate Embryology. (Lab: 4; Lct: 3). Cr. 4**

Prereq: BIO 102. 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 man. Laboratory studies of gametogenesis and development of sea urchin,

frog, chick and pig. (F)

**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. (Lct: 2). Cr. 3**

Prereq: BIO 220 or 340; PHY 214; CHM 226 or consent of instructor. Integrated analysis of cancer: cell biology, pathology, etiology and therapy. (W)

**567. Endocrinology. (BIO 768). (Lct: 4). Cr. 4**

Prereq: BIO 340. Functional evolution of the chemoregulatory mechanisms in vertebrates, physiology and biochemistry of hormones with emphasis on interhormonal relationships in metabolism, maintenance of homeostasis, growth, development. Endocrinopathies. (W)

**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)

**571. Paleontology of Vertebrates. (GEL 571). (Lab: 3; Lct: 3). Cr. 4**

Prereq: BIO 271 or GEL 102 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Morphology, phylogeny, evolution, paleoecology and paleogeographic distribution of vertebrates. Stratigraphic correlations based on vertebrate assemblages on a global scale. (I)

**572. Ornithology. (Lab: 3; Lct: 2). Cr. 3**

Prereq: BIO 102. Material fee as indicated in *Schedule of Classes*. Morphology, systematics, ecology, evolution, physiology and behavior of birds. Field trips. (I)

**573. Mammalogy. (Lct: 2; Lab: 6). Cr. 4**

Prereq: 16 credits in biology. Material fee as indicated in *Schedule of Classes*. Systematics, geographical distribution, ecology, adaptive radiation, patterns of growth and reproduction, physiology. Field trips. (I)

**574. Insect Biology. (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. Field trips. (I)

**575. Biology of Aging. (BIO 775). (Lct: 3). Cr. 3**

Prereq: BIO 101 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)

**578. Biology of Parasitism. (Lab: 6; Lct: 3). Cr. 5**

Prereq: BIO 102. Material fee as indicated in *Schedule of Classes*.

Parasitism throughout the animal phyla. Morphology, life history, methods of transmission and control of parasites. (I)

**581. Embryology. (Lct: 3). Cr. 3**

Prereq: BIO 187 or 271, or equiv. Open only to nursing students. Gametogenesis and fertilization; descriptive and experimental embryology of echinoderms and amphibians; reproductive physiology and development of birds and mammals including humans. (F)

**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 man; 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)

**594. Senior Seminar for Bachelor of Science Programs.**

(Smr: 1.5). Cr. 1(Max. 2)

Prereq: senior standing in biological sciences. Not a requirement for the Bachelor of Science degree. Aspects of current biological research presented by well-known speakers. (F,W)

**595. Senior Seminar: Honors Program. (Smr: 1). Cr. 1 (Max. 2)**

Prereq: consent of adviser; 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 for Bachelor of Science Programs.**

Cr. 1-2(Max. 3)

Prereq: written consent of instructor and biology adviser. Not a requirement for the Bachelor of Science degree. 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. Cell Biology. (Lct: 3; or Lct: 3; Lab: 6). Cr. 3 or 5**

Prereq: BIO 220 or 340; PHY 214; CHM 226 or consent of instructor. Analysis of cell structure and function: nucleic acids, proteins, lipids, properties of cell organelle, organization of cell components. Introduction to laboratory techniques in cell biology: isolation and characterization of cells and organelles, cell culture, Lybridomas, properties of nucleic acids, proteins and lipids. (Y)

**602. Methods of Analysis in Life Sciences.**

(Lct: 2; or Lab: 6; Lct: 2). Cr. 2 or 4

Prereq: one year of chemistry and biology. Material fee as indicated in *Schedule of Classes*. Theory and application of instruments and procedures used in biological materials analysis. Topics include: error analysis, basic electronics, logic circuits, solutions and buffers, spectroscopy, separation techniques, elementary analyses, laboratory application of computers. (F)

**604. Computer Application in Life Sciences.**

(Lct: 2; Lab: 4). Cr. 4

Prereq: knowledge of BASIC, junior or senior standing in life sciences. Use of microcomputer technology in life sciences. Methods of data acquisition and analysis. Use of various forms of computer input, such as: transducers, digital pads, A/D boards, and computer simulation graphic displays. (W)

**605. Techniques in Electron Microscopy. (Lab: 6; Lct: 2). Cr. 4**

Prereq: BIO 513 and written consent of instructor. Material fee as indicated in *Schedule of Classes*. Use of the electron microscope, ancillary sectioning and darkroom equipment in present or future research efforts. Evaluation of publications which use these techniques. (B)

**606. Molecular Basis of Evolution. (Lct: 3). Cr. 3**

Prereq: BIO 102, 507, and 509; or consent of instructor. Use of proteins and nucleic acids as historical documents in studying evolutionary trends; emphasis on new information about modes of genome evolution derived from recombinant DNA methods. Theories and models of eukaryotic gene regulation in relation to evolutionary processes. (I)

**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. Genetics of Microorganisms and Cells *In Vitro*. (BIO 708).**

(Lct: 3). Cr. 3

Prereq: BIO 507. Principles and current progress in genetics at the molecular and cellular levels. Emphasis on those features of microorganisms and cultured animal and human cells appropriate for the study of the fundamental mechanisms concerning recombination, replication, metabolic functioning. (Y)

**609. Evolutionary Genetics. (Lab: 3; Lct: 2). Cr. 3**

Prereq: BIO 504, 507. An integrated lecture/laboratory course in the application of genetics to organic evolution. Theoretical population genetics and readings in the original literature are emphasized. The laboratory has an open structure that allows students to conduct several classical experiments in population genetics. (B)

**610. Biosynthesis and Metabolism. (Lct: 4). Cr. 4**

Prereq: BIO 102; 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)

**614. Experimental Approach to Physico-Chemical Analysis.**

(Lct: 2; or Lab: 6; Lct: 2). Cr. 2 or 4

Prereq: one year of chemistry, biology and physics. Physico-chemical principles applied in life sciences: solution thermodynamics; ionic processes in solution including buffers, pH, and equilibria across membranes; enzymatic and non-enzymatic kinetics; redox potentials; nature of chemical bonds; spectroscopy; and transport processes. (I)

**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, 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 Middle and Secondary School Teachers. (Lct: 4). Cr. 4**



Prereq: consent of instructor. Offered only for graduate credit; for teachers only. Discussion of basic biological principles in light of recent advances. (I)

**626. Laboratory Biology for Middle and Secondary School Teachers. (Lab: 3). Cr. 1**

Prereq: consent of instructor. Offered only for graduate credit; for teachers only. Laboratory component of BIO 625; basic laboratory techniques required to enhance instruction at middle and secondary school levels. (I)

**635. Microbial Ecology. (Lct: 2). Cr. 2**

Prereq: eight credits in bacteriology. Ecological relationships between microorganisms and higher forms in soils, the marine environment, the bovine rumen, insects, and in petroleum fields. (B)

**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 102. 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 Animal Physiology and Biochemistry. (BIO 767). (Lct: 3). Cr. 3**

Prereq: one course in physiology; one previous course in biochemistry highly recommended. A comparative analysis of biological mechanisms and adaptations of cellular and systemic variations which allow for biological success in a multiplicity of changing environments. (B)

# CHEMISTRY

*Office:* 123 Chemistry Building

*Chairperson:* Richard L. Lintvedt

*Academic Services Officers:* Sharon Kelley, Joseph Oravec

## *Professors*

Robert D. Bach, Alan Brenner, Darrell D. Ebbing, John F. Endicott, Karl H. Gayer (Emeritus), Richard B. Hahn (Emeritus), William L. Hase, Carl R. Johnson, Tokuji Kimura, Stanley Kirschner, Norman A. LeBel, Edward C. Lim, Richard L. Lintvedt, Lawrence J. Marnett, W. Martin McClain, John P. Oliver, Wendell H. Powers (Emeritus), Morton Raban, Gene P. Reck, David B. Rorabacher, A. Paul Schaap, George H. Schenk, H. Bernhard Schlegel, Calvin L. Stevens, Tche T. Tchen

## *Associate Professors*

Ellen B. Brown, Colin F. Poole, James H. Rigby, Louis J. Romano, Ronald R. Schroeder

## *Assistant Professors*

Kim F. Albizati, David M. Coleman, Joseph S. Francisco

## *Adjunct Professors*

Charles King, Erhard W. Rothe

## *Adjunct Associate Professor*

Gary W. Carriveau

## *Adjunct Assistant Professor*

Jeffrey Evelhoch

## Degree Programs

*Bachelor of Arts—with a major in chemistry*

*Bachelor of Science in Chemistry*

\* *Master of Arts—with a major in chemistry*

\* *Master of Science—with a major in chemistry*

\* *Doctor of Philosophy—with a major in chemistry and specializations in analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, and physical chemistry*

The courses offered by this department are designed to serve the needs of three distinct groups of students: (a) those majoring in chemistry with the intention of entering the chemical profession, (b) those majoring in chemistry with the intention of entering other professional fields, and (c) those majoring in other subjects who desire to elect chemistry courses as part of their programs. Students intending to major in chemistry should refer to the bachelor's degree programs below.

\* For specific requirements, see the Wayne State University Graduate School Bulletin.

**Beginning Chemistry Courses:** Students with no prior experience in chemistry may elect Chemistry 100 (for non-science majors); Chemistry 102 (for non-science majors and certain pre-professional students); or Chemistry 105 (for science majors and most pre-professional students continuing on to higher level courses). Students who have had a year or more of high school chemistry or the equivalent may register for Chemistry 107 or 131 (for science and preprofessional majors) provided that they meet the other eligibility requirements outlined below. Election of any one of these courses will satisfy the University General Education Requirement for a physical science.

Chemistry 100 is a terminal survey course designed primarily to acquaint non-science students with the principles of chemistry in a format requiring minimal mathematical skills. When elected for four credits, this course includes a laboratory which satisfies the University General Education Requirement for a laboratory course.

Chemistry 102 and 103 represent a terminal sequence designed to introduce the basic principles of chemistry and survey the various fields of chemistry for non-science majors and certain pre-professional students such as pre-nursing, occupational health, engineering technicians and others.

Chemistry 105 is designed as the beginning chemistry course for science majors, pre-professional students, and other students who have had little or no prior experience in chemistry but desire to obtain a strong background in the fundamentals of this subject.

Chemistry 107 is designed as the beginning course for science majors and pre-professional students who have successfully mastered high school chemistry. Eligibility for Chemistry 107 must be established by passing a qualifying examination, covering basic high school material, which is administered by the Counseling Office of Testing and Evaluation, 343 Mackenzie Hall. The qualifying examination is administered several times prior to and during registration.

Chemistry 131 is designed as the highest level beginning course in chemistry and is usually elected only by students who have a strong science background and plan to take at least two years of college chemistry. To qualify for Chemistry 131, a student must receive a superior score on the Chemistry 107 Qualifying Examination, or receive a score of 3 or better on the National Advanced Placement Exam in Chemistry (see below), or show other evidence of superior academic potential (receipt of Wayne State Merit Scholarship, admission to the Honors Program, etc.).

The sequence of Chemistry 107 (or 105) and 108, or 131 and 132, are prerequisite to all higher numbered courses in chemistry.

**Credit for Advanced Placement:** Advanced placement college credit in chemistry shall be awarded for scores earned in the chemistry qualifying examination as follows:

*Score of 4 or 5:* Credit awarded for Chemistry 107 and 108 (nine credits); student is eligible to enroll in Chemistry 224 as well as Chemistry 132 or 312.

*Score of 3:* Credit awarded for Chemistry 107 (4 credits); student is eligible to enroll in either Chemistry 108 or 131.

## Bachelor of Arts with a Major in Chemistry

This curriculum allows students to major with a maximum of fifty-five credits in chemistry while providing flexibility for exposure in other cognate fields. It is particularly recommended (a) for students in science-oriented pre-professional fields (pre-medical, pre-dental), (b) for individuals entering secondary science teaching, and (c) for individuals interested in pursuing careers in chemistry who are unable to complete all of the requirements for the Bachelor of Science in Chemistry degree. While providing a less rigorous background in chemistry than that of the B.S. curriculum, the B.A. curriculum generally qualifies a person to enter graduate programs in chemistry or biochemistry or to enter industrial positions in chemistry following graduation. However, it is recommended that individuals in the latter categories fulfill the additional requirements for professional certification by the American Chemical Society outlined below.

Those interested in Phi Beta Kappa should consult with the secretary of the Wayne State University Chapter in order to determine the maximum amount of credits allowed in the major, as well as other general requirements.

**Admission requirements** for the College are satisfied by the general requirements for undergraduate admission to the University; page 13. Students planning to major in chemistry should consult with an adviser in the Chemistry Department not later than the beginning of their sophomore year.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 20) and the College of Liberal Arts Group Requirements (see page 191), as well as the major requirements cited below. All course work must be completed in accordance with the academic procedures of the University and the College; see page 20-31 and the section on Bachelor's Degree Requirements, page 191.

**Major Requirements:** Those who wish to follow the general curriculum in the College of Liberal Arts for the B.A. degree with a major in chemistry must complete the following courses:

1. Chemistry 107 (or 105), 108, 224, 226, 227, 302, 312, 542, 555, and at least one of the following: 516, 544, 551, 560, or 662. A minimum of 12 credits in chemistry must be earned at Wayne State University. Qualified students may substitute 131 and 132 for 107, 108, and 312. Similarly, students may substitute 231 and 232 for 224 and 226.
2. Physics 217 and 218 or 213 and 214. (Whereas the latter sequence is acceptable for the B.A. degree, PHY 217 and 218 provide a stronger background for advanced chemistry courses.)
3. Mathematics 201 and 202.

**ACS Certification:** B.A. candidates may receive certification by the American Chemical Society upon graduation by completing Mathematics 203 and 204 as well as the following chemistry courses in addition to those required for the B.A. degree: Chemistry 544, 516, and two additional advanced laboratory courses (551, 557, 599). No substitutions are permitted.

To receive certification, students must submit an application along with a transcript to the Chemistry Department Curriculum Committee prior to the end of the final term.

## Recommended Program

### First Year

#### Fall Semester

UGE 100.....	1
Chemistry 105 or 107 (or 131).....	4-6
English 102.....	4
Mathematics 180 or 201.....	4
Group Requirement.....	3
Total: 16-18	

#### Winter Semester

Chemistry 108 (or 132).....	5
English.....	3
Mathematics 201 or 202.....	4
Group Requirement.....	4
Total: 16	

### Second Year

Chemistry 224.....	4
Physics 217 (or 213).....	4-5
Group Requirements.....	6-7
Total: 14-16	

Chemistry 226.....	4
Chemistry 227.....	2
Physics 218 (or 214).....	4-5
Group Requirement.....	3
Elective.....	3
Total: 16-17	

### Third Year

Chemistry 312.....	4
Chemistry 542.....	3
Language I.....	4
Group Requirement.....	4
Total: 15	

Chemistry 302.....	3
Group Requirements.....	8
Language II.....	4
Total: 15	

### Fourth Year

Chemistry Elective (or CHM 555).....	2-4
Language III.....	4
Electives.....	3
Group Requirement.....	4
Total: 13-15	

Chemistry 555 (or CHM elective).....	2-4
Electives.....	12
Total: 14-16	

## — With Honors in Chemistry

1. All B.A. requirements in chemistry must be fulfilled including a full year of physical chemistry (CHM 542 and 544) plus one additional elective (CHM 516, 551, 560, 662, or 664).
2. Minimum h.p.a.: 3.3 overall; 3.3 in chemistry courses.
3. Minimum of four credits in independent research (Chemistry 299 or 599). Research should be commenced in the junior year (or earlier).
4. Completion of *at least one* Advanced Honors Seminar (Honors 420, 421, 422, or 423; three credits). This course may be used to partially fulfill college Group Requirements and can be elected in either the junior or senior year. See the Liberal Arts section of the University *Schedule of Classes*, under 'Honors Program.'
5. At least fifteen credits in honors-designated course work, including at least four credits in Chemistry 299 and 599; the recommended chemistry honors courses; the Honors Program 400-level seminar; and honors credits in other departments or from the Honors Program.
6. Submission of a B.A. thesis (covering the undergraduate research project) to the Honors Subcommittee in Chemistry which will act to accept or reject the thesis.
7. Presentation of a Public Lecture on the B.A. thesis. This may be followed by an oral examination by the Honors Subcommittee in Chemistry.
8. Chemistry 131, 132, 231, and 232 are strongly recommended for students intending to earn an Honors degree in Chemistry.

## Bachelor of Science in Chemistry

This curriculum fulfills the requirements of the American Chemical Society Committee on Professional Training and is designed primarily for those planning to enter the chemical profession or those entering other professional fields (e.g., medicine, dentistry) who desire an exceptionally strong background in chemistry. Students may take a maximum of fifty-five credits in chemistry. (Note: Those interested in Phi Beta Kappa should consult with the secretary of the Wayne State University Chapter in order to determine the maximum number of chemistry credits allowed.)

**Admission requirements** are satisfied by the the general requirements for undergraduate admission to the University; see page 13. Students planning to major in chemistry should consult with an adviser in the Chemistry Department not later than the beginning of their sophomore year.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 20) and the College of Liberal Arts Group Requirements (see page 191), as well as the major requirements cited below. All course work must be completed in accordance with the academic procedures of the University and the College; see page 286, and the section on Bachelor's Degree Requirements, page 191.

**Major Requirements:** Those who wish to follow the curriculum in the College of Liberal Arts for the B.S. degree in chemistry 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, 614, 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 204.

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 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
Chemistry 105 or 107 or 131.....	4-6
English 102.....	4
Mathematics 201.....	4
Group Requirement.....	3
<b>Total:</b>	<b>16-18</b>

#### Winter Semester

Chemistry 108 or 132.....	5
English.....	3
Mathematics 202.....	4
Group Requirement.....	3
<b>Total:</b>	<b>15</b>

### Second Year

Chemistry 224.....	4
Chemistry 312.....	4
Mathematics 203.....	4
Physics 217.....	5
<b>Total:</b>	<b>17</b>

Chemistry 226.....	4
Chemistry 227.....	2
Chemistry 302.....	3
Physics 218.....	5
Group Requirement.....	3
<b>Total:</b>	<b>17</b>

### Third Year

Chemistry 542.....	3
Chemistry 551.....	3
Mathematics 204.....	4
Language I.....	4
Group Requirement.....	3
<b>Total:</b>	<b>17</b>

Chemistry 544.....	4
Chemistry 555.....	2
Chemistry 516.....	3
Language II.....	4
Group Requirement.....	4
<b>Total:</b>	<b>17</b>

### Fourth Year

Chemistry 502.....	2
Chemistry 557.....	2
Chemistry 599.....	2-4
Language III.....	4
Advanced CHM Course*.....	3
<b>Total:</b>	<b>13-15</b>

Group Requirements.....	11
Electives.....	5
<b>Total:</b>	<b>16</b>

**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 204; (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, 599); this should be commenced in the junior year (or earlier).
4. Completion of **at least one** Advanced Honors Seminar (Honors 420, 421, 422, or 423; three credits). This course may be used to partially fulfill college group requirements and can be elected in either the junior or senior year. See the Liberal Arts section of the

## University Schedule of Classes under 'Honors Program.'

5. Submission of a B.S. thesis (covering the undergraduate independent research project) to the Honors Subcommittee in Chemistry which will act to accept or reject the thesis.
6. Presentation of a Public Lecture on the B.S. thesis. 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.

## COURSES OF INSTRUCTION<sup>1</sup> (CHM)

*A minimum grade of C is required in every prerequisite course. Most laboratory courses have a non-returnable 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**  
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. 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*. 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)

\* May be taken in the winter semester.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**105. (PS) Introductory Principles of Chemistry.**

**(Lct: 4; Quz: 2; Lab: 4). Cr. 6**

Prereq: intermediate high school algebra. Only 3 credits after 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*. 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. Only 2 credits after CHM 102; no credit after CHM 105. 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 chemistry and their applications, atomic and molecular structure, states of matter, periodicity, solutions, chemical bonds, principles of chemical equilibrium. (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*. Continuation of CHM 105 or CHM 107. 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. (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). 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*. 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. All fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. Experiments to familiarize students with important laboratory techniques, with methods of identifying organic compounds, with reactions of important classes of aliphatic and aromatic compounds, and with the scope and limitations of organic syntheses. (T)

**231. Organic Structure and Reactions. (Lct: 4). Cr. 4**

Prereq: CHM 132 or superior performance in 108. No credit after CHM 224. Structure, stereochemistry, and reactions of organic compounds. The two semester sequence of CHM 231 and CHM 232 covers all of the material in CHM 224 and CHM 226. This sequence is recommended for all chemistry majors and honors students. (F)

**232. Organic Synthesis and Spectroscopy. (Lct: 4). Cr. 4**

Prereq: CHM 231; coreq: 302. No credit after CHM 226. Continuation of CHM 231. Synthesis and reactions of organic compounds. Introduction to spectroscopic methods in organic chemistry. (W)

**236. Organic Chemistry II: for Chemical Engineers. Cr. 2**

Prereq: CHM 224 or equiv. Open only to chemical engineering students. Continuation of CHM 224 for chemical engineers. Reactions of aliphatic and aromatic compounds; reaction mechanisms. (T)

**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)

**510. Survey of Analytical Chemistry. Cr. 3**

Prereq: CHM 224 or equiv. No credit for chemistry majors; no credit if taken after CHM 132 or CHM 312. 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*. For students in medical technology, nutrition, and life sciences. Emphasis on gravimetric, titrimetric, spectrophotometric, and potentiometric analysis of simple substances of clinical and biological interest. (W)

**516. Instrumental Analytical Chemistry. Cr. 3**

Prereq: CHM 132 or 312, and 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 201 and 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 138 or 132, MAT 202 or equiv.; prereq. or coreq: PHY 213 or PHY 217 or equiv. 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. Analytical-Physical Chemistry Laboratory I. Cr. 2**

Prereq: CHM 132 or 312, and 542 or equiv.; 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*. Basic electrical and physical measurements. Principles of measurement. Fundamental investigations of thermodynamics. Fundamental studies and advanced applications of potentiometry. Principles and techniques of solution spectroscopy including UV-visible, IR, and fluorescence. (F,W)

**557. Analytical-Physical Chemistry Laboratory II. Cr. 2**

Prereq: CHM 516 and 555 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 electrical and physical measurements. Fundamental kinetic measurements. Principles and techniques of atomic and molecular spectroscopy, magnetic resonance, and mass spectrometry. (F)

**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)

**572. Topics in Chemistry for Middle School Science Teachers. Cr. 1-6(Max. 20)**

Topics, including principles of chemistry, descriptive chemistry, chemical demonstrations, audio-visual aids, computer aids, laboratory experiments, to be announced in *Schedule of Classes*. (I)

**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)

**614. Advanced Analytical Chemistry. (Lct: 3; or Lab: 4). Cr. 3-4**

Prereq: CHM 132 or 312 or equiv. If elected for 4 credits, 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*. Modern advanced analytical methods for inorganic and organic substances utilizing chemical methods and common instruments. Survey of the analytical chemistry of the periodic table. Useful background for analysis in research or industry. (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)

**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)

**662. Biochemistry I. (CHM 762). Cr. 3**

Prereq: CHM 224 or 231 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. Biochemistry Laboratory. (CHM 763). Cr. 3**

Prereq: CHM 662. Basic biochemical experiments such as purification, characterization, and kinetics of enzymes. Laboratory work with spectrophotometry, fluorometry, polarography, and other methods in biological systems. Lectures on current methods frequently used in biochemical studies. (F)

**664. Biochemistry II. (CHM 764). Cr. 3**

Prereq: CHM 224 or 231 or equiv. Nucleic acid structure and function. Mechanism and control of replication, transcription, and translation. Mutation, genetic recombination, and recombinant DNA. Membranes and organelles. (W)

**674. Laboratory Safety. Cr. 1-3**

Not for chemistry major credit. Offered for S and U grades only. 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. (F,S)

**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. (T)

**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. (T)

**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. (F,W)

**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. (F)

**690. Directed Study. Cr. 1-4(Max. 8)**

Prereq: undergrad., consent of adviser; grad., consent of adviser and graduate officer. (T)

# COMPUTER SCIENCE

*Office:* 538 Mackenzie Hall

*Chairperson:* Vaclav Rajlich

*Administrative Assistants:* Donna Alexander, Patricia A. Stroker

## *Professors*

Michael Conrad, Karel Culik, Mortesa A. Rahimi, Vaclav Rajlich

## *Associate Professors*

Charles F. Briggs (Emeritus), William Grosky, Robert Reynolds, Ishwar Sethi, Nai-Kuan Tsao, Horst Wedde, Seymour J. Wolfson

## *Assistant Professors*

Roberto Kampfner, Jia-Guu Leu, Alexis Manaster-Ramer, Satyendra Rada, Ambrish Vashishta

## *Lecturer*

Richard Weinand

## *Adjunct Professors*

George Lasker, Michael Marcotty, Bernard Zeigler

## *Adjunct Assistant Professor*

Carl Friedlander

## 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*

*Bachelor of Science with Honors 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 will give students the flexibility to cope with the ever-increasing complexity of this rapidly-changing field. The objective of the Department is to provide a learning environment which will foster the development of computer scientists with strong fundamental concepts and a good mathematical background. To facilitate this instruction, the Department has at its command an array of hardware resources. For details, see page 224.

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

## BACHELOR'S DEGREE PROGRAMS

**Admission requirements** for the College are satisfied by the general requirements for undergraduate admission to the University; see page 13.

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 frequently with the department for the latest information concerning the program and requirements.

*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 the 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 225.) 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 and 208 are 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 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 120 credits in course work, including satisfaction of the

University General Education Requirements (see page 20) and the College of Liberal Arts Group Requirements (see page 191). All course work must be completed in accordance with the regulations of the University governing undergraduate scholarship and degrees; see page 20-31 and 191-203, respectively.

#### COURSE REQUIREMENTS:

1. Mathematics 186, 187, 201, 202, 203, 204, and 221.
2. Introductory programming courses Computer Science 102 and 203.
3. A minimum of thirty-two credits in Computer Science courses beyond the introductory courses including the following:
  - (a) Computer Science 371, 441, 450, 520, 531, and 541.
  - (b) At least one additional Computer Science course numbered 511 or above for a minimum of three semester credits and excluding directed studies.
  - (c) Additional Computer Science electives to complete the required number of credits selected from courses numbered above 210, excluding CSC 495 and 590.
  - (d) A minimum of twenty of the thirty-two credits in computer science must be earned at Wayne State University.
  - (e) An overall Wayne State honor point average of at least 2.0.

### — 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 222.

**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 20) and the College of Liberal Arts Group Requirements (see page 191). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 20-31 and 191-203, respectively.

#### COURSE REQUIREMENTS:

1. Mathematics 186, 187, 201, 202, 203, 204, and 221.
2. Introductory programming courses Computer Science 102 and 203.
3. A minimum of twenty-nine credits in computer science courses beyond the introductory courses including the following:
  - (a) Computer Science 371, 441, 450, 520, 531, and 541.
  - (b) At least one additional computer science course numbered above 510 for a minimum of three credits and excluding directed studies.
  - (c) Additional computer science electives to complete the required number of credits selected from courses numbered above 210, excluding CSC 495 and 590.



(d) A minimum of twenty of the twenty-nine credits in computer science must be earned at Wayne State University.

4. Honors 421, 422, or 423, Honors Seminar; three credits.
5. Computer Science 595, Honors Thesis; three to 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.

6. An overall Wayne State cumulative honor point average of at least 3.3.
7. 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 222.

**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 20) and the College of Liberal Arts Group Requirements (see page 191). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 20-31 and 191-203, respectively.

### **COURSE REQUIREMENTS:**

1. Mathematics 186, 187, 201, and 221.
2. Introductory programming courses equivalent to Computer Science 102 and 203.
3. A minimum of twenty-six credits in Computer Science courses beyond the introductory courses including the following:
  - (a) Computer Science 371, 441, 520, 531 and 541.

(b) At least one additional Computer Science course numbered above 510 for a minimum of three credits and excluding directed studies.

(c) Additional Computer Science electives to complete the required number of credits selected from courses numbered above 210, excluding CSC 495 and 590.

(d) A minimum of fifteen of the twenty-six credits in computer science must be earned at Wayne State University.

## — 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 222.

**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 20) and the College of Liberal Arts Group Requirements (see page 191). All course work must be completed in accordance with the regulations of the University governing undergraduate scholarship and degrees; see pages 20-31 and 191-203, respectively.

### **COURSE REQUIREMENTS:**

1. Mathematics 186, 187, 201, and 221.
2. Computer Science 102, 203, 210, 371, 441, 511, 513, 541.
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.
5. A minimum overall Wayne State honor point average of 2.0; and computer science honor point average of 2.0.

## 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, 201, and 221.
2. Introductory programming courses Computer Science 102 and 203.
3. A minimum of fourteen credits in computer science courses beyond the introductory courses, including the following:
  - (a) Computer Science 371 and 441.
  - (b) Additional computer science electives to complete the required number of credits, selected from courses numbered above 210 and excluding CSC 495 and 590.
  - (c) A minimum of nine of the fourteen credits in computer science must be earned at Wayne State University.
  - (d) A Wayne State computer science honor point average of at least 2.0.

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.

## 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 area 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 will generally apply for a second bachelor's degree rather than the Certificate in Computer Science.

The Post Bachelor Certificate Program provides a certificate which verifies the completion of the technical courses required for the Bachelor of Arts with a major in Computer Science and provides the minimal course requirements for admission to the graduate program in

computer science at Wayne State University; students planning to enter the graduate program in computer science are strongly advised to take as many additional mathematics and computer science courses as their programs will allow, to provide an adequate background for graduate work.

**Admission:** Students who have received their undergraduate degree from Wayne State University should apply directly to the University Advising Center. Two copies of the student's transcript must be submitted to the university adviser.

Students who have received their undergraduate degrees from another institution must complete the Application for Undergraduate Admission form and request that official transcripts from the college or university granting the degree be sent directly to the Office of Admissions.

**CERTIFICATE REQUIREMENTS:** Candidates for this certificate must achieve a level of competence in mathematics and computer science equivalent to completion of fifty-seven 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, 201, and 221.
3. Introductory courses Computer Science 102 and 203.
4. A minimum of twenty-four credits in computer science courses beyond the introductory courses, including the following:
  - (a) Computer Science 371, 441, 520, 531, and 541.
  - (b) At least one additional computer science course numbered above 510 for a minimum of three credits and excluding directed studies.
  - (c) Additional computer science electives to complete the required number of credits, selected from courses numbered above 210 excluding CSC 495 or 590.
  - (d) At least twenty of the twenty-six credits in computer science course work must be taken at Wayne State University with an h.p.a. of at least 2.5.

## 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 permits 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. In addition, 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. These facilities include:

A Digital Equipment Corporation VAX-11/780 operating as a Merit

Network host;

A local area network consisting of SUN color, greyscale, and monochrome workstations;

A local area network consisting of Digital Equipment Corporation VAX Station II/GPX Advanced Color Workstations;

A local area network consisting of leading edge PCs;

A vision laboratory centered on a COMTAL Vision System 1/10.

The Digital Systems Laboratory provides the capabilities for microprocessor device construction and evaluation.

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.

## COURSES OF INSTRUCTION<sup>1</sup> (CSC)

### 100. 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. 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. 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. 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. 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)

### 207. Programming with PL/I. Cr. 4

Prereq: placement out of MAT 180; at least two semesters of programming in COBOL, FORTRAN, or equiv. Student computer account required. Intensive course in PL/I for students with extensive prior programming background in other languages. (T)

### 208. 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. 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. Data and File Structures. Cr. 4

Prereq: CSC 203, MAT 187. 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)

### 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)

### 460. Introduction to Numerical Methods. Cr. 3

Prereq: CSC 203 or equiv., MAT 204. Student computer account required. Numerical methods in the solution of equations and systems; interpolation and approximations; differentiation and integration; ordinary differential equations. (I)

### 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

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

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)

**503. Computers in Statistical Data Analysis. Cr. 3**

Prereq: some computer terminal experience; one course in statistics. No credit for computer science minors or majors. Student computer account required. Basic concepts of correlation, testing hypotheses; chi square, t and f statistics; linear regression; statistics packages such as SPSS, SAS, or BMD; understanding and interpreting the output. (I)

**504. Introduction to Programming. Cr. 4**

Prereq: graduate standing and placement out of MAT 180. Only two credits after any other programming course; no credit for computer science minors or majors. Student computer account required. Introduction to programming using Pascal. (I)

**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. (T)

**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. (IE 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. (T)

**520. Principles of Programming Languages. Cr. 4**

Prereq: CSC 371 or former 370, and 441. Offered for undergraduate credit only. Syntax, lexical analysis, grammars (Algol 60, PL/1, Pascal, ADA) and parsing; interpretation semantics (basic structures, axiomatic theory, data type and structures, declaration and specification), translation; execution semantics (flow of the control, structured theorem, expression and flow of data), parallel execution; block structure, procedure, side-effect, recursive procedure and definition (functional programming, LISP); program correctness (problem solving and programming). (T)

**521. Artificial Intelligence Programming with LISP. Cr. 2**

Prereq: CSC 371 or former 370. Student computer account required. Primarily for artificial intelligence students. Introduction to the LISP language; formulation and coding of non-numerical algorithms for digital computers using this language. (I)

**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 531, 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)

**541. 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)

**542. Introduction to Computer Networking. Cr. 3**

Prereq: CSC 541 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)

**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 204. Student computer account required. Basic geometrical concepts, graphics primitives, two-dimensional transformations, segmented files, windowing and clipping, camera models, and 3-D transformations. (Y)

**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. (B)

**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. (T)

**632. (ECE 665) Fault-Tolerant Computer Architecture. Cr. 4**

Prereq: CSC 531 or ECE 568. Survey of current literature in fault-tolerant design and fault diagnosis of combinational circuits. Use of redundancy in the form of majority logic or interwoven logic to prevent errors in spite of certain types of faults. Consideration of graphical and calculus methods for determining fault-finding experiments. Multi-valued and threshold logic. (I)

**638. Microprogrammed Computer Design. (ECE 565). Cr. 4**

Prereq: CSC 531 or ECE 460. Student computer account required. Introduction to microprogramming techniques and discussion of their implementations. Consideration of control word formats and microinstruction coding. Use of microprogrammable computers to emulate other computers. Implementation of microprogramming, including control-store timing, capacity and cost. (I)

**640. Engineering Design of Computer Operating Systems. (ECE 760). Cr. 4**

Prereq: ECE 564 or CSC 541. 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. (Y)

**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. (B)

**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. (B)

**661. Computational Algorithms: Analysis. Cr. 3**

Prereq: MAT 204 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 204 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. (T)

**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: 701 - 711 Mackenzie Hall

Chairperson: Marvin Zalman

Academic Services Officer: Mary A. Serowik

## Professor

Louis L. Friedland (Emeritus)

## Associate Professors

Donald A. Calkins, Marvin Zalman

## Assistant Professor

Thomas M. Kelley

## Lecturer

Thomas M. Mieczkowski

## Degree Programs

### *Bachelor of Science in Criminal Justice*

#### \* *Master of Science in Criminal Justice*

Criminal Justice is organized society's primary formal means of social control. Generally, it is the practice of public and private agencies and groups which seek to prevent, control, adjudicate, punish, correct, and defend juvenile delinquents, criminal suspects, and convicted offenders. The core of the criminal justice system is comprised of police agencies, prosecutors, defense attorneys, courts, and correctional agencies. This system enforces federal and state laws and provides numerous other services. Criminal justice is part of a larger administration of justice complex which involves court administration, juvenile justice, and public and private security.

The study of criminal justice begins with analysis of the entire justice system as a force for social order. Advanced study inquires into the political, organizational, social and behavioral aspects of various components of the criminal justice system. Research courses give students the tools with which to independently analyze criminal justice and skills important for career development. Legal courses foster an awareness of the values of due process and the limits of governmental power in a democratic society.

Career opportunities in criminal justice include roles as police officers, supervisors, and executives; criminal justice investigators working for public defenders, prosecutors, fire departments, and insurance companies; correctional officers for whom a college degree is mandatory, such as probation officers, parole officers, and community corrections specialists. Other specialized roles in criminal justice include juvenile intake officers, juvenile probation officers, volunteer administrators, criminologists, forensic scientists, forensic psychologists, medical examiners, and policy analysts.

## Bachelor of Science in Criminal Justice

The Bachelor of Science program stresses a broad undergraduate education designed to enhance the student's liberal arts background in the social sciences and humanities. Required courses expose a criminal justice major to all aspects of the justice system and foster a systemic view rather than a specialization in a single component of this field. Within this broad framework, courses which deal with specific topics and pre-professional concerns are available. Concentrations within criminal justice may be fulfilled by electing 12 - 18 credits of criminal justice electives in particular areas, such as security, 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 13.

**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 20) and the College of Liberal Arts Group Requirements (see page 191), 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 20-31 and 191-203, 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. To integrate major requirements with College Group Requirements, the Department makes some specific recommendations; for details, students should obtain a copy of the curricular outline, *Criminal Justice Major and Group Requirement Summary*, and meet with a departmental adviser prior to beginning study in criminal justice.

### CORE COURSES

	<i>Credits</i>
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 courses:*

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
CRJ 586 - Research Methods .....	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.

\* For specific degree requirements, see the Wayne State University Graduate School Bulletin.

**Minor in Criminal Justice:** The Department offers a minor in Criminal Justice for which the notation of a *minor* appears on the student's transcript. The required Criminal Justice courses are:

	<i>Credits</i>
CRJ 101 — Introduction to the Criminal Justice System.....	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 195.

**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 School 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 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).

## COURSES OF INSTRUCTION<sup>1</sup> (CRJ)

### 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. Introduction to Juvenile Justice and Delinquency. 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 Role in the Criminal Justice System. 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)

### 324. Traffic Control. Cr. 3

Essentials of traffic law; organization of traffic functions. Enforcement policies and procedures. Identification and analysis of traffic problems. Experiments in traffic control. (Y)

### 326. Investigation. Cr. 3

Prereq: CRJ 201. 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)

### 333. Industrial Fire Protection. Cr. 3

Fire prevention and loss control. Essentials for security officers of fire causation, fire suppression and fire prevention. (I)

### 334. Fire and Arson Investigation. Cr. 3

An integral part of the fire science curriculum in the field of criminal justice related to provisions for public safety. (I)

### 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,

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

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.

**506. Comparative Criminal Justice Systems. Cr. 3**  
No credit after former CRJ 650. Selected criminal justice systems in other nations. (B)

**508. History of American Criminal Justice. (HIS 531) (HIS 731). Cr. 3**  
Prereq: junior standing. History of Anglo-American criminal justice system from English roots to the Omnibus Crime Control Act of 1968. Major components of criminal justice will be examined: law, courts, police, corrections, juvenile justice. Changing perspectives of deviance; violence in American history. (B)

**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)

**528. Pro-Seminar: Evidence. Cr. 3**  
Prereq: minimum of 9 credits in criminal justice. Admissibility of evidence in courtroom proceedings, problems of hearsay, real, and administrative evidence, circumstantial and testimonial evidence; and application to law enforcement officers. (Y)

**534. Community Based Corrections. Cr. 3**  
Prereq: CRJ 270. History, theory and practice of community based corrections. Probation and parole; halfway houses and other residential correctional facilities. Jails as community correctional centers. Legal issues. International perspectives. The future of community corrections. (B)

**552. Advanced Security Topics. Cr. 3**  
Prereq: CRJ 351. No credit after former CRJ 530. The study of specialized security systems that present unique problems or require advanced technology. Topics may include: the security of computer systems and data banks; transportation security; security of governmental facilities; bank security. (B)

**554. Terrorism and the Urban Society. Cr. 3**  
Prereq: CRJ 351. No credit after former CRJ 510. Motivation, goals and typology of terrorist groups and individuals. Terrorism in domestic and international law. Governmental response; martial law; declarations of emergency, contingency planning, evacuations. Industrial concerns to terrorism. Roles of local police and federal agents. Hostage negotiations. Improving response to dealing with potential terrorist situations. (B)

**560. Strategies in Crime Control. Cr. 3**  
Substantive criminal justice literature in interpreting basic issues of

crime control strategies, implicit and explicit, in public policies as they relate to theories of crime causation, theories of deterrence and prevention of criminal behavior. (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. 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**  
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)

**586. Research Methods. Cr. 3**  
Planning and design for research in criminal justice and related fields. Application of selected methods. (Y)

**595. Special Topics in Criminal Justice. Cr. 3 (Max. 9)**  
Prereq: CRJ 201. No credit for repeated section. (Y)

**600. Field Studies. (US 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)

**614. Quantitative Methods. Cr. 3**  
Prereq: graduate standing; CRJ 613. Application and analysis of descriptive and inferential statistics in criminal justice planning, research and evaluation. (Y)

**623. Advanced Law Enforcement Administration. Cr. 3**  
Prereq: CRJ 201. Police-management problems; organization and objectives, planning and coordination, public relations and support. (B)

**625. Labor Relations Law in a Criminal Justice System. Cr. 3**  
Prereq: P S 629 or equiv. Development of police labor organizations, statutory requirements, administrative law precedents established particularly in Michigan. (I)



**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)

**646. Volunteerism in Criminal Justice. Cr. 3**  
 History, philosophy and structure of volunteer programs in policing, juvenile and adult probation and corrections. Roles of volunteers. Dynamics of personal change. Administration of volunteer programs. (I)

**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: 960 Mackenzie Hall

Chairperson: Li Way Lee

### Professors

David I. Fand, Thomas J. Finn, Jr., I. Bernard Goodman, Michael R. Haines, Mark L. Kahn (Emeritus), Jay H. Levin, John M. Mattila (Emeritus), John D. Owen, Douglas S. Paauw, Karl W. Roskamp, Lawrence H. Seltzer (Emeritus), Wilbur R. Thompson (Emeritus), C. Emery Troxel (Emeritus)

### Associate Professors

R. King Adamson (Emeritus), Allen C. Goodman, James L. Hamilton, Li Way Lee

### Assistant Professors

Robin A. Dubin, Anthony Owusu-Gyapong, Carlos E. Santiago, Allen J. Scafuri, Marlene A. Smith, Michael H. Thomson

### Lecturers

Harjit Arora, Gautam Bose, Pami Dua, Paul Holtgreive

## 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 School 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.

\* For specific requirements, see the Wayne State University Graduate School Bulletin.

## Bachelor of Arts in Economics

**Admission requirements** for the College are satisfied by the general requirements for undergraduate admission to the University; see page 13, as well as the instructions for declaring a major (page 192). The Economics Department assumes that all students in economics course have had at least two years of high school-level algebra and one year of geometry.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively.

**Major Requirements:** Students considering an economics major should take ECO 101 and 102 as soon as possible, preferably in the freshman year. 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 three 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 four credits in accounting may be counted as credit in economics.

**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 allow the Department to evaluate their writing proficiency, economics majors must submit one term paper to the Department's Committee for Undergraduate Studies. Field course writing assignments are acceptable, as are term papers written in economics directed studies or seminars. Each paper submitted must be certified by the assigning faculty member as satisfying the writing proficiency requirement.

To satisfy the General Education Major Competency Requirement, Economics majors must have a cumulative honor point average of 2.0 in their economics courses.

**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 200 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. In addition, honors majors must take one semester of Honors 420, 421, 422, or 423, offered by the Liberal Arts Honors Program. Those who successfully complete these requirements and finish their undergraduate course work with an overall honor point average of 3.5 or above, and have accumulated at least fifteen credits in honors-designated course work, 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.

## 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 \$500.00 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.

## COURSES OF INSTRUCTION<sup>1</sup> (ECO)

### 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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

## 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. Introduction to Mathematical Economics. Cr. 4

Prereq: ECO 500 and MAT 201 or consent of instructor. 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. (S)

### 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

### 320. Public Control of Business. Cr. 3

Prereq: ECO 102. Public policies to improve the social performance of industry. Industry structure and monopoly power; antitrust policies concerning monopoly power, mergers, and pricing; problems and policies in regulating industry. (Y)

### 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)

### 522. Economics of Transportation. Cr. 4

Prereq: ECO 102. Principles of transportation economics. Inter-city transportation; competition among rail, highway, and air transport; the impact of government regulations. Problems of metropolitan transportation systems. (I)

### 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)

### 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. (F)

## 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)

### 544. Economics of Social Welfare. (S W 575). Cr. 4

Prereq: ECO 102 or consent of instructor. Economics of education, unemployment, poverty, and discrimination. Emphasis on analyzing the interests of both taxpayers and beneficiaries of government programs in order to deal with their economic problems. (I)

**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)

**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)

## Field G: Economic History and Development

**361. Honors Comparative Economic Systems. Cr. 4**

Prereq: ECO 101 or 102 or consent of instructor. Open only to Liberal Arts Honors students. No credit after ECO 561. Comparative analysis of capitalism, socialism, communism; emphasis on differences in pricing, allocation of resources, functional and personal distribution of income, economic planning. (Y)

**464. Economic Development of the United States. Cr. 3**

Prereq: ECO 101 and 102 or consent of instructor. Economic development and modernization of the United States from colonial times to the twentieth century; emphasis on economic, social and technical changes which accompanied industrialization. (I)

**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)

**561. Comparative Economic Systems. Cr. 3**

Prereq: ECO 101 and 102 or consent of instructor. No credit after ECO 361. Comparative analysis of capitalism, socialism, communism, emphasis on differences in pricing, allocation of resources, functional and personal distribution of income, economic planning. (Y)

## 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)

**571. Money and Banking II. Cr. 3**

Prereq: ECO 505 and 570. Structure and functioning of money and capital markets, objectives and techniques of central banking, use and limitations of monetary policy as a tool for furthering full employment, management of public debt, avoidance of inflation or deflation. (I)

## 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. (Y)

**580. Urban and Regional Economics I. (U P 582). Cr. 3**

Prereq: ECO 101 and 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

**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)

**398. Professional Practice in Economics. Cr. 1(Max. 4)**

Prereq: junior or senior standing and consent of co-op coordinator. Open only to students in Economics Co-op Program. Offered for S and U grades only. Review of practical experiences in economics as a result of participation in the Economics Co-op Program of work-study. (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)

# ENGLISH

Office: 431 State Hall

Chairperson: Suzanne Ferguson

Associate Chairperson: Robert M. Strozier II

## Professors

Samuel Astrachan, Alvin B. Aubert, Charles M. Baxter, Esther M. Broner, Chester H. Cable (Emeritus), Suzanne Ferguson, Samuel A. Golden (Emeritus), Arnold L. Goldsmith, C. Yates Hafner, Patricia E. Hernlund, Daniel J. Hughes, Thelma G. James (Emerita), Orville F. Linck (Emeritus), Arthur F. Marotti, Ralph L. Nash, Emilie A. Newcomb (Emerita), Joseph Prescott (Emeritus), John R. Reed, Herbert M. Schueller (Emeritus), Alfred Schwarz, Leonard W. Tennenhouse, Vern Wagner (Emeritus), Marilyn L. Williamson, Beongcheon Yu

## Associate Professors

Nancy B. Armstrong, Michael J. Bell, Alexander Brede (Emeritus), Barbara A. Couture, Walter F. Edwards, Bradford S. Field, Jeanne A. Flood, John C. Franzosa, Alva A. Gay (Emeritus), Henry L. Golemba, Joseph A. Gomez, Isabel Graham (Emerita), David S. Herreshoff (Emeritus), Terrance J. King, Janet C. Langlois, Steven Lapointe, Bernard Levine, Donald MacDonald (Emeritus), Jay W. McCormick (Emeritus), William E. Mockler (Emeritus), Ross J. Pudaloff, Amy K. Richards (Emerita), Michael H. Scrivener, Edward Sharples, Clifford H. Siskin, Elizabeth S. Sklar, Paul Sporn, Robert M. Strozier II, Travis E. Tritschuh (Emeritus), Stephen H. Tudor, Anca Vlasopolos, Richard R. Werry (Emeritus), Robert B. Winans

## Assistant Professors

Ellen Barton, Robert Burgoyne, Bernyce Cleveland (Emerita), Jerry Herron, Martin Irvine, Gerald MacLean, Renata M. Wasserman

## Lecturers

Todd Duncan, Dorothy Huson, Michael Liebler, Susan Ohmer, Ruth E. Ray, Susan Webb, Rebecca Wyatt

## Adjunct Instructor

Ronald Kar

## Director, English Language Institute

Susan Webb

## 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

The English Department offers courses in several areas of study: composition, creative writing, film, folklore, language, literature, and popular culture. The bachelor of arts programs in English offer concentrations in these areas while providing both a liberal education and fundamental preparation for numerous careers. English majors enter careers in business and governmental service; writing, journalism, and publishing; professions such as teaching, law, medicine, and religion; as well as graduate study in English and related fields.

**Admission requirements** for this program are satisfied by the general requirements for undergraduate admission to the University; see page 13.

**Advising:** The Associate Chairperson of the Department and designated members of the Undergraduate Studies Committee provide advising to English majors. As soon as possible, and no later than the end of the fourth semester, 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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, 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 21) and include nine courses beyond the 200 level. (For exceptions in combined degree programs, see below.) Specific requirements are as follows:

1. English 311: Survey of English Literature to 1700.
2. English 312: Survey of English Literature after 1700.
3. One course in English literature chosen from the group numbered 510 through 519: English Literature to 1700.
4. One course in English literature chosen from the group numbered 520 through 529: English Literature, 1700-1900.
5. One course in American literature chosen from among 314, 541, and 542: Survey of American Literature before 1900.

**Concentrations:** The remaining six courses must complete one of the following concentrations:

—**Literature:** This is the traditional English and American literature major, a general liberal arts program. It is strongly advised for students considering graduate programs in English and is also a recommended pre-professional major. Students in this concentration take the following:

1. One additional course chosen from the group numbered 509 through 559.

\* For specific degree requirements see the Wayne State University Graduate School Bulletin.

2. Five additional courses in any area, including three at the 500 level. English 220 (Shakespeare) may be substituted for one of these.

3. Students in this concentration are advised to take a Shakespeare course, a course in minority literature and more than the minimum number of required courses at the 500 level.

—**Creative Writing:** The creative writing concentration is designed for English majors who are seriously interested in writing fiction, poetry, drama, or personal essays. The following courses complete the concentration:

1. English 280 (Imaginative Writing).
2. One course from English 381 (Poetry Writing); 382 (Fiction Writing); or 383 (Play Writing).
3. Three courses from English 587 (Poetry Writing Workshop); 588 (Fiction Writing Workshop); 589 (Writing for Theatre, Film and Television); 680 (Advanced Creative Writing).
4. One elective.

—**Film:** This concentration is for students who wish to study the aesthetic, theoretical and historical aspects of film in the context of an English major. Students interested in a major in film should consult Film Studies listings for details (see page 241). Courses completing the concentration are:

1. English 245 (Introduction to Film) or English 246 (History of Film).
2. Four film courses: English 504 (Film Criticism and Theory); 505 (Literature into Film); 506 (Styles and Genres in Film); 507 (Topics in Film).
3. One elective.

—**Folklore:** The folklore concentration is designed for students interested in the study of oral arts, customs and beliefs, and material expressions of traditional cultures in the United States and throughout the world. Students choosing the folklore concentration may wish to add electives in anthropology and related areas. Wayne State University's Urban Folklore Archive, located in Purdy Library, is the oldest and most extensive collection of urban folklore materials in the United States. The following courses complete the concentration:

1. English 260 (Introduction to Folklore).
2. Four folklore courses: English 360 (Survey of American Folklore); 560 (Studies in Folklore); 565 (Folklore and Literature); 567 (Topics in Folklore and Folklife).
3. One elective.

—**Linguistics:** This concentration is for students interested in the descriptive and analytical study of English and in understanding the formal and semantic principles inherent in all languages. The following courses complete the linguistics concentration:

1. English 272 (Introduction to the Analysis of English); or 570 (Introduction to English Linguistics).
2. Four courses from among the following: English 572 (Topics in Language); 573 (Traditional Grammar); 574 (Theory of Syntax); 575 (Theory of English as a Second Language); 576 (American Dialects); 577 (Sociolinguistics).
3. One elective.

— **Professional Writing:** This concentration is for students who are especially interested in expository and/or technical and business writing and composition theory. The following courses complete the concentration:

1. English 301 (Expository Writing).
2. Four courses from among the following: English 501 (Advanced Expository Writing), 578 (Approaches to Technical and Professional Writing), 579 (Writing Theory), 580 (Technical Communication I); or one substitution from among English 303 (Writing the Research Paper), 307 (The Personal Essay), 308 (Writing from Evidence).
3. One Elective.

## Honors Program Requirements

The English Honors Program is designed for the student who can profitably undertake a program of independent study and seminar work. Ordinarily, the student will enter this program at the beginning of the junior year. The program has three parts to be completed in the English Department:

1. *The Honors Seminar:* A student in English Honors completes nine to twelve credits in English 491, Honors Seminar, usually in the course of the junior and senior years.

2. *Other Course Requirements and Independent Reading:* The honors student is required to take English 311, 312, and 314 (or 541 and 542) to acquire a general background in the history of English and American literature and may choose to fulfill the general requirements for an English major; however, it is possible for an honors student to have a double major or even to major in another field and take only that portion of the English Honors Program that appeals to him or her.

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 considerably longer than a conventional term paper but usually 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 University requirements 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 as early in the major program as possible.

## 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. The student's program must also include a course in language study and a course in expository writing, either 301 or 501. Information regarding this curriculum is on page 200.

**Combined Curriculum with Dentistry, Law, or Medicine:** (See page 193.) 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 English Group Requirement. 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 (Freshman Composition), 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 Placement Examination, taken prior to matriculation, indicate need for instruction and practice in composition will be placed in English 101 (Composition Seminar) before they take English 102. (To take the English Placement 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 humanities requirement (see page 191).

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: ENG 311, 312, 314
- b. at least one course from ENG 509 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, language studies, 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.

## COURSES OF INSTRUCTION<sup>1</sup> (ENG)

### 10. Developmental English. Cr. 0

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)

### 50. English Language Institute. Cr. 1-6

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. Six eight-week sessions per year. (T)

### 52. English Language Communication Skills. Cr. 2

Prereq: teaching assistant who has failed SPEAK test; others by consent of instructor. Not offered for degree credit. 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

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 Placement Test. (T)

### 102. (BC) Introductory College Writing. Cr. 4

Prereq: placement or passing grade in ENG 101. One hour arranged. 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)

### 115. Short Story. Cr. 3

Selected readings in the international modern short story. (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. (Y)

### 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. (T)

### 205. (IC) Freshman Honors: English II. Cr. 4

Open only to Honors Program students. Continuation of ENG 105. (W)

### 210. (IC) Introduction to Poetry. 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. Cr. 3

Introduction to techniques and forms of drama through critical reading of, and writing about, representative plays from various traditions and periods. (Y)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

- 212. (IC) Introduction to Fiction. 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 in Translation: 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. (PL) European Literature in Translation: 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. (Y)
- 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. 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. 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. 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)
- 250. (PL) The English Bible as Literature. Cr. 4**  
The King James text as a literary masterpiece. (T)
- 257. (IC) Literature By and About Women. 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)
- 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. (Y)
- 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). (Y)
- 272. (PL) Introduction to the Analysis of English. (LIN 272). Cr. 3**  
Analysis of the structure of 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)
- 280. Techniques of Imaginative Writing. Cr. 4**  
Writing in various creative forms. Frequent individual conferences and student readings for class criticism. (T)
- 299. (PL) Sophomore Honors Colloquium: Literature. Cr. 3**  
Prereq: ENG 102 or equiv.; consent of director of Honors Program. Literary theme, figure or genre with individualized study. Topics to be announced in *Schedule of Classes*. (Y)
- 301. (IC) Intermediate Writing. Cr. 3**  
Prereq: ENG 102 or equiv.; proof of passing English Proficiency Examination. 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: passing of English Proficiency exam or ENG 108. 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: passing English Proficiency exam or ENG 108; 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)
- 307. The Personal Essay. Cr. 3**  
Writing of autobiographical, impressionistic, philosophical essays; analysis of essays by such writers as Loren Eiseley, Thoreau, E.B. White. (I)
- 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)
- 350. Women's Lives. (HIS 377). Cr. 3(Max. 6)**  
Examination of women's writings in various forms: diary, journal, autobiography, biography, essay, interview and film. (Y)
- 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. (T)
- 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. (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 Criticism. Cr. 3(Max. 9)**  
Close reading of one or more major critics, the close reading of selected critical texts, or criticism from a literary period. (Y)
- 510. Literature of the Middle Ages. Cr. 3**  
Major works and genres of Old and Middle English; mostly in translation. (B)
- 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. (B)
- 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*. (B)
- 514. Introduction to Old English. (ENG 610). Cr. 3**  
The fundamentals of language and grammar and the literary analysis of Old English texts. (B)
- 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*. (B)
- 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. (B)
- 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)
- 534. Topics in British Literature. Cr. 3(Max. 9)**  
British literature from specific perspectives such as generic or thematic. Writers from more than one period may be considered. Topics to be announced in *Schedule of Classes*. (I)
- 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. (B)
- 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. (B)
- 543. Topics in American Literature Through the Nineteenth Century. Cr. 3(Max. 9)**  
Generic or thematic perspectives on the literature of the period. Humor, the frontier, travel, Puritanism, transcendentalism, autobiography. Topics to be announced in *Schedule of Classes*. (I)
- 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*. (Y)
- 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*. (Y)
- 570. Introduction to English Linguistics. (LIN 570). Cr. 3**  
Basic concepts and methods of modern linguistics and their application to the study of the English language. (Y)
- 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. (Y)
- 576. American Dialects. (LIN 576). Cr. 3**  
Survey of chief social and geographic dialects of American English and introduction to theory of language variation. (I)
- 577. Sociolinguistics. (LIN 577). Cr. 3**  
Identification of sociolinguistic principles used by English speakers and writers in choosing among the different English codes, styles, registers and social dialects in American and other communities. (B)
- 578. Approaches to Technical and Professional Writing. Cr. 3**  
Survey of the theory and practice of technical and professional communication. Topics include the rhetoric and teaching of technical communication, analysis of on-the-job writing and rhetorical situations, and use of new communications technology. Some technical report writing, a research paper, and extensive reading and writing. (B)
- 579. Writing Theory. Cr. 3**  
Review of linguistic, rhetorical, and/or literary theories of written language. Analysis of the principles, purposes, types, and modes of written discourse. Course includes extensive reading and writing. (B)
- 580. (ENG 305) Technical Communication I: Report Writing. Cr. 3**  
Prereq: passing of English Proficiency exam or ENG 108. 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: passing English Proficiency exam or ENG 108; 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)**

Prereq: junior or senior standing. Open only to undergraduates. 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)

**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, Film and Television. (THR 513). Cr. 3 (Max. 6)**

Prereq: ENG 383 or consent of instructor. Comparative study of scripts for stage, television and motion pictures; practice in writing an original script or essay on some phase of contemporary dramatic form. (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)

**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. (B)

**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: 585 Manoogian; 413 State Hall

Co-Directors: Joseph Gomez, John Spalding

### Advisory Committee

ENGLISH: Robert Burgoyne, Joseph Gomez, Susan Ohmer

ROMANCE AND GERMANIC LANGUAGES: Andrea deTommaso

SPEECH: Darryl Fox, John Spalding, Robert Steele, Jeanne Williams, Gary Witt

### 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, Italian, and Speech) 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 13.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively.

**Major Requirements:** students majoring in film studies must complete a minimum of thirty-four credits, distributed as follows:

## CORE COURSES (Fourteen Credits)

	Credits
ENG 504 – Film Criticism and Theory.....	3
FLM 201 – Introduction to Film.....	4
FLM 202 – History of Film.....	3
SPF 540 – Techniques of Film/Video Production.....	4

## ELECTIVE COURSES (Twenty Credits)

ENG 505 – Literature into Film.....	3
ENG 506 – Styles and Genres in Film.....	3
ENG 507 – Topics in Film.....	3
FLM 390 – Directed Study.....	1-3
ITA 515 – Topics in Italian Cinema.....	3
SPF 502 – Studies in Film History.....	4
SPF 506 – Documentary and Non-Fiction.....	4
SPF 525 – Screenwriting.....	3
SPF 546 – Motion Picture Animation Techniques.....	3
SPR 544 – Film Production II.....	4

## 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.

## COURSES OF INSTRUCTION<sup>1</sup> (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)

### 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)

### 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 AND URBAN PLANNING

Office: 225 State Hall

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

## Adjunct Faculty

Harold Bellamy, Rondal Downing, Robin Dubin, Roy Flemming, Mel Ravitz, 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 13.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

\* For specific degree requirements, see the Wayne State University Graduate Bulletin.

**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:

1. Geography 300, 301, 302, 340, and 390;
2. a minimum of three additional geography courses having higher numerical designations (no more than two of these three may be regional geography courses);
3. at least one statistics course (U P 632 is recommended).

**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.

## Honors Program

Superior 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 Honors 420, 421, 422, or 423 (see 'Honors Program' in the Liberal Arts section of the University *Schedule of Classes*), accumulate at least fifteen credits in honors-designated course work, and maintain a minimum honor point average of 3.3, in order to graduate with the degree designation 'With Honors in Geography'. 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 course work available each semester, see the Liberal Arts section of the University *Schedule of Classes* under 'Honors Program,' or consult the Director of the Honors Program (577-3030).

## Minor in Geography

The discipline of geography complements expertise and understanding in many other disciplines selected as majors. It specifically addresses the spatial processes and variations over space as they impact economic, social, political, historical, criminal, commercial and other phenomena. The courses listed below for a minor in geography are basic to all aspects of spatial analyses. It is strongly recommended that the student minoring in geography consult with faculty concerning the most appropriate selection of courses to complement his or her interests.

Requirements for a minor in geography are:

- a) twenty credits in geography of which fifteen credits are exclusive of courses at the 100 level;
- b) at least one of the following courses—Geography 300, 301 or 302;
- c) Geography 340; and
- d) two additional courses at the 500-level or higher, only one of which can be a regional geography course.

## 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.

# COURSES OF INSTRUCTION<sup>1</sup>

## Geography (GEG)

### 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)

### 120. Earth Physical Systems. Cr. 4-5

The physical landscape as an ecologic assemblage: elements include landforms and surface processes, plate tectonics, soils, vegetation, and climate in lecture and laboratory. (B)

### 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)

### 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. 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)

### 310. Economic Geography. Cr. 4

Basic principles of modern economic geography: population-resource foundations of the world's economic systems; spatial organization; locational theories and principles; problems of economic overdevelopment and underdevelopment. (I)

### 313. (SS) Introductory Urban Geography. Cr. 4

An introduction to the geographer's view of cities, with emphasis on the North American city. Topics include the pre-industrial city, migration, evolution of the American urban pattern, city classification, city-regional relationships, and the city's internal structure (ethnic, residential, commercial, and industrial). (Y)

### 320. (SS) 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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

- 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)
- 525. Eastern Europe. Cr. 4**  
Poland, Czechoslovakia, Hungary, Rumania, Bulgaria, Yugoslavia, Albania; economic development, nationalism, minorities; problems with the USSR and relations with the West. (I)
- 530. 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)
- 560. The United States. Cr. 4**  
Analysis of regional differences of the coterminous states with special emphasis on physiography. Overview of cultural differences. (I)
- 565. Regions of Detroit. Cr. 4**  
Delineation, identification, and analysis of cultural regions in Detroit. Topics include: the regional concept; problems of delimitation; territoriality; historical development; social, economic, and ethnic regions; social change; and future development. (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)
- 613. Advanced Urban Geography. (U P 601). Cr. 4**  
Selected themes in urban geography. Topics include: 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)
- 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**  
The location of industry in theory and practice, analysis of selected manufacturing industries and selected industrial regions. The role of industrial location in urban and regional 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)
- 630. Remote Sensing. (U P 630). Cr. 3**  
Prereq: 15 credits in geography or consent of instructor. Student computer account required. Topics include remote sensing, aerial photography, landsat imagery, and digital image processing as applied to land use, vegetative cover and land management. (B)
- 631. Political Geography and Geopolitics. Cr. 4**  
Global geopolitical patterns and theories; environmental factors and resources issues; location and conflicts between states. (I)
- 632. Historical Geography of the United States. Cr. 3**  
Analysis of factors underlying the settlement and development of the

United States through the early twentieth century. Themes include spread of European settlement, emergence of cultural regions and diffusion of cultural traits, growth of regional economics and inter-regional trade, and emergence of a national urban system. (I)

**635. Geography of Ethnic Groups in the United States. Cr. 4**  
Analysis of America's ethnic structure; concepts, theory and methods relating to the meaning of ethnicity, migration, territoriality, socio-economic and residential mobility; ethnic community formation and extension, ethnic Detroit. (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)

**650. Field Geography. (U S 603). Cr. 3-7**  
Prereq: two courses in geography or consent of instructor. Geographic field training, including mapping, interviewing, field observation, data gathering, problem analysis, and report preparation. Work undertaken in a variety of situations, includes urban and rural land use, industrial and commercial locations, urban social change, agriculture, soils and landforms. (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)

## Urban Planning (U P)

### Planning Background and Process

**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)

**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. Regional Development. Cr. 4**

Regional planning and development concepts. Influences of transportation, resources, economic activity, and urban spatial agglomerations on regional growth. (Y)

## Urban Structure and Analysis

**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)

**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)

**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)

**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)

## Planning Implementation

**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)

**645. (SOC 655) Dynamics of Urban Social Action. Cr. 3**

Exploration of the nature and forms of social action. Practical examples of organization and planning considered along with the uses of power, non-violence, violence and the relationships of these actions to social change. (I)

**665. Land Use Controls. Cr. 2-3**

Techniques available to guide land development. Concepts in zoning, subdivision regulations, timing and sequence of land development. (Y)

## Other Courses

**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)

**630. (GEG 630) Remote Sensing. Cr. 3**

Prereq: 15 credits in geography. Student computer account required. Topics include remote sensing, aerial photography, landsat imagery, and digital image processing as applied to land use and cover and land management. (B)

**640. Planning Issues. Cr. 2-4**

Studies of urban policy issues as they affect land use. Social and economic determinants of the physical composition of urban areas. (B)

# GEOLOGY

Office: 201 Old Main

Chairperson: Robert B. Furlong

## Professors

Egbert G. Driscoll, Jr., Robert B. Furlong, Hugo Mandelbaum (Emeritus), Andrew J. Mozola (Emeritus), Willard H. Parsons (Emeritus), Luciano B. Ronca

## Instructor

John M. Zawiskie

## 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 13.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, 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. A foreign language is strongly recommended, but is not required.

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.

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



## 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 13.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, 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.

## 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 237 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.

## COURSES OF INSTRUCTION<sup>1</sup> (GEL)

### 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

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)

### 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. 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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**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)

**513. Geology of Industrial Minerals and Rocks. Cr. 4**

Prereq: GEL 316 and 340. Material fee as indicated in *Schedule of Classes*. Origin, occurrence and the utilization of the industrial rocks and minerals. Local field trip. (B)

**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)

**535. Geophysics. Cr. 4**

Prereq: consent of instructor. Gravitational field and isostasy; magnetic field and paleomagnetism; seismology; internal structure of the earth; absolute age determination; exploration geophysics. (W)

**550. Geological Development of the World: North America. Cr. 4**

Prereq: GEL 330, 340 or consent of instructor. Tectonic setting, stratigraphy and sedimentological history of the world and especially North America from a regional viewpoint. General geological history of the continents. (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)

**571. (BIO 571) Paleontology of Vertebrates. Cr. 4**

Prereq: GEL 102 or BIO 271 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Morphology, phylogeny, evolution, paleoecology and paleogeographic distribution of vertebrate animals. Stratigraphic correlations based on vertebrate assemblages on a global scale. (F)

**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)

**620. Groundwater Geology. Cr. 4**

Prereq: GEL 420 and 340. Material fee as indicated in *Schedule of Classes*. Occurrence of groundwater in crystalline, sedimentary and unconsolidated terrains, qualitative and quantitative evaluations of aquifers. (B)



# GREEK AND LATIN LANGUAGES AND LITERATURES

Office: 431 Manoogian Hall

Chairperson: Ernest J. Ament

## Professor

Richard W. Minadeo

## Associate Professors

Ernest J. Ament, Joel B. Itzkowitz, Kathleen McNamee, Kenneth R. Walters

## Lecturers

Curt Mayes, Ladislav Szymanski, Thomais Tsoutsou-Roussos

## Adjunct Associate Professor

Norma Goldman

## 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 Classical 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 prevalence of this background as a heritage to a wide variety of academic disciplines affords classics majors excellent preparation for a corresponding 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.

## Bachelor of Arts Degrees

Admission requirements for this program are satisfied by the general requirements for undergraduate admission to the University; see page 13.

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 individually to combine the most varied advantages consistent with the 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 20) and the College of Liberal Arts Group Requirements (see page 191), 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 20-31 and 191-203, 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. Recommended cognates are: CLA 220 and 240, as well as those 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 300 level or above. Potential majors are also encouraged to elect Classics 101 (Classical Civilization) and 200 (Greek Mythology) 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, 300 level or above. Potential majors are also encouraged to elect Classics 101 (Classical Civilization) and 200 (Greek Mythology) 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

Art History 520 .....	Classical World: Minoan to Alexander
Art History 521 .....	Hellenistic and Roman Art
History 533 .....	Greece
History 534 .....	Rome
Philosophy 370 .....	Philosophy of Art
Philosophy 541 .....	Plato
Philosophy 542 .....	Aristotle

**Major Requirements in Classical Civilization:** The major in Classical Civilization is an interdisciplinary study administered by this Department in cooperation with the Departments of Anthropology, Art History, English, History, Humanities, Philosophy, and Political Science. It is designed for students with particular interests in the development of the Classical tradition in Western culture. Without intensive work in the ancient languages, this major offers broad general education to students with graduate aspirations in the humanities or professions such as law and medicine. The breadth of the major also allows completion of a second major simultaneously, or heavier concentration in specific areas included in this program.

Upon completing this major, the student will have fulfilled the Liberal Arts Foreign Language and Humanities Requirements and, with the correct electives, the Social Science Requirement. Interested students

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

should contact the Department Undergraduate Adviser or the Department Chairperson.

*Core Requirements:*

1. Fulfillment of the Foreign Language Group Requirement in either Greek or Latin (12 credits maximum).
2. Four Classics courses, from CLA 219 or above. (12-16 credits)
3. Art History 520 (Classical World: Minos to Alexander) 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 260

Anthropology 531 .....	Language and Culture
Art History 530 .....	Early Christian and Byzantine Art
Classics 310 .....	Law and Ancient Society
Classics 325 .....	Urban Study of Ancient Rome
Classics 219 .....	Daily Life in Ancient Rome
English 215 .....	Introduction to Literary Criticism
History 535 .....	The Hellenistic Period
History 536 .....	The Early Middle Ages: 300-1000
History 537 .....	The High Middle Ages: 1000-1300
History 559 .....	Byzantine History I
History 560 .....	Byzantine History II
Humanities 533 .....	Western Culture in the Classical Period
Philosophy 370 .....	Philosophy of Art
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 as outlined above and the requirements for this curriculum set by the College of Education. For further information on this curriculum, see 'Secondary Teaching' in the Undergraduate Curricula section of this bulletin, page 200.

## 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: CLA 220 and 240, 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 219 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 219 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 219 or above (six to eight credits).
3. Art History 520 (Classical World: Minos to Alexander) *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 192) 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 Department undergraduate advisers to determine the level of study at which to continue in the Department (phone: 577-3032).

## Humanities Group Requirement

Most courses in the Department satisfy the Humanities Group Requirement (see page 191). The requirement may be satisfied through:

*Courses in Ancient and Modern Greek and Latin* that concentrate on literature (generally courses numbered 260 and above).

*All courses of Classics in English Translation (Classics)*, with the exceptions of CLA 120 and 124. All of these courses are taught in English translation with no knowledge of Greek or Latin required.

## 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 personalities 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. For further information, consult with the department advisers.

## Intercollegiate Center for Classical Studies in Rome

The University is a member of the Intercollegiate Center for Classical Studies in Rome, a consortium of American colleges and universities set up to provide undergraduate students with an opportunity to study Greek and Latin literature, ancient history and archaeology, and ancient art in Rome. Students—preferably in their third year—are eligible to apply to study at the Center for a period of one or two semesters. The Department will help students who are accepted at the Center seek financial assistance if necessary and credit gained from study there will be accepted by the University. For further information, consult with the department chairperson or undergraduate adviser.

## COURSES OF INSTRUCTION<sup>1</sup>

### 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. (T)

#### 120. Preparation for Foreign Language Study. (SLA 120). Cr. 4

A survey of the grammatical concepts and terminology necessary for the effective study of a foreign language. For students who anticipate or are having difficulties with foreign language study. Not for foreign language credit. (I)

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. (T)

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. (T)

#### 200. Greek Mythology. Cr. 3-4

Typical myths related to religion, custom, ethics, philosophy, art, literature. (T)

#### 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. (T)

#### 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. (W)

#### 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. (W)

#### 240. Heroic Poetry: Homer and Vergil. Cr. 4

The hero, heroism, and other themes reflected in the epics of Homer and Virgil. Other ancient or modern authors may be read for comparison. (Y)

#### 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)

#### 310. Law and Ancient Society. Cr. 3-4

Historical development from the Twelve Tables (fifth century B.C.) to the *Digest* of Justinian (sixth century A.D.); appraisal of the Classical Law (first century A.D. to third century A.D.), including status, slavery, property, contracts, and testamentary law; special attention to procedures. No special legal knowledge required. (I)

#### 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. (F)

#### 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)

#### 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 treated in the regular classics offerings, culminating in a course paper. (T)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

## Greek (GRK)

### Ancient Greek

- 101. Elementary Greek. Cr. 4**  
Basic vocabulary, forms, grammar. (T)
- 102. Elementary Greek. Cr. 4**  
Prereq: GRK 101. Continuation of GRK 101 with increasing emphasis on reading ability. (T)
- 201. (FC) Classical Greek Prose. Cr. 4**  
Prereq: GRK 102. Selections from various classical Greek prose authors such as Plato and Lysias. (T)
- 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. (Y)
- 301. New Testament. Cr. 2-4**  
Prereq: GRK 201 or equiv. or consent of instructor. Typical examples of textual and interpretive variants; emphasis on reading ability. (I)
- 360. Greek Tragedy. Cr. 4**  
Prereq: GRK 260 or equiv. or consent of instructor. Study of a tragedy or tragedies of Euripides, supplemented by selections from Sophocles and Aeschylus. (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. (T)
- 530. Attic Orators. Cr. 4**  
Prereq: GRK 260 or equiv. or consent of instructor. Development of Greek prose style and rhetoric in selected works of the Attic orators. (I)
- 540. Greek Philosophy. Cr. 4**  
Prereq: GRK 260 or equiv. or consent of instructor. The origin and development of Greek philosophy as seen through representative selections from the Presocratics, Plato, Aristotle, Epicurus, and the Stoics. (I)
- 590. Directed Study. Cr. 1-4(Max. 8)**  
Prereq: undergrad., written consent of chairperson; grad., consent of chairperson and graduate officer. (T)
- 620. Special Studies. Cr. 2-4(Max. 8)**  
Prereq: GRK 360 or equiv. or consent of instructor. In-depth approach to special aspects of Greek studies, such as papyrology, paleography, or metrics. Topics to be announced in *Schedule of Classes*. (I)
- 625. Greek Comedy. Cr. 4**  
Prereq: GRK 360 or equiv. or consent of instructor. Representative comedies from Old, Middle or New Greek Comedy to show the origin, development and social implications of the genre. (I)
- 645. Greek Literature of the Hellenistic Period. Cr. 4**  
Prereq: GRK 360 or equiv. or consent of instructor. An introduction to such writers as Apollonius of Rhodes, Callimachus and Theocritus. (I)

## Modern Greek

- 111. Elementary Modern Greek. Cr. 4**  
Material fee as indicated in *Schedule of Classes*. Training in pronunciation, conversation and reading. (T)
- 112. Elementary Modern Greek. Cr. 4**  
Prereq: GRK 111 or equiv. Material fee as indicated in *Schedule of Classes*. Continuation of GRK 111. (T)
- 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. (T)
- 261. Readings in Modern Greek Literature. Cr. 4**  
Prereq: GRK 211 or equiv. Selections from major contemporary authors. (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. (Y)
- 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. (Y)
- 371. 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. (T)
- 102. Elementary Latin. Cr. 4**  
Prereq: LAT 101. Continuation of LAT 101, with increasing emphasis on reading ability. (T)
- 201. (FC) Latin Literature. Cr. 4**  
Prereq: LAT 102. Representative selections of Latin prose and poetry. (T)
- 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. (B)
- 330. Virgil. Cr. 4**  
Prereq: LAT 201 or 260 or equiv. Representative selections from the poetry of Virgil. (B)
- 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. (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 their 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. (B)

**590. Directed Study. Cr. 1-4(Max. 8)**

Prereq: undergrad., written consent of chairperson; grad., written consent of chairperson and graduate officer. (T)

**685. Latin Pastoral Poetry. Cr. 4**

Prereq: LAT 315 or equiv. or consent of instructor. Study of the *Eclogues* and *Georgics* or Virgil. (I)

**689. Roman Satire. Cr. 4**

Prereq: LAT 315 or equiv. or consent of instructor. Studies in the satire of Horace, Persius and Juvenal. (I)



# HISTORY

Office: 838 Mackenzie Hall

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, Christopher H. Johnson, Harry Magoulias, Philip P. Mason, T. F. Mayer-Oakes (Emeritus), Richard D. Miles, Alan Raucher, Samuel F. Scott, Melvin Small, Goldwin Smith (Emeritus)

## Associate Professors

Effie Ambler, John Bukowczyk, Charles K. Hyde, Marc Kruman, Richard Place, Monica Schuler, Stanley D. Solvick

## Assistant Professors

Stanley Shapiro, Tyrone Tillery

## Lecturer

Sandra Van Burkleo

## 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 13.

**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 191) and the University General Education Requirements (see page 20), as well as the major requirements listed below. All course work must be

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

completed in accordance with the academic procedures of the University and the College; see page 28 and the section on Bachelor's Degree Requirements, page 191. The minimum requirement for a major in history is thirty-three credits, distributed as follows:

1. at least one survey sequence, or the equivalent, from among the following: History 110-120; 190; 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 another institution.

**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, 190; 204 and 205; and twenty-one credits in 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 195).

The University requirement in American government may be satisfied by the election of History 103 or History 204 and 205; or History 516 and 517.

## 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 Honors 420, a senior seminar given by the College Honors Program, and accumulate at least fifteen credits in honors-designated course work, including the History Honors Seminar and the Honors Program Seminar. For additional information on honors-designated course work available each semester, see the Liberal Arts section of the University *Schedule of Classes* under 'Honors Program,' or consult the Director of the Honors Program (577-3030).

## Minor in History

The minimum requirement for a minor in history is eighteen credits of which at least fourteen must be from classes at the 300 level or higher.

## 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.

## COURSES OF INSTRUCTION<sup>1</sup> (HIS)

- 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) The World and the West: 1500-1945. (Lct: 3; or Lct: 4). Cr. 3 or 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)
- 150. (HS) Transatlantic Encounters: 1400-1700. 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. (Y)
- 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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations



- 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)
- 196. The Impact of Technology. Cr. 3-4**  
Extended case studies of particular technological developments and their effects; topics will vary. Critical issues raised by contemporary technology: assessment of risks, decision-making, controls, and the social responsibility of technologists. (W)
- 200. (U S 200) (SS) Introduction to Urban Studies. (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)
- 204. American Foundations: United States to 1877. Cr. 3-4**  
American experience with colonialism, revolution and nation building. (T)
- 205. Modern America: 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)
- 250. (PCS 200) Introduction to Peace and Conflict Studies. 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. 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)
- 287. (HS) The Transformation of Western Society. Cr. 3**  
No credit after HIS 130 or former HIS 190. 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)
- 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. (Y)
- 305. United States and the Vietnam Experience. Cr. 4**  
The United States' involvement in Vietnam; military, domestic and diplomatic impact. (B)
- 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. 3**  
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. (Y)
- 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. (Y)
- 377. (ENG 350) Women's Lives. Cr. 3(Max. 6)**  
Examination of women's writings in various forms: diary, journal, autobiography, biography, essay, interview and film. (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)
- 397. Topics in European History. Cr. 1-4(Max. 8)**  
Topics to be announced in *Schedule of Classes*. (T)
- 398. Topics in American History. Cr. 1-4(Max. 8)**  
Topics to be announced in *Schedule of Classes*. (T)
- 490. Directed Study. Cr. 2-6**  
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)
- 500. The French Empire in America. (HIS 700). Cr. 3**  
Descriptive analysis of the French activity in North America; contribution to the future United States and Canada; relations with the British colonies. (B)
- 501. The Colonial Heritage in the United States to 1776. (HIS 701). Cr. 3**  
Origins and development of colonial American culture to the revolution. (B)

- 502. Founding of the United States: 1776-1815. (HIS 702). Cr. 3**  
The emergence of a new nation by way of revolution, war, constitution-making and the experiences of the Federalist and Jeffersonian eras. (B)
- 503. The American Republic on Trial: 1815-1861. (HIS 703). Cr. 3**  
Emphasis on the political culture with special attention to immigration, the emergence of a market economy, slavery, social reform, war with Mexico, and the coming of the Civil War. (B)
- 504. Civil War and Reconstruction: 1861-1877. (HIS 704). Cr. 4**  
Analysis of political military, social and economic developments. (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)
- 512. Foreign Relations of the United States to 1920. (HIS 712). Cr. 3**  
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. Foreign Relations of the United States Since 1920. (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; transplanted immigrant culture; immigrant institutions; relationship between immigration, industrialization, and urbanization; racism, nativism, and immigrant 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. (B)
- 529. (ECO 549) American Labor History. 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)
- 531. (CRJ 508) History of American Criminal Justice. Cr. 3**  
Prereq: junior standing. History of Anglo-American criminal justice system from English roots to the Omnibus Crime Control Act of 1968. Major components of criminal justice will be examined: law, courts, police, corrections, juvenile justice. Changing perspectives of deviance; violence in American history. (B)
- 533. History of Greece. (HIS 733). Cr. 3**  
Ancient Greek culture, emphasizing political events, social and economic institutions, cultural achievements. (Y)
- 534. History of Rome. (HIS 734). Cr. 3**  
Institutional and cultural development. (Y)
- 535. The Hellenistic Period. (HIS 735). Cr. 3**  
Social and economic developments, Alexandrian science, and Hellenization of the East from Alexander the Great to the Roman conquest of the eastern Mediterranean. (B)
- 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** (I)  
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. (B)
- 544. Twentieth Century Europe. (HIS 744). Cr. 4**  
Total war and disillusionment, attempts to restore stability and security, totalitarianism as an answer, more war and reconstruction, a divided Europe, the search for Europe's place in the world. (B)
- 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. (B)
- 550. The Soviet Union. (HIS 750). Cr. 3**  
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. (B)
- 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)
- 559. Byzantine History I: 284-867. (HIS 759). Cr. 4**  
From Diocletian and Constantine I to the Macedonian Dynasty. (F)
- 560. Byzantine History II: 867-1453. (HIS 760). Cr. 4**  
From the Macedonian Dynasty to the fall of Constantinople. (W)
- 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 the age of Marx to the present; Utopian socialism, Marxism, anarchism, syndicalism, and communism; labor, fascism and the Spanish Civil War; contemporary trends. (B)
- 564. European Economic History. (HIS 764). Cr. 3**  
Development of the European economies from the eighteenth century to the present. The Industrial Revolution and its consequences. (I)
- 565. Technology in Western Civilization. (HIS 765). Cr. 3**  
Development of technology since the Renaissance and its impact on Western society and culture. Technological developments in manufacturing, transportation, communication, warfare. (I)
- 73. 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.
- 579. Cities and Empires: European, Muslim, Chinese, and Russian. (HIS 779). Cr. 3**  
A comparative analysis of the way urban patterns link to the political, economic, and cultural characteristics of empires. (I)
- 595. Honors Seminar. Cr. 3**  
Prereq: consent of Chairperson; honors standing in history. (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*. (T)
- 602. Studies in European History. Cr. 2-4(Max. 9)**  
Topics to be announced in *Schedule of Classes*. (T)



# HONORS PROGRAM

Office: 258 Mackenzie Hall

Director: Francine Wehmer

Adviser: Elizabeth MacBride

See page 202 for a general description of the honors program.

College of Liberal Arts 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.

College of Liberal Arts 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	Introduction to Physical Anthropology
ANT 310	Cultures of the World
ANT 311	Detroit Minorities
ANT 524	Anthropological Perspectives on the Role of Women
A H 112	Survey of Renaissance to Modern Art
BIO 101	Basic Biology I
BIO 102	Basic Biology II
BIO 103	Human Environmental Biology
CHM 131	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	Principles of Macroeconomics
ECO 102	Principles of Microeconomics
ECO 361	Comparative Economics Systems
ENG 105	Freshman Honors English I
ENG 205	Freshman Honors English II
ENG 299	Sophomore Honors Colloquium
HIS 325	The Family in History
HUM 220	Sophomore Honors Colloquium
HUM 222	Constructs of Human Experience: Histories, Novels, and Philosophy
HUM 302	Continuity and Change
ITA 270	Anguish and Commitment: European Existential Literature

MAT 201	Calculus I
MAT 202	Calculus II
MAT 203	Calculus III
MAT 204	Calculus IV
NFS 221	Human Nutrition
PHI 102	Honors Introduction to Philosophy
PHI 186	Honors Symbolic Logic
PHI 232	Introduction to Ethics
PHI 233	Introduction to Social and Political Philosophy
PHI 360	Space, Time and the Philosophy of Physics
P S 101	American Government
P S 281	World Politics
PSY 101	Introduction to Psychology
PSY 260	Psychology of Social Behavior
PSY 331	Abnormal Psychology
PSY 407	Drugs and Behavior
SOC 558	Ethnic Groups in Urban America
SOC 587	Violence in the Family
SPB 200	Effective Speech

## COURSES OF INSTRUCTION<sup>1</sup> (HON)

### 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. Seminar in Philosophy and Letters. Cr. 3 (Max. 9)

Prereq: junior or senior standing. Open only to Honors Program students. Analysis of meanings given to human experience through study of philosophy or letters. Topics to be announced in *Schedule of Classes*. (Y)

### 421. Seminar in Social Science. Cr. 3

Prereq: junior or senior standing. Open only to Honors Program students. Analysis of major institutions in society and roles in those institutions. Topics to be announced in *Schedule of Classes*. (Y)

### 422. Seminar in Life Science. Cr. 3

Prereq: junior or senior standing. Open only to Honors Program students. Analysis of aspects, methods, and important issues in various areas of the life sciences. Topics to be announced in *Schedule of Classes*. (Y)

### 423. Seminar in Physical Science. Cr. 3

Prereq: junior or senior standing. Open only to Honors Program students. Analysis of modern theory and data, implications and possibilities in the physical sciences. Topics to be announced in *Schedule of Classes*. (Y)

### 424. Seminar in the Visual and Performing Arts. Cr. 3 (Max. 9)

Prereq: junior or senior standing. Open only to Honors Program students. Analysis of ways the visual or performing arts may be appreciated, evaluated, and criticized. Topics to be announced in *Schedule of Classes*. (Y)

### 425. Seminar in Historical Studies. Cr. 3 (Max. 9)

Prereq: junior or senior standing. Open only to Honors Program students. Studies of periods of history in which there has been major transition and change. Topics to be announced in *Schedule of Classes*. (Y)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**426. Seminar in Foreign Cultures. Cr. 3 (Max. 9)**

Prereq: junior or senior standing. Open only to Honors Program students. Humanistic or social science investigation of peoples and institutions in other cultures. Topics to be announced in *Schedule of Classes*. (Y)

**427. Seminar in American Society and Institutions. Cr. 3 (Max. 9)**

Prereq: junior or senior standing. Open only to Honors Program students. Study of American society, its institutions and social change. 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: 631 Merrick

Chairperson: Martin M. Herman

## Professors

Homer F. Edwards, Jr., Bernard M. Goldman, Martin M. Herman, Sara E. Leopold, Alexandra McCoy, Jay Vogelbaum

## Associate Professors

Marc Cogan, Richard P. Studing, Nola H. Tutag

## Assistant Professor

Ramon J. Betanzos

## Degree Programs

### *Bachelor of Arts—with a major in humanities and a major or special concentration in another department*

The Humanities curriculum focuses on the symbolic ways in which human beings represent their experience. By means of a multidisciplinary approach, it examines relationships among such diverse humanistic disciplines as art, music, literature, history, language and philosophy from both a theoretical and an historical perspective. Courses are designed to serve four curricular needs:

1. Designated courses may be taken to fulfill the Humanities Group Requirement in the College of Liberal Arts and/or the University General Education Requirement in humanities.
2. Some may be taken as electives or cognates by 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** requirements of the College are satisfied by the general requirements for undergraduate admission to the University; see page 13.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 170-171, respectively.

**Course Requirements:** Candidates must complete twenty-four credits in course work in Humanities and elect one of the following options:

1. Satisfy the major requirements in another department; *or*
2. Complete a twenty-four credit concentration in a single discipline other than Humanities; *or*
3. Develop a coherent period or area study by completing a special twenty-four credit concentration in course work chosen from the offerings of appropriate departments and programs.



Students who are interested in this major should consult a Departmental Adviser for further information.

**Major Requirements** within the Department: All majors are required to complete the following courses:

Humanities 102.....	Experiencing the Arts
Humanities 210.....	Humanities and the Western Tradition I
Humanities 211.....	Humanities and the Western Tradition II
Humanities 221.....	Medium, Form and Meaning in the Arts
Humanities 222.....	Constructs of Human Experience
Two Humanities courses at the 500 level	

To insure a coherent program, one which possesses 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 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. 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).

## COURSES OF INSTRUCTION<sup>1</sup> (HUM)

### 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)

### 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. (T)

### 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. (T)

### 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*. (I)

### 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. (T)

### 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. (T)

### 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 an interdisciplinary perspective. Topics to be announced in *Schedule of Classes*. (I)

### 301. The Persistence of Tradition. Cr. 3

Studies in myth and mythopoetic thought. Myth as artistic and cultural symbol of perennial human concerns. (Y)

### 302. (PL) Continuity and Change. Cr. 3

Considering how the reformulation of persistent human problems relates to historical change. Showing how solutions proposed by writers, artists, composers and philosophers combine conventional wisdom with leaps of the imagination. (B)

### 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 artistic media. (B)

### 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. (T)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**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, 211 or equiv. For the period 1600-1750: 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)

**575. Studies in the Arts and Ideas of American Culture I: 1770-1870. Cr. 3**

Prereq: HUM 211 and one course in American literature or American history or A S 201 or equiv. Major individuals, schools and movements in American literature, philosophy, music and the visual arts: their relationships to one another and to American history. (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. Approach similar to that of HUM 575. (I)

**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)

**652. Interrelation of the Arts in Critical Theory. Cr. 3**

Sources and content of contemporary theories of criticism; their adequacy when applied to various arts. (I)

# LINGUISTICS

Office: 422 State Hall

Director: Walter F. Edwards

## Participating Faculty

Ernest Ament, Associate Professor, Greek and Latin  
Richard B. Angell, Professor, Philosophy  
Ellen Barton, Assistant Professor, English  
Lynn Bliss, Associate Professor, Speech Communication  
Walter Edwards, Associate Professor, English  
Helen Hause, Associate Professor Emerita, Anthropology  
Steven Lapointe, Associate Professor, English  
Sara E. Leopold, Professor, Humanities  
Stella Liu, Associate Professor, Education  
Thomas McKinsey, Associate Professor, Philosophy  
Hilary Ratner, Assistant Professor, Psychology  
Aleya Rouchdy, Associate Professor, Near Eastern Languages  
Eli Saltz, Professor, Psychology  
Gary Scavnicky, Associate Professor, Romance and Germanic Languages  
Patricia Siple, Associate Professor, Psychology  
Geneva Smitherman, Professor, Speech Communication  
Robert Titiev, Associate Professor, Philosophy  
Rebecca Treiman, Associate Professor, Psychology

## Degree Programs

*Bachelor of Arts—with a major in linguistics*

### \* *Master of Arts in Linguistics*

Linguistics is the scientific study of language. Linguistics students study several aspects of language including its nature and development; its universal properties; its diversified structures; its dialects and sub-dialects; its acquisition by children and non-native speakers; its systems of writing and transcription; its cultural role in the speech community; and its application to other areas of human knowledge. Although linguists investigate many kinds of language behavior, the main role of the linguist is to discover and present the rules of grammar and pronunciation in human languages. This means that every grammar book and dictionary that is used in schools represents the distilled knowledge of linguists. Linguists perform very important social and educational functions, in that the society relies on them to describe the principles by which its language(s) function and to monitor the linguistic changes that take place over time.

Training in linguistics prepares students for jobs in teaching English and foreign languages (especially in multilingual and multicultural programs), broadcasting and the mass media, computer program design, public relations, tourism, speech writing, civil service and diplomatic work, and generally any job requiring the precise use or the analysis of speech or writing. Post-graduate students have opportunities to teach linguistics in college.

The linguistics program at Wayne State is interdepartmental and offers students an opportunity to concentrate on the study of the fundamental nature of human language: language history and structure, linguistic theory, the application of linguistics, and the relationship between linguistics and other disciplines. The program is administered by a director and an advisory committee composed of linguists from the Departments of Anthropology, Education, English, Humanities,

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

Philosophy, Psychology, Near Eastern Languages, Romance and Germanic Languages, Slavic Languages, and Speech Communication and Journalism.

## 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 13.

**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 20), the College of Liberal Arts Group Requirements (see page 191), 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 20-31 and 191-203, 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 — Structure of Language: Phonology.....	3
LIN 530 — Structure of Language: Grammar.....	3
LIN 570 — Introduction to English Linguistics.....	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

The student must complete the following courses:

	<i>credits</i>
LIN 185 — Symbolic Logic.....	4
LIN 257 <i>or</i> LIN 557	
— Introduction to Philosophy of Language.....	3
— Philosophy of Language.....	4

#### Additional Courses:

ENG 576 — American Dialects.....	3
CSC 652 — Automata Theory.....	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

The student must complete the following courses:

PSY 671 — Psycholinguistics.....	3
PSY 209 — Cognitive Processes.....	4

#### Additional Courses:

PSY 240 — Developmental Psychology.....	4
PSY 609 — Higher Mental Processes.....	3
PSY 410 — Statistical Methods in Psychology.....	4
PSY 490 — Directed Study and Research (credit max. 9).....	2-4
SPC 501 — Psychology of Human Communications.....	3
SPD 508 — Phonetics.....	3
PSY 610 — Research Methods in Cognitive Psychology.....	3
PSY 620 — Development of Memory.....	3
PSY 699 — Special Topics in Psychology (elect with consent of adviser).....	3

### D. Sociolinguistics

The student must complete the following courses:

LIN 531 <i>or</i> LIN 576	
— Language and Culture.....	3
— American Dialects.....	3
LIN 532 <i>or</i> LIN 577	
— Language and Society.....	3
— Sociolinguistics.....	3

#### Additional Courses:

SPC 504 — Communication in the Black Community.....	3
SOC 410 — Social Psychology.....	3
SOC 525 — Social Statistics.....	3
PSY 567 — Psychology of Interpersonal Communications.....	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 English Linguistics.....	3
LIN 529 <i>or</i> LIN 572	
— The Structure of Language: Phonology.....	3
— Topics in Language (Phonology).....	3
LIN 530 — Structure of Language: Grammar.....	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.



# COURSES OF INSTRUCTION<sup>1</sup> (LIN)

- 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)
- 209. (PSY 209) 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)
- 257. (PHI 257) Introduction to the Philosophy of Language. Cr. 3**  
A survey of philosophical problems concerning such topics as: the concepts of language and linguistic convention; the nature of meaning, reference, and truth; the relations between language, thought, and the world. (B)
- 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) Introduction to the Analysis of English. Cr. 3**  
Analysis of the structure and use of 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)
- 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. (ANT 529) The Structure of Language: 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. (SPD 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 English Linguistics. 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)

see page 429 for interpretation of numbering system, signs and abbreviations

**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)

**610. (PSY 610) Research Methods in Cognitive Psychology. Cr. 3**

Prereq: written consent of instructor. Survey of research methods in cognitive psychology, emphasizing relationship to contemporary content and theory. Investigation of memory, language processing, perception, and attention. (I)

**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. (SPD 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. (W,S)

**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: 646 Mackenzie Hall

Chairperson: Clarence W. Wilkerson, Jr.

Academic Services Officer: Katherine McDonald

## Professors

Gregory F. Bachelis, Leon Brown, Pao-Liu Chow, Bertram J. Eisenstadt, Karl W. Folley (Emeritus), David Handel, Chong-Shi Houh, John M. Irwin, Judith Q. Longyear, D. Clarence Morrow (Emeritus), Togo Nishiura, Owen G. Owens (Emeritus), Claude L. Schochet, Bertram M. Schreiber, Tze-Chien Sun, Chia Kuei Tsao, Martin T. Wechsler, Paul Weiss (Emeritus), Clarence W. Wilkerson

## Associate Professors

Robert D. Berman, John C. Breckenridge, Lawrence J. Brenton, Robert R. Bruner, Paul A. Catlin, William S. Cohn, Daniel S. Drucker, Henryk Fast, Daniel E. Frohardt, David H. Gluck, Lowell J. Hansen, David W. Jonah, Morris W. Katz, Marc Konvisser, Richard I. Loebel, Leonid Makar-Limanov, Peter Malcolmson, Charles A. McGibbon, Jose L. Menaldi, Jingyal Pak, Choon-Jai Rhee, Harold T. Slaby, Kai Wang, Stephen A. Williams

## Assistant Professors

Steven M. Kahn, Andrzej Kozłowski

## 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 School Bulletin.

## Bachelor's Degrees

**Admission Requirements** for the College are satisfied by the general requirements for undergraduate admission to the University; see page 13. 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 Liberal Arts Group Requirements (see page 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively.

**Bachelor of Arts:** The candidate must complete the Basic Sequence and then continue with option A, B, or C as described below. Students intending to go on to graduate study in mathematics are advised to elect option A.

**Bachelor of Science:** The candidate must complete the Basic Sequence and elect mathematics option A (see below), complete Physics 217 and 218, and satisfy the Liberal Arts group requirement in foreign language by choosing French, German or Russian. A candidate for the Bachelor of Science degree in another department who wishes to include mathematics as a second major may substitute option B for option A. All mathematics majors must plan their programs with the help of an adviser from the Mathematics Department.

## Mathematics Qualifying Examinations

**Mathematics 150:** Students must qualify for entry into Mathematics 150 by either (a) successfully completing Mathematics 095 with the recommendation of their instructor to enter Mathematics 150, or (b) by receiving a satisfactory score on the Mathematics 150 Qualifying Examination given 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.

**Mathematics 180 or 201:** Designated minimum scores on the Mathematics Qualifying Examination must be achieved within the previous two semesters in order to (a) enroll in Mathematics 180 (except for certain students from Mathematics 095 who are recommended by their instructors) or (b) enroll directly in Mathematics 201 without first passing Mathematics 180. All transfer students, including those who have had the equivalent of Mathematics 180 at another institution, are required to take the qualifying examination before enrolling in Mathematics 201.

This examination is administered each semester. If possible, a student should take the qualifying examination two semesters before electing a mathematics course. This will permit the student with a deficiency in preparation to remedy it before scheduling to elect the required course. It is important for the student to review thoroughly the basic notions and operations of elementary mathematics before taking the examination. A student may take the examination only once during one testing period.

The Mathematics Qualifying Examination for Mathematics 180 or 201 tests proficiency. 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 second part of the examination is on a level indicated in the discussion of the Basic Sequence below.

## Basic Sequence

The sequence consists of mathematics courses 201, 202, 203, and 204. While it is designed to meet the needs of students majoring in mathematics, engineering or the exact sciences, it is often the best set of courses in mathematics for students with other objectives.

To enter the Basic Sequence a student must pass Mathematics 180 or obtain a satisfactory score on the Mathematics Qualifying Examination (see above) which is based on three and one-half to four years of college preparatory mathematics including topics from algebra, plane and solid geometry and trigonometry. Students are not allowed to enroll in Mathematics 201 without this educational background or its equivalent. Courses designed for other purposes (e.g., general mathematics, consumer mathematics, business mathematics, shop mathematics) do not constitute adequate preparation for this sequence.

## OPTIONS

**Total Credits in Major:** Students may take no more than forty-six credits in mathematics and no more than forty-six credits in computer science.

**Honor Point Average:** For majors, the honor point average in mathematics (MAT) courses must be at least 2.0.

### — Option A

This option is for students with a strong interest in theoretical mathematics and requires:

1. The Basic Sequence (Mathematics 201, 202, 203 and 204).
2. Advanced Calculus (MAT 507).
3. Algebra I and II (MAT 542 and 543).
4. Analysis I and II (MAT 560 and 561).
5. Probability (MAT 570).
6. One additional course chosen from (a) mathematics courses numbered 500 or above and applicable to degree work in mathematics or (b) computer science courses: CSC 460 (Numerical Methods), 518 (Discrete System Simulation), 661 and 662 (Computational Algorithms). Mathematics service courses may not be used to satisfy this requirement. Students in the combined curriculum for secondary teaching should take MAT 614.
7. Completion of the Liberal Arts foreign language requirement with French, German, or Russian.

### — Option B

This option is for students interested in a broad range of topics and requires:

1. The Basic Sequence.

2. MAT 507.
3. MAT 542 or 560.
4. MAT 570.
5. Either (a) three courses chosen from mathematics courses numbered 500 or above and applicable to degree work in mathematics, or (b) two mathematics courses numbered 500 or above and applicable to degree work in mathematics and one of the following: CSC 460, 518, 661, or 662. Mathematics service courses may not be used to satisfy this requirement.
6. Satisfaction of the Liberal Arts foreign language group requirement (French, German or Russian recommended).

### — Option C

This option is available only to students in the Combined curriculum for Secondary Teaching.

1. The Basic Sequence.
2. Mathematics 560, 614, 615 and 616.
3. Mathematics 540 or 542 or 561.
4. Two additional courses selected from (a) mathematics courses numbered 500 or above and applicable to degree work in mathematics, or (b) computer science courses numbered 460 or higher, except Computer Science 503. Mathematics service courses may not be used to satisfy this requirement.
5. Satisfaction of the Liberal Arts foreign language group requirement (French, German or Russian recommended).

### Curricular Alternatives

**Combined Curriculum for Secondary Teaching:** Under the Combined Curriculum (see Teacher Preparation Curricula, page 200), it is possible to earn a bachelor's degree in mathematics and, at the same time, 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. Those students who are admitted into and complete the Combined Curriculum for Secondary Teaching may satisfy the mathematics requirements for the Bachelor of Arts degree with a major in mathematics by electing option C (above). It is stressed, first, that students in the combined curriculum with education are the only ones who may use option C, and, second, that these students are not restricted to option C but may use options A, or B if they choose.

**Language Recommendations:** The department recommends that its majors take at least two semesters of foreign language beyond the group requirement. This additional work could be in a second foreign language.

**Double Major:** Students whose field of concentration is closely related to mathematics and who have an independent interest in mathematics should consider the declaration of a double major with mathematics. It is usually possible to combine the work of a mathematics major with one in physics or chemistry. The growing use of mathematical methods in life sciences, the social sciences, and in the operation of large government and industrial organizations makes the mathematics major program a rewarding educational experience for students interested in these fields.

### 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 258).
4. Completion of a Senior Task, for which a student registers under Mathematics 490, Directed Study: Honors Program.

**Honors Sections in the Basic Sequence:** Honors sections in Mathematics 201 and 203 are taught in the fall semester and in Mathematics 202 and 204 are taught in the winter semester. A 3.0 or higher grade point average in Basic Sequence courses already taken is required for admittance.

### Minor in Mathematics

**Minor in Mathematics:** Requirements for a Minor in Mathematics consist of the Basic Sequence (MAT 201, 202, 203, and 204), Mathematics 507, and two additional Mathematics courses numbered 500 or above and applicable to degree work in mathematics. Mathematics Service Courses may not be used to satisfy this requirement.

### Introductory Courses for Non-Majors

It must be emphasized that students who, for any purpose, desire a foundation in elementary college level mathematics adequate for continuing with more advanced mathematics should elect the Basic Sequence; see page 265. On the other hand, 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 269. Ordinarily, the courses in this list are not suitable for degree work in mathematics. Courses in the Service Course list are not intended as preparation for more advanced mathematical study. 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:

Algebra I .....	MAT 542
Linear Programming and Operations Research .....	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:

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

**High School Teachers:** The following courses should deepen the understanding of general concepts and techniques in algebra, geometry, probability and statistics:

Elementary Theory of Numbers .....	MAT 540
Topics in Mathematics for High School Teachers .....	MAT 614, 615, 616

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 102. Those whose work demands a good foundation in mathematical statistics are referred to Mathematics 570 and 582. Mathematics 583 and 683 are useful for students interested in applied statistics.

## COURSES OF INSTRUCTION<sup>1</sup> (MAT)

*A minimum grade of 'C' is required in every prerequisite course.*

### Undergraduate Courses

#### 091. (MC) Basic Concepts in Mathematics. Cr. 3

Prereq: ENG 102; failure in mathematics proficiency test. Offered for S and U grades only. Not for 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. 1-3

Not for 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. 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, relations, functions, applications to computer science. (T)

#### 187. Discrete Mathematics for Computer Science II. Cr. 4

Prereq: MAT 186. Analysis of algorithms, recurrence relations, combinatorics, graphs, application to computer science. (T)

#### 201. Calculus I. Cr. 4

Prereq: MAT 180 or satisfactory score on qualifying exam. 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 or equiv. Vectors; partial derivatives; differentiation of vector functions; techniques and applications of integration. (T)

#### 203. Calculus III. Cr. 4

Prereq: MAT 202 or equiv. Multiple integrals; sequences and infinite series; Taylor Series; vector analysis. (T)

#### 204. Calculus IV. Cr. 4

Prereq: MAT 203 or equiv. Only 2 credits toward graduation after MAT 225. Elementary linear algebra and ordinary differential equations. (T)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**221. Elementary Probability and Statistics. Cr. 4**  
Prereq: MAT 201. No credit after MAT 570. Sample spaces, probability of events; random variables, mean, variance; joint probability distribution and density functions. Some special distributions; counting techniques; estimation, testing hypothesis; regression models; analysis of variance. (T)

**225. Elementary Linear Algebra. Cr. 3**  
Prereq: MAT 201 or equiv. No credit after MAT 204. Introduction to linear systems, matrices, linear transformations, basis, dimension, determinants, inner products, and eigenvalue methods. (I)

## Honors Courses

**419. Linear Algebra and Differential Equations: Honors Program. Cr. 5**

Prereq: 3.0 h.p.a. in MAT 201 and 202. No credit after MAT 204. Students who plan to take this course should not take MAT 203 and MAT 204. Matrices and linear transformations; inner products; characteristic vectors; first order differential equations; systems of linear differential equations; infinite series; series solutions of differential equations. (I)

**420. Advanced Calculus: Honors Program. Cr. 5**  
Prereq: MAT 419. Taylor's theorem and maxima and minima for several variables; uniform convergence; improper integrals; Gamma function; implicit function theorem; line and surface integrals; Green's Theorem, Divergence Theorem, Stokes' Theorem. (I)

**490. Directed Study: Honors Program. Cr. 1-4(Max. 8)**  
Prereq: admission to Honors Program by Mathematics Honors Committee. (I)

## Undergraduate and Graduate Courses

*PREREQUISITES: Knowledge of analytical geometry and calculus is normally a prerequisite for all upper division courses in mathematics. Mathematics 201, 202, 203, and 204 make up the four-semester sequence which provides this preparation.*

**503. Computational Statistics and Data Analysis. Cr. 3**  
Prereq: introductory computer experience; one course in statistics. No graduate degree credit. Basic concepts of estimation, testing hypothesis; linear regression, analysis of variance; time series analysis; understanding and interpretation of statistics packages such as SPSS, SAS or BMDP. (I)

**507. Advanced Calculus. Cr. 4**  
Prereq: MAT 204. Derivatives of implicit functions; Lagrange multipliers; implicit function theorems; transformations and mappings; vector fields and the theorems of Green and Stokes; uniform convergence; advanced topics in power series; improper integrals and functions defined by improper integrals; Fourier series and integrals. (T)

**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 204. Linear nth order differential equations; linear systems of differential equations (constant and periodic coefficients); oscillation and comparison theorems for second order differential equations; boundary value problems; stability theory (Liapunov's direct method and frequency domain stability criteria); asymptotic solutions; autonomous non-linear systems; classification of singularities. (B)

**535. (PHI 535) Logical Systems I. Cr. 4**  
Prereq: PHI 185 or PHI 186 or MAT 560 or MAT 542 or consent of instructor. Metaresults concerning formal systems of sentential and first-order logics; soundness, completeness; independence of axioms; introduction to recursive functions; formalization of elementary arithmetic; discussion of Godel's incompleteness theorem and Church's Theorem. (B)

**539. (PHI 539) Logical Systems II. Cr. 4**  
Prereq: PHI 535 or MAT 535 or consent of instructor. Detailed proofs of Godel's incompleteness results, Tarski's Theorem, and Church's Theorem; formal axiomatic treatment of set theory and selected applications. (B)

**540. Elementary Theory of Numbers. Cr. 3**  
Prereq: MAT 204 or consent of instructor. Unique factorization theorem; order of magnitude of arithmetic functions; congruences, quadratic residues, law of reciprocity; continued fractions; elements of geometry of numbers; second pearl of number theory. (B)

**541. Applied Linear Algebra. Cr. 4**  
Prereq: MAT 204. 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 204. Linear algebra: vector spaces, linear transformations, polynomials, determinants, eigenvalues and eigenvectors, canonical forms. Introduction to group theory: groups, subgroups, cosets (Lagrange's theorem), homomorphisms and quotient groups, permutation groups. (T)

**543. Algebra II. Cr. 4**  
Prereq: MAT 542. Group theory continued: Sylow Theorems, finite Abelian groups. Ring Theory, rings, domains, fields, fields of quotients, homomorphisms and ideals, P.I.D.s and U.F.D.s, polynomial rings; Field extensions: splitting fields, finite fields. (T)

**553. Differential Geometry of Curves and Surfaces I. Cr. 3**  
Prereq: MAT 204. Classical differential geometry of curves and surfaces in  $\mathbb{R}^3$  (to the third power). (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 204. No credit after MAT 615; only two credits after MAT 502 or MAT 221. 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)

**577. Mathematical Models in Operations Research. Cr. 3**

Prereq: MAT 204 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 204. 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 204. 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)

**614. Topics in Mathematics for High School Teachers I. Cr. 3**

Prereq: MAT 204. Only 2 credits toward graduation after MAT 556. Modern geometry; Euclidean geometry based on Hilbert's axioms; projective and affine planes; non-Euclidean geometries. (Y)

**615. Topics in Mathematics for High School Teachers II. Cr. 3**

Prereq: MAT 204. No credit after MAT 570; only one credit toward graduation after MAT 221. Combinatorial analysis; basic concepts and methods of probability and statistical inference. (Y)

**616. Topics in Mathematics for High School Teachers III. Cr. 3**

Prereq: MAT 204. 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; traversibility; 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)

**550. 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)

**653. Differential Geometry of Curves and Surfaces II. Cr. 3**

Prereq: MAT 553 or consent of instructor. Continuation of MAT 553 with emphasis on global theory. (I)

**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)

## 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. (ET 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)

**342. Applied Calculus I. (ET 342). Cr. 3**

Prereq: MAT 180. No degree credit in College of Liberal Arts. Application of differential and integral calculus and analytical geometry to engineering problem situations. (T)

**344. Applied Calculus II. (ET 344). Cr. 3**

Prereq: MAT 342. No degree credit in College of Liberal Arts. Continuation of MAT 342, including the application of ordinary differential equations to engineering problem situations. (T)

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

No graduate credit; credit in College of Education only. Discussion

and development of the mathematics upon which much of the current elementary school mathematics curriculum is based. Sets and Venn diagrams; systems of numeration; prime numbers, least common multiple, greatest common divisor; number systems, inverses, identity, associativity, commutativity, and distributivity; modular arithmetic; notions of ratio and percentage. (Y)

**517. Mathematics for Elementary School Teachers II. (MAE 506). Cr. 3**

Prereq: MAT 516. No graduate credit; credit only in College of Education. A survey of the real number system, algebraic operations, systems of linear equations, theory of equations. (Y)

**518. Mathematics for Junior High School Teachers I. (MAE 510). Cr. 3**

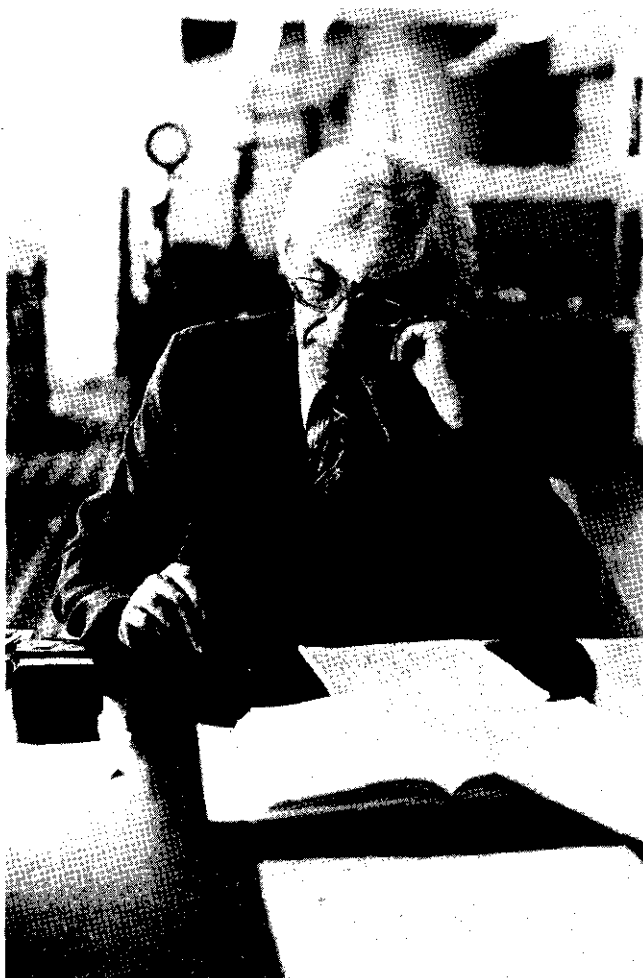
Prereq: MAT 517. No graduate credit; credit in College of Education only. Basic concepts of Euclidean geometry; trigonometric solutions of triangles. (Y)

**519. Mathematics for Junior High School Teachers II. (MAE 511). Cr. 3**

Prereq: MAT 518. Credit only in College of Education. 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 Manoogian  
Chairperson: Jacob Lassner

*Professor*

Jacob Lassner

*Associate Professors*

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 13.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, 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.

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



**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.

**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).

## COURSES OF INSTRUCTION<sup>1</sup>

### 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. (I)

**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)

### 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)

**390. Directed Study. Cr. 3-6(Max. 9)**

Prereq: consent of chairperson. Readings; consultations and reports. (T)

**500. Post-Biblical Texts. Cr. 3**

Prereq: HEB 201 or consent of instructor. Selected readings of prose texts. (I)

**507. Readings in the Bible. Cr. 3(Max. 9)**

Prereq: HEB 501 or consent of instructor. (I)

**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 Languages And Literatures (N E)

*Knowledge of the original languages is not required for the following courses.*

**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)

**302. Survey of Jewish History and Civilization. Cr. 3**

General survey of Jewish history. (I)

<sup>1</sup>See page 429 for interpretation of numbering system, signs and abbreviations

**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. Cr. 3**

History, law and religion based on source readings in translation; from the beginnings to the Hellenistic period. (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. 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)

**366. History of the Jews II. Cr. 3**

Prereq: N E 365 or consent of instructor. The middle ages and modern times. (I)

**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. (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)

**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)

## 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

Chairperson: Leora A. Shelef

Administrative Assistant: Evette Weaver

## Professors

Mary Jane Bostick (Emerita), Esther D. Callard (Emerita), Leora A. Shelef

## Associate Professors

K.-L. Catherine Jen, Michael B. Zemel

## Assistant Professor

Margene Wagstaff

## Senior Lecturer

Joyce Mooty

## Lecturers

Paula Parlovich, Susan Ryskamp

## Field Instructors

Joan Brown (VA Medical Center—Allen Park), Mary Clor (St. Clair Renal Center), Susan Crankshaw (William Beaumont Hospital—Troy), Jean Egan (Oakland County Health Department), Karen Jackson (Saratoga Hospital—Detroit), Mary Jaskowski (Detroit Osteopathic Hospital), Andrea Mathis (William Beaumont Hospital—Royal Oak), Beth Naber (St. John Hospital—Detroit), Cheryl Nagy (Pontiac Osteopathic Hospital), John Perkins (U.S. Army Tank-Automotive Command), Pat Perry (VA Medical Center—Allen Park), Joanne Reid (Hutzel Hospital), Tonia Reinhard (Macomb County Cooperative Extension), Jennie Valin (Selectcare), June Ventimiglia (Children's Hospital of Michigan), Deborah Zibell-Frisk (Providence Hospital—Detroit)

## 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, or physiology.*

\* For specific degree requirements, see the Wayne State University Graduate School Bulletin.

The courses offered by this department are designed for students in three distinct groups: (a) those majoring in nutrition and food science who are interested in entering either the nutrition or the food science profession; (b) those interested in entering the dietetics field; and (c) those majoring in nutrition and food science with the intention of entering managerial positions in a variety of food service establishments.

## BACHELOR'S DEGREES

**Admission Requirements:** See the general requirements for undergraduate admission to the University, page 13. 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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, 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 the following 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 203, 213, 214, 413, 522, 535, 592, 616, 617, 685  
Biological Sciences 100, 220  
Chemistry 102, 103  
Computer Science 100  
Economics 101, 102  
Mathematics 150  
Accounting 301  
Management 550, 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, 523, 622, 685 and an additional ten credits of upper division course work in Nutrition and Food Science.  
Biological Sciences 101, 102, 220, 287, 507, 525  
Chemistry 105 or 107, 108, 224, 226, 227, 312 or 510  
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 six-month pre-planned approved work 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 of the medical dietetics degree outlined below.

## Bachelor of Science in Medical Dietetics

The medical dietetics program prepares students to deal with the maintenance and improvement of human health through study and research in food science, nutrition and food service systems management. This program is accredited by the American Dietetic Association and focuses on the nutritional care of persons in hospitals and community care settings. The curriculum is designed to coordinate classroom learning and clinical experience, preparing students for entry-level practice as clinical dietitians. Unlike the program in general dietetics, no post-baccalaureate internship is required. Upon completion of the program, the student earns the Bachelor of Science in Medical Dietetics degree. The graduate is then eligible for membership in the American Dietetics Association and may then take the national registration examination for professional certification.

**Admission Requirements:** Admission to this program is granted only to students with junior standing in the College after completion of the following core courses. 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.

### CORE COURSES:

Nutrition and Food Science: 213, 214, 221, 513, 523, 616, 617, 622, 685  
Anthropology 210 or Sociology 200  
Biological Sciences 101, 220, 287  
Chemistry 105 or 107, 108, 224  
Economics 102  
Philosophy 111  
Psychology 102  
Statistics 102  
Biochemistry 501  
Management 550

**DEGREE REQUIREMENTS:** Candidates for this degree must complete at least 130 credits including the above core courses, the following sequences in general dietetics and medical dietetics, as well as any remaining courses necessary to satisfy the College Group Requirements and the University General Education Requirements (see pages 22 and 191, respectively).

### GENERAL DIETETICS

Nutrition and Food Science 413, 522, 525  
Management 570  
Accounting 550  
Instructional Technology 511, 512

### 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 an Honors Senior Seminar (Honors 420, 421, 422, or 423; 3 credits)
3. Complete at least three credits in an independent research project (NFS 596)
4. Complete no less than fifteen credits of Honors-designated course work.

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, 522, 523, 616, 617, 622, 685

## COURSES OF INSTRUCTION<sup>1</sup> (NFS)

### 203. (LS) Introductory Nutrition. Cr. 3-4

Material fee if taken for four credits. Material 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*. 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 or CHM 220 and 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

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

## COURSES OF INSTRUCTION<sup>1</sup> (PCS)

### 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)

### 500. Dispute Resolution. Cr. 3 Overview of the processes and sectors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. (Y)

### 600. Senior Seminar in Peace and Conflict Studies. Cr. 3 Prereq: senior standing; PCS major. Offered for undergraduate credit only. Students work on a research project relevant to concepts studied in the program. (Y)



## PHILOSOPHY

Office: 767 Mackenzie Hall  
Chairperson: William D. Stine

### Professors

Richard B. Angell, Alfred Stern

### Associate Professors

Barbara M. Humphries, Lawrence B. Lombard, T. Michael McKinsey, Lawrence Powers, Bruce A. Russell, William D. Stine, Robert J. Titiev, Robert J. Yanal

## 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 13. 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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively.

**Major Requirements:** A candidate for the regular major must complete a minimum of eight 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); and
5. three courses at the 500-level or above.

**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 eight 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 in the candidate's senior year), and an interdisciplinary seminar from the Honors Program,
- 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, and
- d. complete an interdisciplinary seminar offered through the Honors Program and accumulate at least fifteen credits in honors-designated course work.

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 this page).

1. *History of Philosophy group:* PHI 210 (or 541, or 542) or PHI 211 (or 545, or 546).
2. *Symbolic Logic group:* PHI 185 or 186.
3. *Value Theory group or Philosophical Problems group:* one course from either group.
4. One course at the 500 level or above from any group.
5. One additional course at the 200 level or above from any group.

Courses taken in compliance with requirement (4) may be used to satisfy any of requirements (1), (2), (3), or (5); however, students wishing to do so must consult with the instructor; the five course minimum must still be met.

Students who are planning to minor in philosophy should consult the Director of Undergraduate Studies in the Philosophy Department.

# COURSES OF INSTRUCTION<sup>1</sup> (PHI)

## Introductory Courses

**101. (PL) Introduction to Philosophical Systems. (Lct: 3; or Lct: 3; Dsc: 1). Cr. 3-4**

No credit after PHI 103. Introduction to philosophy and the main schools of philosophical thought, through examination of some of the great philosophers of the past. Selected texts of writers such as Plato, Augustine, Aquinas, Descartes, Hume, Kant, Hegel, Nietzsche, James, and Russell will be discussed. (T)

**102. Honors Introduction to Philosophical Systems. Cr. 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. Honors Introduction to Philosophical Problems. Cr. 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. Contemporary Moral Issues. Cr. 3 (Max. 9)**

Current moral problems confronting individuals and societies. Possible topics: war, love, death, civil disobedience, population and environmental issues, sexuality, feminism, racism, ageism, animal rights. Topics to be announced in *Schedule of Classes*. (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 description; a brief introduction to set theory. (T)

**186. Honors Symbolic Logic. (LIN 186). Cr. 4**

Open only to Honors students. See PHI 185. (T)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

## 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)

### 212. Nineteenth Century Philosophy. Cr. 3

A survey of the views concerning knowledge, reality and value of the major European philosophers of the nineteenth century. Selected readings from such philosophers as Fichte, Hegel, Marx, Schopenhauer, Kierkegaard, Nietzsche, Bentham, Mill, and Bradley. (B)

### 213. Twentieth Century Philosophy. Cr. 3

A survey of the major European and American philosophers and philosophical movements of the twentieth century: pragmatism (Peirce, James, Dewey), process philosophy (Whitehead), phenomenology (Husserl), existentialism (Heidegger, Sartre), positivism (Carnap, Ayer), philosophical analysis (Russell, Moore, Austin, Ryle, Wittgenstein). (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)

### 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)

### 551. Special Topics in the History of Philosophy. Cr. 4 (Max. 8)

Prereq: any course from the History of Philosophy group or consent of instructor. Topics to be announced in *Schedule of Classes*. (I)

## Theory of Value

### 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)

### 524. Special Topics in Social and Political Philosophy. Cr. 4 (Max. 8)

Prereq: any philosophy course at the 200 level or above or major in political science or consent of instructor. Selected topics and readings from major social and political philosophers. Topics to be announced in *Schedule of Classes*. (I)

### 527. Philosophy of Law. Cr. 4

Prereq: one philosophy course at the 200 level or above or pre-law or law student standing or consent of instructor. Intensive investigation and discussion of special topics or particular authors in the philosophy of law. (B)

### 528. History of Ethics. Cr. 4

Prereq: one philosophy course at the 200 level or above or consent of instructor. A survey and discussion of historically important moral philosophers from Plato to Mill. (B)

### 530. Twentieth Century Analytic Ethics. Cr. 4

Prereq: any philosophy course at the 200 level or above or consent of instructor. Important twentieth century moral philosophers in the analytic tradition, such as G.E. Moore, W.D. Ross, Hare, Stevenson, Baier and Rawls. (B)

### 532. Special Topics in Ethics. Cr. 4 (Max. 8)

Prereq: one philosophy course at the 200 level or above or consent of instructor. Selected topics in normative and meta-ethics. Topics to be announced in *Schedule of Classes*. (I)

## 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)

**257. Introduction to the Philosophy of Language. (LIN 257). Cr. 3**

A survey of philosophical problems concerning such topics as: the concepts of language and linguistic convention; the nature of meaning, reference, and truth; the relations between language, thought, and the world. (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)

**380. Special Topics in Philosophy. Cr. 3 (Max. 6)**

Prereq: one course in philosophy or consent of instructor. Special topics to be announced in *Schedule of Classes*. (I)

**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)

**560. Philosophy of Religion. Cr. 4**

Prereq: any philosophy course at 200-level or above, or consent of instructor. Intensive investigation and discussion of special topics or

particular authors in the philosophy of religion. Topics and authors to be announced in *Schedule of Classes*. (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)

**575. Philosophy of Logic. Cr. 4**

Prereq: PHI 185 or 186 and one other philosophy course at the 200 level or above, or consent of instructor. Topics concerning such issues as the nature of logic, the relation between logic and ontology, and the relation between logic and mathematics. Topics to be announced in *Schedule of Classes*. (I)

## Special Courses

**487. Honors Directed Reading. Cr. 4**

Prereq: philosophy honors candidate. Research on topic of honors essay and research for comprehensive examinations. (F)

**489. Honors Proseminar. Cr. 4**

Prereq: PHI 487. Continuation of PHI 487. (W)

**590. Directed Reading. Cr. 1-6(Max. 12)**

Prereq: undergrad., consent of chairperson and instructor; grad., consent of chairperson, graduate officer and instructor. Intensive investigation by student on topic chosen by student in consultation with instructor. (T)



# PHYSICS AND ASTRONOMY

Office: 135 Physics Research Building

Chairperson: David M. Fradkin

Assistant Chairperson: Talbert S. Stein

## Professors

George B. Beard, William P. Beres, Henry V. Bohm, Juei-Teng Chen, Harry H. Denman, 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, Lowell E. Wenger

## Associate Professors

Jhy-Jiun Chang, William E. Dorenbusch, Patrick F. Kenealy, Jogindra M. Wadehra

## Assistant Professors

Caroline G. Morgan-Pond, Karur R. Padmanabhan

## Instructor

Ching-Kwan Kwan

## Adjunct Professors

Edward C. Lim, Eleftherios M. Logothetis, Pieter K. Rol, Melvin P. Shaw

## Adjunct Associate Professor

John E. Keem

## 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.

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

**Physics Colloquium:** The department colloquium is normally held Thursday afternoons. Advanced undergraduates are invited to attend.

## 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 13.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively.

## 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.<sup>1</sup>
2. Elementary mathematics sequence—MAT 201, 202, 203 and 204.
3. Chemistry 107
4. The Department recommends that the Foreign Language Group Requirement (see page 192) 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 two laboratory courses and including Physics 620, 660, 680 and 685.

## Suggested Course Sequence

### Freshman Year

#### Fall Semester

Chemistry 107.....	4
Mathematics 201.....	4
<sup>2</sup> Group Req. Elective.....	4
<sup>2</sup> English.....	4
<b>Total:</b>	<b>16</b>

#### Winter Semester

<sup>1</sup> Physics 217.....	5
Mathematics 202.....	4
<sup>2</sup> Group Req. Elective.....	4
<sup>2</sup> English.....	4
<b>Total:</b>	<b>17</b>

### Sophomore Year

<sup>1</sup> Physics 218.....	5
<sup>2</sup> Biology Elective.....	4
Mathematics 203.....	4
<sup>2</sup> Group Req. Elective.....	4
<b>Total:</b>	<b>17</b>

Physics 330.....	3
Physics 520.....	3
Mathematics 204.....	4
<sup>2</sup> Group Req. Elective.....	4
<b>Total:</b>	<b>14</b>

### Junior Year

Physics 560.....	3
Physics 535.....	5
Mathematics 507.....	4
<sup>2</sup> Group Req. Elective.....	4
<b>Total:</b>	<b>16</b>

Physics 562.....	5
<sup>2</sup> Foreign Language.....	4
Mathematics 522.....	4
<sup>2</sup> Group Req. Elective.....	4
<b>Total:</b>	<b>17</b>

### Senior Year

Physics 620.....	4
Physics 680.....	3
Computer Science.....	4
<sup>2</sup> Foreign Language.....	4
<b>Total:</b>	<b>15</b>

Physics 660.....	4
Physics 681.....	3
Physics 650.....	4
<sup>2</sup> Foreign Language.....	4
Physics 685.....	2
<b>Total:</b>	<b>17</b>

## — 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
<sup>2</sup> Group Req. Elective.....	4
<sup>2</sup> English.....	4
<b>Total:</b>	<b>16</b>

##### Winter Semester

<sup>1</sup> Physics 217.....	5
Mathematics 202.....	4
<sup>2</sup> Group Req. Elective.....	4
<sup>2</sup> English.....	4
<b>Total:</b>	<b>17</b>

### Sophomore Year

<sup>1</sup> Physics 218.....	5	Physics 330.....	3
Biology Elective.....	4	Physics 520.....	3
Mathematics 203.....	4	Mathematics 204.....	4
<sup>2</sup> Group Req. Elective.....	4	<sup>2</sup> Group Req. Elective.....	4
<b>Total:</b>	<b>17</b>	<b>Total:</b>	<b>14</b>

### Junior Year

Physics 560.....	3	Physics 562.....	5
Technical Elective.....	4	Technical Elective.....	4
Mathematics 507.....	4	<sup>2</sup> Foreign Language.....	4
<sup>2</sup> Group Req. Elective.....	4	<sup>2</sup> Group Req. Elective.....	4
<b>Total:</b>	<b>15</b>	<b>Total:</b>	<b>17</b>

### Senior Year

Physics Elective.....	3-5	Physics 685.....	2
<sup>2</sup> Foreign Language.....	4	Physics Elective.....	3-5
Technical Elective.....	4	<sup>2</sup> For. Lang.....	4
Computer Science.....	4	Tech. Elective.....	4
<b>Total:</b>	<b>16</b>	Computer Science.....	4
		<b>Total:</b>	<b>17-19</b>

## — 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; etc.

**Course requirements** which fulfill current medical school requirements are outlined in the following suggested curriculum; however, students should consult the University Advising Office for possible changes in pre-medical requirements.

### Suggested Course Sequence

#### Freshman Year

##### Fall Semester

Chemistry 107.....	4
Mathematics 201.....	4
<sup>1</sup> Group Req. Elective.....	4
<sup>2</sup> English.....	4
<b>Total:</b>	<b>16</b>

##### Winter Semester

Chemistry 108.....	5
Mathematics 202.....	4
Physics 217.....	5
<sup>2</sup> English.....	4
<b>Total:</b>	<b>18</b>

### Sophomore Year

<sup>1</sup> Physics 218.....	5	Physics 330.....	3
<sup>2</sup> Group Req. Elective.....	4	Physics 520.....	3
Biology 101.....	4	Biology 102.....	4
Mathematics 203.....	4	Mathematics 204.....	4
<b>Total:</b>	<b>17</b>	<b>Total:</b>	<b>14</b>

<sup>1</sup> Physics 213 and 214 may be substituted for Physics 217 and 218 with the permission of the Departmental Undergraduate Adviser.

<sup>2</sup> Students are responsible for satisfying College Group Requirements.

### Junior Year

Physics 560.....	3	Physics 562.....	5
Chemistry 224.....	4	Chemistry 226.....	4
Biology 507.....	4	Chemistry 227.....	2
Group Req. Elective.....	4	Foreign Language.....	4
Total: 15		Total: 15	

### Senior Year

Physics Elective.....	3-5	Physics Elective.....	3-5
Biology Elective.....	4	Group Req. Elective.....	4
Group Req. Elective.....	4	Group Req. Elective.....	4
Foreign Language.....	4	Foreign Language.....	4
Total: 15-17		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;

(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.
2. (a) Elementary Mathematics Sequence: MAT 201, 202, 204, 204.  
(b) Intermediate Mathematics Course: MAT 507.
4. Chemistry 107
5. The Department recommends that the Foreign Language Group Requirement (see page 192) 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, 106, 310 and 502. The laboratories connected with AST 201, PHY 102, and PHY 310 satisfy the natural science laboratory group requirements.

## COURSES OF INSTRUCTION<sup>1</sup>

### Astronomy (AST)

#### 201. (PS) Descriptive Astronomy. (Lct: 4; Lab: 2). Cr. 4-5

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)

<sup>1</sup> Students are responsible for satisfying College Group Requirements.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

# Physics (PHY)

All courses with a laboratory have a non-returnable 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)

## 101. (PS) Music, Color, and Perception: The Physics. (Lct: 3; or Lct: 3; Lab: 2). Cr. 3-4

Prereq: satisfaction of University mathematics proficiency requirement recommended. Material fee as indicated in *Schedule of Classes*. Physics of sound, light, and color; history and creation of models for physical phenomena, particularly those associated with light, the physics of waves illustrated with sound and light, and psychophysical phenomena associated with sight and hearing. Associated laboratory is optional but highly recommended. (Y)

## 102. (PS) Conceptual Physics: The Basic Science. Cr. 3-4

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)

## 106. Energy. Cr. 3

Current issues: the impact of energy crisis and pollution on society, fossil fuels, nuclear power, solar energy, energy from agriculture. No previous knowledge of science or mathematics necessary. (I)

## 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)

## 213. (PS) General Physics. Cr. 3-4

Prereq: high school algebra and trigonometry. Pre-medical technology students only may register for 3 credits (lecture, quiz); all others must register for 4 credits (lecture, quiz, lab). 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. Material fee as indicated in *Schedule of Classes*. Continuation of PHY 213. Electricity, magnetism and introduction to modern physics. (T)

## 216. General Physics Laboratory. Cr. 1

Prereq: PHY 213 for 3 credits. Open only to medical technology students. Material fee as indicated in *Schedule of Classes*. (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. 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. 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. 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; magnetotonic 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*. 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*. 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. Applied Electricity and Magnetism. Cr. 3**

Prereq: PHY 218 or 214, MAT 204. 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*. 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)

**600. Physics for Secondary-School Teachers. Cr. 6**

Prereq: written consent of instructor. Open only to pre-college teachers. Course may extend over two semesters before full credit is awarded. Intensive course in physics and astronomy for pre-college teachers of physical science, physics, and/or chemistry. Physics content on the non-calculus level, special talks by guest experts, production of videotape modules for classroom instructional use. (I)

**601. The Physics of Waves I: Sound and Music. Cr. 4**

Prereq: introductory physics course in mechanics, or consent of instructor. Open only to pre-college teachers. Ideas of introductory mechanics and Newton's laws as applied to mechanical waves; emphasis on sound and music, and interaction of these waves with the human organism. (Y)

**602. Workshop for Teachers of Physics. Cr. 3**

Prereq: written consent of instructor. Open only to teachers. Intensive scholarly workshop for teachers of precollege physics; includes series of talks by guest experts in physics, study of recent research on problem-solving in physics, production of videotape modules for instructional use in classroom. (I)

**603. The Physics of Waves II: Light and Color. Cr. 4**

Prereq: introductory physics course in electricity and magnetism, or consent of instructor. Open only to pre-college teachers. Ideas of introductory electricity and magnetism, and Maxwell's description, applied to electromagnetic waves; emphasis on visible light and color, and interaction of these waves with the human organism. (Y)

**605. Special Topics in Physics for Secondary-School Educators. Cr. 4-8**

Prereq: introductory physics courses in mechanics, and in electricity and magnetism; or consent of instructor. Open only to pre-college teachers. Topics, including astronomy, modern physics and cosmology, optics, electronics, to be announced in *Schedule of Classes*. (Y)

**620. Theoretical Mechanics. Cr. 4**

Prereq: PHY 520 and MAT 204. 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 204 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. 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)

**688. Lab-Computer Interfacing. Cr. 4**

Prereq: PHY 562 and CSC 100 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Design of experiments and experimental apparatus for digital control and digital data acquisition and storage, using microprocessors and microcomputers. (B:F)

**691. Special Topics. Cr. 1-4(Max. 4)**

Prereq: consent of instructor. Offered for S and U grades only. Topics and prerequisites for each section to be announced in *Schedule of Classes*. More than one section may be elected in a semester.

# POLITICAL SCIENCE

Office: 856 Mackenzie Hall

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), Louis L. Friedland (Emeritus), Wesley L. Gould (Emeritus), Donald S. Hecock (Emeritus), Charles J. Parrish, Henry J. Pratt, Maurice M. Ramsey (Emeritus), Murray B. Seidler (Emeritus), Jorge Tapia-Videla, C. Dale Vinyard, Maurice Waters, Harold L. Wolman

## Associate Professors

James T. Chalmers, Richard C. Elling, Roy B. Flemming, Ray E. Johnston, Robert W. Miller, Alfred M. Pelham (Emeritus), Wilbur C. Rich

## Assistant Professors

Susan P. Fino, James A. Jarvis, John M. Strate

## Lecturer

Kenneth H. Hill

## 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 in students 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 192).

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively

**Major Requirements:** A political science major must satisfactorily complete at least thirty-two credits of course work in the department. For co-majors, a minimum of twenty-four credits is required. In both cases, 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.
4. A distribution of courses in political science that includes course work in at least *two* 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), 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.

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

## — Areas of Concentration

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 area or subfield. The following are areas 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 219, 311, 510, 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, and 522.

**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, 333, 343, 522, 591, 632, 634, and 635.

**Public Policy.** How policy is formulated, decided, implemented, and evaluated; moral and political standards for making policy. Relevant courses include: P S 241, 242, 333, 343, 446, 506, 522, 544, 549, 552, 581, 591, 632, and 643.

**Political Philosophy and Ethics.** The justification and application of ethical standards to politics; history and analysis of authority and rebellion, individualism and community, justice and equality; modern ideologies such as communism, socialism, liberalism, and conservatism. Relevant courses include: P S 242, 251, 351, 352, 557, 504, 551, and 522.

**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 446, 563, 632, 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 governmental and non-governmental organizations, regional organizations, and multi-national corporations; north-south relations and issues of development, imperialism, and dependency; 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 311, 510, 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 under conditions that approximate circumstances in public service careers. Students interested in this program should consult the political science undergraduate adviser as early as possible in their college careers. Ideally, students would 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 13. 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 192).

**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 bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 191) excepting the foreign language requirement, and the University General Education Requirements (see page 20), 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 20-31 and 191-203, 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.

**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 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 will take one sequence of courses in the fundamentals of policy analysis and public management and another sequence in research methods and techniques of data analysis.

	<i>credits</i>
<i>1. Fundamentals Sequence</i>	
P S 241 – Introduction to Public Policy .....	4
P S 242 – Ethics and Politics of Public Policy.....	4
<i>2. Techniques and Methods Sequence</i>	
P S 563 –Statistics and Data Analysis I .....	4
<i>The statistics course is prerequisite to:</i>	
P S 446 – Techniques of Policy Analysis.....	4

**Political Science Electives:** Students must take two additional political science courses (8 credits) selected from courses that may *not* be used 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 at least one area of concentration and should consult with the political science undergraduate adviser for specific information. Areas of Concentration include:

**Public Management:** The following are required for students choosing the Public Management concentration:

*Core Requirements (10-12 credits):* three courses selected from P S 231, 333, 612, and 632, 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 the disciplines of accounting, economics, business management, psychology and sociology.

**Public Policy Analysis:** The following are required for students in the Public Policy Analysis concentration:

*Core Requirements (10-12 credits):* three courses selected from among P S 303, 311, 333, 343, 506, 522, 544, 549, 643, 664; courses dealing with policy development, implementation, and evaluation.

*Cognate Courses (3-4 credits):* one course selected from social science offerings in the following fields: urban health and welfare policy; transportation and housing policy; environmental and population policy; labor policy; economic, business and consumer affairs regulation; and criminal justice.

### **Urban Policy and Management:**

*Core Requirements (12 credits):* Three courses (P S 224, 231, and 522) dealing with urban political systems, urban policy, and urban management.

*Cognate Course (3-4 credits):* One course selected from social science offerings in disciplines 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:

*Core Requirements (10-12 credits):* Three courses selected from P S 231, 311, 510, 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 social science offerings related to organizational and managerial behavior or management techniques and financial management chosen from the disciplines of accounting, economics, business management, psychology, or sociology.

**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 Advanced Honors Seminar—HON 420, 421, 422, or 423—offered by 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 Advanced Honors Seminar. 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.

## 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 591, Political Science Internship, a course that helps to assure the educational relevance of the internship by requiring interns to prepare seminar 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.

## 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.

## COURSES OF INSTRUCTION<sup>1</sup> (P S)

**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. (GEG 200) (HIS 200) (SOC 250). 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)

**201. Current Issues in American Politics. Cr. 2**  
Not for major credit. American political and public policy issues of current concern. (Y)

**202. Current Issues in American Foreign Policy. Cr. 2**  
Not for major credit. Crucial issues in current foreign policy. (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)

**219. Issues in the Constitution. Cr. 4**  
How recurring constitutional issues effect politics today. Topics include: the free press and national security; searches, seizures, and the exclusionary rule; presidential elections; affirmative action; the insanity defense. (B)

**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). 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. 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. (FC) 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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**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)

**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)

**371. Major European Democratic Systems: Great Britain and German Federal Republic. Cr. 4**

Government and politics of Great Britain and German Federal Republic. Political, social, economic, and cultural foundations of the systems; the structure and functions of institutions and political processes. (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. 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, impact of polycentrism, political institutions and processes of representative East European countries. (Y)

**478. Contemporary African Politics. Cr. 4**

Nature of African politics; impact of African politics on international relations. (B)

**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)
- 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)
- 504. American Political Reform Movements. Cr. 4**  
Socialism, communism, liberalism, feminism, and the black revolution, in terms of historical backgrounds, impact on the larger society, contemporary strengths, weaknesses and prospects. (B)
- 506. Comparative American State Politics and Policy. Cr. 4**  
Prereq: P S 101 or 103 or 207 or 306. 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**  
Prereq: P S 101 or 103. 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. (Y)
- 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. Political Economy of East Asia. 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)
- 591. Political Science Internship. (U S 602). 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)
- 599. Special Topics in Political Science. Cr. 1-4**  
Prereq: consent of chairperson or undergraduate adviser. Open only to juniors and seniors. Topics to be announced in *Schedule of Classes* (Y)
- 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)
- 632. Management Science in the Public Sector. Cr. 3**  
Prereq: P S 563. Introduction to the techniques of management science including linear programming, decision theory, queueing theory, and other methods designed to improve the quality of organizational performance with special attention paid to their usefulness in solving public management problems. (Y)

**634. Employee Relations in the Public Sector. Cr. 3**

Prereq: P S 231. Open only to seniors and graduate students. Examination of collective bargaining and public employee unionism in federal, state and local governments. (Y)

**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. (Y)

**664. Statistics and Data Analysis in Political Science II. Cr. 3**

Prereq: P S 663 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 discriminate function analysis. (Y)



# PSYCHOLOGY

*Office:* 71 W. Warren, Room 214

*Chairperson:* M. Marlyne Kilbey

*Associate Chairperson:* Alan R. Bass

*Administrative Assistant:* Imogene Angell

## *Professors*

Ernest L. Abel, Joel W. Ager, Sheldon Alexander, Lynn R. Anderson, David Asdourian, Alan R. Bass, Sandor B. Brent, C.G. Browne (Emeritus), Donald N. Elliott (Emeritus), Ira J. Firestone, LaMaurice H. Gardner, Kalman J. Kalplan, M. Marlyne Kilbey, Arthur Kornhauser (Emeritus), Gisela Labouvie-Vief, Sheldon J. Lachman, Sheldon G. Levy, Wilson McTeer (Emeritus), Hjalmar Rosen, Gerald Rosenbaum, Eli Saltz, Carolyn M. Shantz, Charles M. Solley, Ross Stagner (Emeritus), Laurence J. Stettner, Dalmás A. Taylor, John E. Teahan, Francine Wehmer, R. Douglas Whitman

## *Associate Professors*

Robert F. Berman, Kenneth S. Davidson, Joseph M. Fitzgerald, Winifred R. Fraser (Emeritus), S. Edson Haven (Emeritus), Rolando R. Henry, Joseph L. Jacobson, Melissa G. Kaplan, Cary M. Lichtman, Michael M. Reece (Emeritus), Annette U. Rickel, Patricia Siple, Rebecca A. Treiman, Jalie A. Tucker, Kathryn Urberg, Rudy E. Vuchinich, Glenn E. Weisfeld, Alice M. Young

## *Assistant Professors*

Leslie Isler, Hilary Ratner, Lois Tetrick

## *Lecturer*

Linda K. Forsberg

## *Research Scientist*

Sandra Jacobson

## *Research Associates*

Catalina Danis, Thomas Figurski, Susan Schantz, Gregory T. Smith, Jyotsna Vasudev

## *Adjunct Professors*

Kenneth M. Adams, Donald F. Caldwell, Samuel Gershon, Mark S. Goldman, Marvin Hyman, David Lachar, Donald W. Nielsen, Allen Raskin, Eli Z. Rubin

## *Adjunct Associate Professors*

Gregory Brown, Shirley I. Dobie, David Faigenbaum, Robert R. Freedman, Charles L. Gdowski, Alan G. Glaros, James L. Grisell, Valerie Klinge, Richard M. Lee, Helene Lycaki, Mark W. Shatz, Herbert Silverman, Michael K. Tanenhaus

## *Adjunct Assistant Professors*

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. Fruchtman, Manfred F. Greiffenstein, Melanie Hwalek, Joan Lessen-Firestone, Ronald F. Lewis, Ned Papania, Edward C. Podany, Arthur Robin, Daniel L. Rourke, Douglas L. Shore, Barry A. Tanner, Walter J. Zetusky

## 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, graduate 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 mental health or 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 departmental 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 include learning, perception, abnormal, social, developmental, psychological, and cognition 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 13.

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.

\* For specific requirements consult the Wayne State University Graduate School 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 191) and the University General Education Requirements (see page 20), 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 page 202, and the section on Bachelor's Degree Requirements, page 191.

**Major Requirements:** To graduate with a major in psychology, a student must complete satisfactorily at least thirty credits (and at least nine courses) in the department of psychology, in a sequence approved by the student's major adviser. Degree requirements include:

Psychology 101 ..... Introductory Psychology

*One laboratory course chosen from the following:*

Psychology 205 ..... Psychology of Perception

Psychology 207 ..... Psychology of Learning and Memory

Psychology 209 ..... Cognitive Processes: Language, Thinking & Problem Solving

*Three of the following six courses:*

Another (second) laboratory course from the selection listed above (PSY 205, 207, 209)

Psychology 240 ..... Developmental Psychology

Psychology 260 ..... Psychology of Social Behavior

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 191.

**The Bachelor of Science** degree requires a minimum of sixty credits in the natural sciences. Of these sixty credits a minimum of twenty-seven credits must be earned in natural science outside the field of psychology. The Liberal Arts 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 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 wish 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 wish 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 which provides an appropriate foundation for entry into this psychology program. See the general requirements for undergraduate admission to the University, page 13.

**DEGREE AND MAJOR REQUIREMENTS:** The Bachelor of Applied Studies in Psychology 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 20) and the

College Group Requirements (see page 191) 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 20-31 and 191-203, respectively. Further detailed information about this program is available from the undergraduate office of the Psychology Department.

*Major requirements, total thirty credits, as follows:*

Psychology 101 .....	Introductory Psychology
Psychology 331 .....	Abnormal Psychology
Psychology 338 .....	Human Sexuality
Psychology 405 .....	Introduction to Physiological Psychology
Psychology 535 .....	Assessment of Personality

*One laboratory course chosen from the following:*

Psychology 205 .....	Psychology of Perception
Psychology 207 .....	Psychology of Learning and Memory
Psychology 209 .....	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 Departmental 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**, providing smaller classes, somewhat more advanced readings, and opportunities for independent work by students are offered in the 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 a senior thesis is completed.

**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 402, 410, 240, 260, 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. *Industrial 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, 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. *Industrial employee assistance program workers* require knowledge which 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), 535 (personality), 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 335 (personality), 240 (developmental), 407 (drugs and behavior), 411 (psychological tests), 331 (abnormal), 437 (behavior modification), 528 (psychoanalytic theory), 535 (personality assessment), 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 for either employment at the bachelor's degree level, or 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

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 345 — 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 Psychology Courses of Instruction.

## 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:** A minor in psychology is offered for students majoring in other fields. The minor consists of a minimum of five courses totaling eighteen credits distributed as follows: Introductory Psychology (PSY 101); one basic Psychology laboratory course (PSY 205, 207, or 209); one additional core Psychology course (PSY 240, 260, 402, 405, 410, 505, or a second laboratory course from the previous group); and two courses selected in consultation with the Student's major adviser. Psychology courses that may not be included in the minimum eighteen credits are: PSY 490, 493, or 496.

**Non-majors** are encouraged to consult with departmental advisers regarding optimum course selections for various purposes.

## COURSES OF INSTRUCTION<sup>1</sup> (PSY)

### 101. (LS) Introductory Psychology. Cr. 4

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

Does not satisfy Liberal Arts Group Requirement. No credit after PSY 101. Research participation required. Introduction to the science of behavior. Principles, concepts, and theories of human thought and action; applications of psychological knowledge. (F,W)

### 205. 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)

### 207. 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)

### 209. Cognitive Processes: Language, Thinking and Problem Solving. (LIN 209). 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)

### 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)

### 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. 2

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)

### 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)

### 336. Racial and Cultural Factors in Human Psychology. Cr. 3

Prereq: PSY 101 or 102. Methods, problems, theories, and empirical data of psychology in the areas of ethnicity, race, and culture as these factors interact with personality development, cognition, pathology. (I)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

- 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. (Y)
- 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.
- 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.
- 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.
- 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)
- 401. Points of View in Modern Psychology. Cr. 3**  
Prereq: PSY 101 or 102. Major systems of psychology, including the influence of scientific thought from other disciplines and countries on models in psychology. (I)
- 402. Research in Psychology. Cr. 3**  
Prereq: PSY 101 or 102. Primarily for students interested in future graduate studies in planning and evaluation of psychological research. Critical evaluation of scientific literature and the planning and development of psychological research proposals. The range of research methods and areas in psychology. (T)
- 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)
- 461. Laboratory in Personality and Social Psychology. Cr. 3**  
Coreq: PSY 260. Field and laboratory studies investigating the impact of environments, groups and personality styles on social interaction. (I)
- 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 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)
- 497. Senior Honors Seminar. Cr. 3**  
Prereq: psychology honors major, junior or senior standing, 3.3 h.p.a. Design of senior thesis project. Investigation of contemporary research issues in various areas of psychology. (I)



**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. (I)

**499. Special Topics in Psychology. Cr. 3(Max. 3)**

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)

**535. Assessment of Personality. Cr. 3**

Prereq: PSY 101 or 102; 331. Background, development, and application of objective, projective, and behavioral techniques in the assessment of personality. (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)

**562. Psychology of Mass Behavior. Cr. 3**

Prereq: PSY 101 or 102. Psychological processes; emotion, motivation, cognition, leadership, communication, and behavioral contagion in the initiation and maintenance of mass behavior, including panics and riots, social and political movements. (I)

**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)

**564. Psychology of Attitudes and Interpersonal Attraction. Cr. 3**

Prereq: PSY 101 or 102. Nature and significance of attitudes, opinions, beliefs. Structure and functions of attitudes on methods of change. (I)

**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)

**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)

**606. Sensory Processes. Cr. 3**

Prereq: PSY 405 or 505 or written consent of instructor. Advanced study of physiological mechanisms and psychological processes involved in sensory and perceptual experiences; laboratory work. (I)

**609. Higher Mental Processes. Cr. 3**

Prereq: PSY 101 or 102. Distinctiveness of human thought processes considered from theoretical and experimental viewpoints. Comparative and developmental approach; focus on problems and issues. (I)

**610. Research Methods in Cognitive Psychology. (LIN 610). Cr. 3**

Prereq: written consent of instructor. Survey of research methods in cognitive psychology, emphasizing relationship to contemporary content and theory. Investigation of memory, language processing, perception, and attention. (I)

**616. Use of Computers in Psychological Research. Cr. 3**

Prereq: PSY 410. Computer applications in current psychological research. Not a course in computer programming; prior training recommended but not required. (I)

**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)

**643. Psychological Problems of Development in Childhood. Cr. 3**

Prereq: PSY 240. Introduction to the relation between normal and atypical development during childhood; common behavioral disorders, such as: aggression, anxiety, dependency, and school phobia. (I)

**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)

**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 AND GERMANIC LANGUAGES AND LITERATURES

Office: 487 Manoogian Hall

Chairperson: Richard Vernier

Academic Services Officer: Mary Hoffiz

## Professors

Vincent C. Almazan (Emeritus), Fernande Bassan, Henry N. Bershas (Emeritus), Manuela M. Cirre (Emeritus), Carl O. Colditz (Emeritus), Penrith B. Goff, Jacques L. Salvan (Emeritus), Marvin S. Schindler, E. Burrows Smith (Emeritus), Guy Stern, Richard Vernier

## Associate Professors

Vladimir Bezdek (Emeritus), Achim Bonawitz, Alfred Cobbs, Erhard Dabringhaus (Emeritus), Andrea di Tommaso, Uwe K. Faulhaber, Michael J. Giordano, Jesus Gutierrez, Donald P. Haase, Louise M. Jefferson, Louis Kibler, Charlotte Lemke (Emeritus), Jacqueline Morton, Hermann D. Poster (Emeritus), Hector R. Romero, Sol Rossman, Maria C. Roth, Gary E. Scavnicky, Donald E. Schurknight, Donald C. Spinelli, A. Monica Wagner

## Lecturer

Claude Astrachan

## Director of Foreign Language Laboratories

Farouk Alameddine

## Degree Programs

*Bachelor of Arts—with a major in French, German, Italian, or Spanish*

\* *Master of Arts—with a major in French, German, 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 13. 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 191) and the University General Education Requirements (see page 20), 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

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

and degrees; see pages 20-31 and 191-203, respectively.

## Major Requirements

All majors in the fields of German, 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 300.) 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 361, 362, 410, 510 or 540, 520, 640 and twelve credits in courses on the 600 level. Of these twelve credits, eight must be in literature of different periods.

A major in French language and culture must take French 361, 362, 410, 510, 520, 540, 571, 640, and 645.

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 German:** A major in German must take German 271 or 272, 310 and 304 or 320, 361, 362, 460, 510, and two courses in literature on the 600 level.

**Major Requirements in Italian:** A major in Italian must complete eleven courses including: Italian 310, 320, 360 and 361; 530; 661; 666 or 667; two courses in the post-Renaissance period; and two cognate courses required of all departmental majors.

**Major Requirements in Spanish:** A major in Spanish must take Spanish 361 and 362, 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, 410, 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, German, 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. Information regarding this curriculum is on page 199.

**Preparation for Careers in Business:** Foreign language majors who do not plan to teach may wish to consider a series of courses in the School of Business Administration which will provide some background for potential employment with multinational corporations. These courses will also prepare them for entrance into the Master of Business Administration degree program after completion of the B.A. For information, contact the Associate Dean of the School of Business Administration, 226 Prentiss Building, telephone: 577-4503.

## Honors in Romance and Germanic Languages

The Honors Program in Romance and Germanic languages is open to students of superior academic ability who are majoring in Romance and Germanic 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 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).

## Travel Study Programs

**Wayne at Gordes, France:** With the approval of the Department students may take credits in advanced French during an eight-week summer session in the Renaissance village of Gordes in the south of France. (See Study Abroad, page 201.)

**Junior Year in Munich or Freiburg:** With the approval of the department, majors may take their junior year abroad in either of the supervised intercollegiate junior year programs. (See Study Abroad, page 201.)

**Wayne at Bologna, Italy:** Beginners in Italian as well as advanced students may earn up to twelve credits during a six-week summer session in Bologna, Italy (see Study Abroad, page 201).

## Minors and Cognate Study

**Minor Requirements in French:** A French minor requires the completion of eighteen to nineteen credits in French courses including: 260, 271 or 571, 361 or 362, 410 and 510 or 520 or 540 or one course at the 600 level.

**Minor Requirements in German:** A German minor requires the completion of nineteen credits in German courses including: 202, 271 or 272, 310, 361 or 362, 410 and 510 or one course at the 600 level.

**Minor Requirements in Italian:** An Italian minor requires the completion of eighteen credits in Italian courses including: 202, 310 or 320, 360 or 361, 530 or 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, 410, 520, 530, 541, 640; (culture) 555, 556; (literature) 361, 362, 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 14.

**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.)

## Humanities Group Requirement

(See page 191.)

Two types of courses offered in the department satisfy the Humanities Group Requirement:

**Courses in English:** A variety of courses dealing with the culture, the literature, or the film of the French, German, Italian, and Spanish-speaking nations, conducted in English with all readings in English. These courses are open to all students with no prerequisites.

**Courses in the Foreign Language:** Literature courses in French, German, Italian, and Spanish with readings in the foreign language. Courses regularly open to freshmen and sophomores are numbered 202, 260, 360, 361, 362, and 460. Literature courses primarily designed for juniors and seniors are on the 600 level. See individual course listings for prerequisites.

## COURSES OF INSTRUCTION<sup>1</sup>

### —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. (ITA 270) (PL) Anguish and Commitment: European Existentialist Literature. (SPA 270) (GER 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, Rilke, Kafka, Moravia, Sartre and Camus. (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. (F)

**272. 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)

**290. Studies in French Literature. Cr. 3(Max. 9)**

Individual themes, critical issues, special problems, or trends in French literature. Topics to be announced in *Schedule of Classes*. (I)

**691. Contemporary French Criticism. Cr. 4**

Theory and practice of contemporary French criticism; structuralist and post-structuralist works: Barthes, Todorov, and Derrida. French majors required to do readings in French. (I)

#### German in English Translation (GER)

**170. Introduction to Norse Mythology. Cr. 3**

Typical myths and their relation to the religion, customs, ethics, art, and literature of the Germanic tribes to the end of the Viking Age. (Y)

**270. (ITA 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, Rilke, Kafka, Moravia, Sartre and Camus. (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)

#### Italian in English Translation (ITA)

**270. (PL) Anguish and Commitment: European Existentialist Literature. (SPA 270) (FRE 270) (GER 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, Rilke, Kafka, Moravia, Sartre, Camus, Unamuno, Mallea and Lispector. (B)

**315. Aspects of Italian Cinema. Cr. 3(Max. 6)**

Material fee as indicated in *Schedule of Classes*. Major developments in the Italian cinema from the origins to the present. Knowledge of Italian not required. Topics to be announced in *Schedule of Classes*. (I)

**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)

<sup>1</sup> See page xxx for interpretation of numbering system, signs and abbreviations.

## 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. (ITA 270) (PL) Anguish and Commitment: European Existentialist Literature. (FRE 270) (GER 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, Rilke, Kafka, Moravia, Sartre and Camus. (B)
- 290. Studies in Spanish Literature. Cr. 3(Max. 9)**  
Period, genre, or topic to be announced in *Schedule of Classes*. (I)
- 291. Spanish American Literature and Culture. (CBS 291) (BKS 291). Cr. 3(Max. 9)**  
Genres, writers, themes, trends. Topics to be announced in *Schedule of Classes*. (I)

## 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)
- 208. Informal French Conversation. Cr. 2 (Max. 4)**  
Offered for S and U grades only. Does not count toward fulfillment of foreign language group requirement. No credit for French majors. Informal conversation. (I)
- 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 to 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 or 310. Discussion and composition based on readings in contemporary French social and cultural topics. (Y)
- 510. Advanced Speaking and Writing. Cr. 4**  
Prereq: FRE 310 or equiv. or consent of instructor. Spoken French in the context of French civilization. Readings and writing skills based on contemporary French texts, translations. (B)
- 520. Language Skills: Phonetics and Diction. Cr. 3**  
Prereq: FRE 310 or equiv. 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 310. 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 310 or consent of instructor. Advanced French grammar. Translation exercises from English to French; study of appropriate grammar rules. (B)
- 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 310. 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)
- 651. French Sixteenth Century Literature. Cr. 4(Max. 8)**  
Prereq: FRE 361. Study of the literary trends of the Renaissance: Marot, Scève, Labe, Du Bellay, Ronsard, D'Aubigne, Montaigne and others. Content will vary to cover a genre, literary movement, literary school, or period. Topics to be announced in *Schedule of Classes*. (B)
- 663. French Seventeenth Century Literature. Cr. 4(Max. 8)**  
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(Max. 8)**  
Prereq: FRE 362. 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, Culture, and Language. Cr. 3 (Max. 6)**

Prereq: FRE 362. In-depth study of an author, a literary movement, or aspects of French culture and language. Topics to be announced in *Schedule of Classes*.

**681. French Nineteenth Century Literature. Cr. 4(Max. 8)**

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)

**683. French Lyric Poetry. Cr. 4**

Prereq: FRE 362. The development of the lyric genre, from the origin of its formal conventions to modern challenges to the tradition. Emphasis on oral interpretation and textual analysis of poetry from Baudelaire to the present. (I)

**684. French Twentieth Century Literature. Cr. 4(Max. 8)**

Prereq: FRE 362. Novel and drama, literary movements and representative authors from the turn of the century to the present: Proust to Le Clezio; Jarry to Tardieu. Course content will cover a genre or literary movement, school or period. Topics will be announced in the *Schedule of Classes*. (B)

**686. Francophone Literature. 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)

**692. French Bibliography, Research Methods, and Theory of Literature. Cr. 4**

Prereq: two 600-level French literature courses. Open only to seniors and graduate students. Initiation to French bibliographical tools and their usage in research. Methodology for papers, essays, and dissertations. Explication de textes. Theory of literature. (B)

**90. 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)

## 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)

**208. Informal German Conversation. Cr. 2 (Max. 4)**

Prereq: GER 101 or equiv. Offered for S and U grades only. (I)

**304. Business German. Cr. 4**

Prereq: GER 201. Readings from German business communications and publications; German business correspondence. (B)

**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)

**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)

**500. Minor Language Practicum. Cr. 3(Max. 9)**

Prereq: consent of graduate adviser. Offered for S and U grades only. No Ph.D. degree credit. Controlled application of active language skills for students electing a Ph.D. minor in German. (T)

**590. Directed Study. Cr. 1-4(Max. 8)**

Undergrad. prereq: consent of German adviser; grad. prereq: consent of German 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 modern prose. (T)

**201. (FC) Intermediate Italian. Cr. 4**

Prereq: ITA 102 or placement. Material fee as indicated in *Schedule of Classes*. Grammar review, composition, conversation, reading, discussion of contemporary Italian culture. (T)

**202. Intermediate Italian. Cr. 4**

Prereq: ITA 201 or placement. Continuation of ITA 201 with readings in modern Italian literature and culture. (T)

**310. Italian Conversation. Cr. 3**

Prereq: ITA 202 or placement. Conversation based on current topics and reading materials. (T)

**320. Italian Grammar and Composition. Cr. 3**

Prereq: ITA 202 or placement. Advanced study of Italian grammar, phonetics, and syntax. Practice in writing themes and translations. (T)

**360. Masterpieces of Italian Literature I. Cr. 4**

Prereq: ITA 202 or consent of department. Representative works or selections from the writings of the major authors from the thirteenth through seventeenth centuries. (F)

**361. Masterpieces of Italian Literature II. Cr. 4**

Prereq: ITA 202 or consent of department. Representative works or selections from the writings of the major authors from the eighteenth through twentieth centuries. (W)

**392. Aspects of Contemporary Italian Culture. Cr. 3**

Prereq: ITA 310 or consent of department. Examination of current Italian literature and the reasons for its native popularity. Taught only at the Wayne State University summer program in Italy. (I)

**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)

**666. Studies in Renaissance Literature. Cr. 4(Max. 12)**

Prereq: ITA 360 or consent of instructor. The major contributions of the Italian Renaissance, including the epic poetry of Boiardo, Pulci, Ariosto, and Tasso; the *Novellieri*; and the lyric poets from Petrarch to Marino. 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)

**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)

**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)

**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)

**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)

**410. 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)
- 430. Approaches in Spanish Translation I. Cr. 3**  
Prereq: SPA 310. General aspects of techniques of translation of non-literary and technical materials selected from Spanish and English newspapers, periodicals and books. (I)
- 520. Spanish Phonetics. Cr. 3**  
Prereq: SPA 310 or consent of instructor. A systematic study of Spanish sounds; intensive drill in accurate pronunciation. (B)
- 530. Advanced Grammar and Stylistics. Cr. 3**  
Prereq: SPA 410 or placement. Intensive study of grammar and syntax. Translation of literary texts into Spanish. Free composition and conversation. Conducted in Spanish. (B)
- 541. Chicano, Cuban, and Puerto Rican Spanish. (CBS 541). Cr. 3**  
Prereq: SPA 202. Practical linguistic description of the Chicano, Cuban, and Puerto Rican varieties of Latin-American 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)
- 642. Spanish Literature of the Renaissance. Cr. 4**  
Prereq: SPA 361, 362. Literary genres of the sixteenth century (poetry and narrative: picaresque, pastoral, morisco, and chivalric). (Formerly SPA 651.) (B)
- 643. Spanish Literature of the Baroque Period. Cr. 4**  
Prereq: SPA 361, 362. Great poets of the Spanish seventeenth century: Lope de Vega, Gongora, Quevedo; as well as the prose of Quevedo and Gracian. Literary selections studied within the unique cultural climate of the Spanish Baroque. (Formerly SPA 651.) (B)
- 644. Spanish Literature of the Eighteenth Century. Cr. 4**  
Prereq: SPA 361, 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, 362. Origins and development of Romanticism in Spain: theatre, poetry, costumbrismo, and novel. (Formerly SPA 652.) (B)
- 646. The Spanish Novel of the Nineteenth Century. Cr. 4**  
Prereq: SPA 361, 362. Representative works of the Realist and Naturalist movements. (Formerly SPA 693.) (B)
- 647. The Spanish Novel of the Twentieth Century. Cr. 4**  
Prereq: SPA 361, 362. Novelists of the Generation of 1898, and representative authors before and after the Civil War; includes such trends as Trementismo, Social Realism, and the contemporary experimental novel. (Formerly SPA 693.) (B)
- 649. Spanish Poetry of the Nineteenth and Twentieth Centuries. Cr. 4**  
Prereq: SPA 361 and 362. Representative figures and trends in Modern and contemporary Spanish poetry. Post-Romantics, Symbolists, the Generations of 1898 and 1927, and the more contemporary poets. (B)
- 656. Cervantes. Cr. 4**  
Prereq: SPA 361 and 362. A detailed study of *Don Quijote*. Other short works of Cervantes. (B)
- 657. The Comedia. Cr. 4**  
Prereq: SPA 361 and 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 or 362. 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. 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)
- 662. The Spanish American Novel II. Cr. 4**  
Prereq: SPA 361, 362. Roots of the modern novel in Spanish America; its stages of evolution through the vanguard period into the contemporary stage, with emphasis on representative figures such as Carpentier, Cortazar, and Garcia Marquez. (Formerly SPA 686.) (B)
- 663. Spanish American Poetry. Cr. 4**  
Prereq: SPA 361, 362. Major poets and their texts from the period of Independence through the early stages of Modernism, Modernism and Vanguard, to contemporary poetry. (B)
- 669. Genres and Topics in Spanish American Literature. Cr. 4**  
Prereq: SPA 361 or 362. Topics in the literature of Latin America, such as the short story or theatre, to be announced in *Schedule of Classes*. (B)
- 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.
- 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)



# SLAVIC AND EASTERN LANGUAGES AND LITERATURES

Office: 443 Manoogian Hall

Chairperson: Frank J. Corliss, Jr.

## Professor

Edmund Ordon (Emeritus)

## Associate Professors

Kenneth Brostrom, Doris V. Johnson

## Assistant Professor

Frank J. Corliss, Jr.

## Lecturers

Vera Andrushkiw, Dickran Toumajan

## Degree Programs

*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 East European studies*

\* *Master of Arts— with a major in Russian*

## Bachelor of Arts Degrees

**Admission Requirements** for these programs are satisfied by the general requirements for undergraduate admission to the University; see page 13.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively.

### — Major Requirements

**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:

(a) Polish 302, 346, and 445.

(b) Polish 460, 570, and 590. 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 credits in Russian beyond Russian 201 including: Russian 245, 302, 303, 380, 409, 410, 445, 460, 560.

**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.

All majors are strongly urged to elect courses in cognate fields, such as geography, history, or political science.

## Minors and Cognate Study

**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), 570 (one section) or 310.

**Minor in Russian:** Students wishing to obtain a minor in Russian are required to complete seventeen credits in Russian *beyond* Russian 202. These credits must include: Russian 245, 302, 303, 445, 460 or 560, and 551.

## 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 must take a placement test before registering. Examinations are given by appointment at 443 Manoogian Hall.

## Honors in Slavic and Eastern Languages and Literatures

The Honors Program in Slavic and Eastern Languages and Literatures is open to students of superior academic ability who are majoring in Slavic and eastern languages and literatures. 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).

## Travel Study Program

**Summer Study in Poland:** Nine scholarships are available each year to registered students at Wayne State for a six-week summer course of Polish language, literature, history, and culture at the Jagiellonian University, Krakow, Poland. Preference is given to students of Polish and/or students with a demonstrated interest in Eastern European

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

affairs. Students not granted scholarships may participate in this program at their own expense under the auspices of Wayne State University. Inquiries may be made at the Slavic Department office.

## COURSES OF INSTRUCTION<sup>1</sup>

### —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 in English Translation (ARM)

**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. 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)

#### Polish in English Translation (POL)

**275. Survey of Polish Literature in Translation. Cr. 3**

Survey of Polish literature from the Renaissance to the modern period. (B)

**310. Polish Folklore in Translation. Cr. 3**

Folklore of various regions in Poland, customs and ceremonies relating to seasons of the year and holidays; folk tales, proverbs, dance and songs. (I)

#### Russian in English Translation (RUS)

**270. (ITA 270) (PL) Anguish and Commitment: European Existentialist Literature. (SPA 270) (FRE 270) (GER 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, Rilke, Kafka, Moravia, Sartre, Camus, Unamuno, Mallea and Lispector. (W)

**351. (FC) Study of Russian Culture. Cr. 3**

Basic features of Russia's cultural heritage. Specific characteristics of the developments and interconnections of institutional forms of oral and written literature and arts. (Y)

**365. (PL) Soviet Literature in Translation. Cr. 3**

Russian literature in Soviet period. (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)

**465. (PL) Survey of Nineteenth Century Russian Literature: in Translation. Cr. 3**

Literature of nineteenth century; special attention to major writers. (F)

## 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. 8)**

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)

### 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)

<sup>1</sup> See page xxx for interpretation of numbering system, signs and abbreviations.

**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. 8)**  
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)

## 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. 3**  
Prereq: RUS 201 or equiv. Structural features not mastered in beginning courses. Extends mastery of written and spoken Russian. (W)

**251. Contemporary Russian Culture and Life. Cr. 2**  
Contemporary life in the Soviet Union against the background of Russia's ancient culture. (I)

**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)

**380. Introduction to Russian Literature. Cr. 2**  
Prereq: RUS 201 or equiv. Introduction to the major genres. Various critical approaches leading to the development of techniques of analysis. (F)

**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. 2**  
Prereq: RUS 245 or consent of instructor. Intensive practical training in use of Russian idiom to achieve fluency of expression. (W)

**460. Survey of Nineteenth Century Russian Literature. Cr. 3**  
Prereq: RUS 380 or consent of instructor. From precursors of Pushkin to Chekhov's death. (F)

**560. Survey of Twentieth Century Russian Literature. Cr. 3**  
Prereq: RUS 380 or consent of instructor. Russian pre-revolutionary and Soviet literature, 1890 to the present. (W)

**590. Directed Study. Cr. 1-3(Max. 8)**  
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)

## Slavic (SLA)

**120. (CLA 120) Preparation for Foreign Language Study. Cr. 4**  
A survey of the grammatical concepts and terminology necessary for the effective study of a foreign language. For students who anticipate or are having difficulties with foreign language study. Not for foreign language credit. (I)

**391. Foreign Language Service Practicum. Cr. 2(Max. 4)**  
Prereq: oral and written proficiency in Slavic language and consent of program director. Weekly visits to foreign-born residents of nursing homes to use foreign language, gather life histories and serve as translators. (T)

**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)

**692. Selected Topics in Slavic Studies. Cr. 3(Max. 9)**  
Topics to be announced in *Schedule of Classes*. (I)

## 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)

**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. 8)**

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)



# SOCIOLOGY

Office: 756 Mackenzie Hall

Chairperson: Mary C. Sengstock

## Professors

Joseph Albin, J. Ross Eshleman, Mel J. Ravitz, Raye A. Rosen (Emeritus), Mary C. Sengstock, Leon H. Warshay, Eleanor P. Wolf (Emeritus)

## Associate Professors

Clifford J. Clarke, Edmund G. Doherty, Thomas J. Duggan, Marshall J. Graney, V. Lee Hamilton, Robert F. Kelly, Mary J. Van Meter, Rhonda Montgomery

## Assistant Professors

Israel L. Barak-Glantz, Robert G. Newby

## Degree Programs

*Bachelor of Arts—with a major in sociology*

*Bachelor of Arts—with a major in anthropology and sociology*

*Bachelor of Applied Studies— with a major in sociology*

\* *Master of Arts—with a major in sociology*

\* *Doctor of Philosophy—with a major in sociology*

The courses in sociology are designed for various groups of students: (1) those desiring scientific knowledge of social relationships as a part of their general education; (2) those planning to enter a public service profession such as social and urban planning, public administration, nursing, medicine, dentistry, or law; (3) those expecting to engage in work that will require a broad grasp of the nature of society, of public opinion, and of social change such as public affairs, journalism, public relations, communications, marketing, etc.; (4) those anticipating a career in social and statistical research and planning; (5) those looking forward to the teaching of social studies and sociology; (6) those preparing for a career in international studies or for service in foreign affairs; (7) those majoring in sociology as a preparation for graduate professional training in social work; (8) those planning to pursue graduate studies in sociology.

Students concerned with sociology as preparations for these careers are encouraged to consult with the undergraduate adviser and with members of the faculty.

## Bachelor of Arts

**Admission Requirements** for these programs are satisfied by the general requirements for undergraduate admission to the University; see page 13.

**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 191) and the University General Education Requirements (see page 20), as well as

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

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 20-31 and 191-203, 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, 519, 520, 535, 537, 617, 631, 638, 639; Economics 102; Geography 520, 565, 613, 624; History 105, 120, 190, 204, 205, 513; Political Science 231, 251, 343, 482; Psychology 230, 331, 401, 535, 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, 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, 570; 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 13.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, 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, 583, 585, or 586);  
Cultural diversity (SOC 533, 550, 557, or 558);  
Family and Sex Roles (SOC 446, 540, 541, 545, or 546);  
Social Institutions and Social Structure (SOC 335, 536, 562, 563, 570, or 581);  
Special Problems (SOC 576, or 587).

In consultation with their advisers, students should select courses which relate to their areas of specialization in the human services field. Students may not elect more than forty-five credits in course work within the Department.

**Cognate Requirements:** Students are required to take courses in three additional areas which will enhance their management and organizational skills. These courses include: computer applications (SOC 422\* or equivalent); management skills (SOC 562101, PSY 350, or P S 231); statistics (SOC 628101 or equivalent).

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. Honors 420, 421, 422, or 423, offered by the College of Liberal Arts Honors Program; 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).

## 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	Understanding Human Society
SOC 330	Social Structure and Social Institutions
SOC 405	Basic Sociological Theory
SOC 410	Social Psychology
SOC 420	Methods of Sociological 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.

\* Sociology courses used to satisfy these management and organization skills requirements may also be counted toward the major.

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), 562 (Social Aspects in Industry), 563 (American Labor: Blue Collar, White Collar), or 660 (Economic Sociology).

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), 557 (Race Relations in Urban Society), or 570 (Inequality and Social Class).

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), 583 (Juvenile Delinquency), 585 (Social Organization of Correctional/ Penal Institutions), 586 (Sociology and Social Psychology of Confinement), 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).

## COURSES OF INSTRUCTION<sup>1</sup> (SOC)

### **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) (HIS 200) (P S 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)

### **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. 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. 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)

### **422. Computing Applications for the Social Sciences. Cr. 4**

Prereq: introductory level course in one of the social sciences.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

Fundamentals underlying application of computers in conducting social research: computer-aided statistical analysis, introduction to word processing, report writing, text editing, and software packages for the management of data sets and the calculation of statistics. (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. (U P 521). Cr. 3**

Examination of the development and organization of urban living as it emerged from village to city to metropolitan regions. Consideration given to such topics as the causes of urbanization and its consequences for the ecological and social structure of the city, intergroup relations, crime and poverty in the city. (Y)

**554. (ANT 506) Urban Anthropology. Cr. 3**

Prereq: ANT 210 or consent of instructor. Socio-cultural effects of urbanization in the developing areas of the world, particularly Africa, Latin America, Southeast Asia and India. The process of urbanization. The anthropological approach in the area of urban

studies. (I)

**555. Collective Behavior: Masses, Mobs, and Social Realities. Cr. 3**

Analysis of the change process through efforts of organized groups, crowds, mobs, riots, social reform efforts, revolutions. Examination of forms of social contagion including fads, rumors, manias. Emphasis on contemporary social movements. (I)

**557. Race Relations in Urban Society. Cr. 3**

Theoretical orientations applied analytically to enhance an understanding of the patterned structures of privilege in society which are based on race. Inequality, segregation-desegregation, pluralism; social structural frameworks; some attention to social-psychological aspects of topics such as prejudice and racism. (I)

**558. Ethnic Groups in Urban America. Cr. 3**

Immigrants and their descendants in United States society. Problems of immigrants in American life, the processes and theories of adjustment and assimilation. Designed for students who may work with persons of variant ethnic backgrounds: health personnel, teachers, social workers, as well as sociology majors. (I)

**562. Social Aspects in Industry. Cr. 3**

The conditions and consequences of industrialization on the organization of work. Topics may include structural patterns in industry, inter-industry comparisons, cross-cultural comparisons, the automobile industry as a special case. (I)

**563. American Labor: Blue Collar, White Collar. Cr. 3**

Theory of working class organization. History of the development of industrial working organizations; unions and bureaucracy; white collar unionism; perspectives for the future of American unionism. (I)

**570. Inequality and Social Class. Cr. 3**

Analysis of the inequalities in societies, the United States and others. Causes of social class differences; varying structures of stratification; consequences for the individual, ethnic groups, political power; the conditions under which mobility occurs. (I)

**576. Society and Aging. Cr. 3**

Personal, interpersonal and institutional significance of aging and age categories. Sociological dimensions of aging based on physical, social-psychological, and demographic backgrounds. (Y)

**581. Law in Human Society. (CRJ 581). Cr. 3**

Law and the legal structure in its social context. The development, enforcement and interpretation of law; emphasis on the American system of government. Reciprocal effects of law and the society in which it develops; comparative analysis. Designed for pre-law, criminal justice, and political science students, as well as for sociology majors. (Y)

**583. Juvenile Delinquency. Cr. 3**

Nature, incidence, causes, treatment, prevention and control of juvenile delinquency. The juvenile justice system as distinguished from the criminal justice system. (Y)

**585. Social Organization of Correctional/Penal Institutions. Cr. 3**

Field trips to prisons may be required. Survey of theory, research and practice in the field of the social organization of penal institutions: prison organization and the prison subculture. (Y)

**586. Sociology and Social Psychology of Confinement. Cr. 3**

Prereq: consent of instructor. Survey of theory, research and practice in confinement in correctional and mental institutions. Impact of confinement upon the individual personality; his ability to function as member of society. Divergent policies and their implications. (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)

**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)

**637. Sociology of Knowledge. Cr. 3**

Socio-cultural conditions underlying human knowledge and its employment. Foundations of myth, ideals, ideologies; other ways of thought in the social process. Significant contributors to the field. (I)

**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. 4**

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)

**655. Dynamics of Urban Social Action. (U P 645). Cr. 3**

The nature and forms of social action. Practical examples of organization and planning; uses of power, non-violence, violence and relationships of these actions to achieving social change. (I)

**658. Introduction to Applied Sociology I. Cr. 2**

Prereq: graduate students or advanced social science undergraduates. The logic of applied sociological analysis, policy research design and ethical issues characteristic of applied sociology. (Y)

**659. Introduction to Applied Sociology II. Cr. 2**

Prereq: graduate students or advanced social science undergraduates. Continuation of SOC 658. Critical examination of a series of applied social research projects, and of the contributions of allied social sciences and professions such as anthropology, economics, political science, and law. Development of writing skills for policy makers; project in applied sociology. (Y)

**660. Economic Sociology. Cr. 3**

Analysis of economic systems, their development and processes. The corporation as an institution and its growth and influence in the total society. Relationship between economic structure, social class and social change. (I)

**677. Sociology and Institutional Care. Cr. 3**

Converging issues of theory, research and practice in general hospitals, mental hospitals, and nursing homes. Ecology of institutions and the adaptation of individuals within them. (I)

**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)



# SPEECH COMMUNICATION AND JOURNALISM

Office: 585 Manoogian Hall  
Chairman: Edward J. Pappas  
Academic Services Officer: Victoria Dallas

## Professors

Eugene H. Bahn (Emeritus), George V. Bohman (Emeritus), Bernard I. Brock, William R. Leith, Leonard Leone (Distinguished Emeritus), Edward J. Pappas, Raymond S. Ross (Emeritus), Geneva Smitherman, George W. Ziegelmüller

## Associate Professors

Lynn S. Bliss, William A. Boyce, Mervyn L. Falk, J. Daniel Logan (Emeritus), James S. Measell, Larry Miller, Lawrence Silverman (Emeritus), John W. Spalding, Jack W. Warfield (Emeritus)

## Assistant Professors

Dorothy E. Dreyer, Matthew W. Seeger, J.P. Williams

## Lecturers

John Buckstaff, Darryl Fox, Anita Lienert, Kristine V. Sbaschnig, Ruth Seymour, Robert Steele

## Adjunct Faculty

Herbert J. Bloom, Richard M. Cole, Richard Frankel, Donald I. Kapetansky

## Cooperating Faculty, Department of Audiology, School of Medicine

Doris V. Allen, George F. Lynn, William F. Rintelmann, Dale O. Robinson

## 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 and television*

*\* Master of Arts — with a major in speech communication and emphasis in public relations and organizational communication; radio-television-film; speech-language pathology; communication disorders and sciences; audiology; oral interpretation; speech communication education; or general speech.*

*\* Doctor of Philosophy — with a major in speech communication and emphases in communication and rhetorical process; radio-television-film;*

*communication disorders and sciences; audiology; oral interpretation; or general speech.*

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 public and private organizations; industrial relations; government; sales and personnel; community and public relations; radio, television, film and journalism; speech pathology; and teaching.

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 Wayne State University Speech, Hearing and Language Association, and the Public Relations Student Society of America.

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.

## Bachelor of Arts Degrees

**Admission Requirements** are satisfied by the general requirements for undergraduate admission to the University; see page 13.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 191-203, respectively.

It is expected that 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. A proper distribution of courses approved by the student's adviser is important. It is desirable that students intending to major in speech communication begin their work in the Department in their freshman year. Courses in the major or specialization 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.

## — 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:** 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 of general speech 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

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

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, SPO 204 and SPO 250.

A minimum of thirty credits, in addition to the fifteen 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: SPD 530, SPE 606, SPE 607, SPR 201, SPT 203 and SPT 207.

In addition, 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. Communication Disorders and Sciences (Speech and Language Pathology) (SPD):** Undergraduate majors in this specialization should note that a master's degree is required for clinical certification by the American Speech-Language-Hearing Association. Study in this major field at the undergraduate level is considered to be pre-professional; it includes the following *required* courses for a Bachelor of Arts: SPD 508, SPD 509, SPD 514, SPD 530, SPD 531, SPD 532, SPD 536, SPD 638, SPD 660, SPD 661, SPD 662, SPD 664, SPM 540, SPM 542 and SPM 544.

Liberal Arts majors will also need to elect SPB 101 and complete all liberal arts group requirements (see page 20). The student in speech pathology also has the option of working towards the Bachelor of Science degree granted by the College of Education. It is recommended that the Michigan Teaching Certificate be earned at the undergraduate level, although certification is not granted until completion of work for the Master's Degree, which is required before clinical certification is awarded. Transfer into the College of Education is normally at the beginning of the junior year.

An adviser in the College of Education should be consulted early in the student's program so that course work is taken in the proper sequence for both the B.S.Ed. degree and the Michigan Teaching Certificate. The College of Education also requires a *planned minor* elected in consultation with an adviser in the College of Education. Speech Pathology majors in the College of Education are required to take SPD 632 (SED 632), Organization and Methods in Speech Pathology, 3 credits. Direct inquiries to 555 Manoogian Hall (577-3337).

**4. 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 in this area: SPO 505, SPO 550, 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, and mass communication (broadcasting or film studies). Direct inquiries to 585 Manoogian Hall (577-2943).

## — With a Major in Journalism

**Major Requirements:** Journalism majors must choose one of the following sequences: Advertising, Broadcast Journalism or News Editorial. An advanced English writing course is required, such as ENG 301. Journalism majors must have at least a 'C' average in their sequence courses to graduate. In addition, a journalism adviser must be consulted for verification of requirements which go beyond the college's requirements, such as additional course work in the social sciences and literature.

1. *Advertising sequence:* Majors electing this sequence must take: SPR 201; SPJ 210, 321, 502; MKT 530, 549, 550, and 551.

2. *Broadcast Journalism sequence:* Majors electing this sequence must take: SPR 201, SPJ 210, SPJ 321, SPJ 341, SPJ 470, SPJ 502, SPR 531 and SPR 541.

3. *News-Editorial sequence:* Majors electing this sequence must take: SPR 201; SPJ 210, 211, 321, 322, 500 and 502; plus two of the following: SPJ 228, 446, 470, or 521.

**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 communications. 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, 163 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, 163 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, 216, 321; SPC 210, 216, 321, 325; SPR 201, 221.

**Cognates:** Recommended electives include an internship (SPJ 400 or SPC 619), as well as courses in Journalism (SPJ 200, 228, and 446) and Communication and Rhetorical Processes (SPC 220, 520, 521). An adviser should be consulted early in the student's program. Direct inquiries to 531 Manoogian Hall (577-2946).

## — Major in Radio and Television

Undergraduate majors in this program must elect SPR 201, 211, 221, 301, 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, plus an additional twelve credits in electives above the College Group Requirements in social science and/or humanities. 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 communication and rhetorical processes. 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, SPC 521 and HON 420, 421, 422, or 423. 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.

## 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.

### Minors in Speech Communication:

*Communication and Rhetorical Processes:* A minor in this area requires: SPB 101; SPC 210, 216, 220, 321 and one additional SPC course selected in consultation with an adviser in the area.

*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 211, 228, 322, 341, 400, 446, 470, or 521.

### Minor in Radio and Television:

*Broadcasting:* A minor in this area requires: SPR 201, SPR 301 and 10 credits elected from among the following courses: SPR 211, 221, 531, 540, 541 or 551.

## COURSES OF INSTRUCTION<sup>1</sup>

### 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)

### Communication, Rhetoric And Public Address (SPC)

#### 210. Persuasive Speaking. Cr. 3

Prereq: SPB 200. 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. (Y)

#### 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. (Y)

#### 219. (PL) Rhetoric in Western Thought. Cr. 3

Prereq: sophomore standing, SPB 200. 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

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

consent of instructor. Training and participation in debate and contest speaking. (T)

**310. Business and Professional Speaking. Cr. 4**

Prereq: SPB 200. Review and practice of the various communication forms used in modern organizations. Topics include: theories of management, communication networks, interpersonal communication, small group processes, public speaking, proposal presentations, communication change, and parliamentary procedure. (Y)

**317. Fundamentals of Public Relations. Cr. 4**

Prereq: SPB 200 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. (Y)

**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. (Y)

**501. Psychology of Human Communication. Cr. 3**

Prereq: SPB 200 or equiv. Basic psychological principles as applied to human and interpersonal communication: process nature, emotion, motivation, language and personality. (I)

**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 200, 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)

## Communication Disorders And Sciences (SPD)

**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)

**508. Phonetics. (SED 532). Cr. 3**

Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesio logic 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: SPD 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. (F)

**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: SPD 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 (Max. 8)**

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)

**632. Organization and Methods in Speech Pathology. (SED 632). Cr. 3**

Class organization, management, material, teaching aids, techniques. (I)

**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)

**638. Diagnostic Tests in Communication Disorders. (SED 638). Cr. 3**

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

**660. Introduction to Articulation Disorders. (SED 660). Cr. 3**

Prereq: SPD 530. Introduction to basic concepts related to acquisition and manifestations of articulation disorders in children and adults. (F)

**661. Introduction to Stuttering. (SED 661). Cr. 3**

Prereq: SPD 530. Introduction to basic concepts related to acquisition and manifestations of stuttering disorders in children and adults. (F)

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

Prereq: SPD 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. (W)

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

Prereq: SPD 530 and 532. Descriptions, etiology, methods of diagnosis of language disorders in children. (F.S)

## 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: SPR 221 or FLM 201. Material fee as indicated in *Schedule of Classes*. Experience with the preparation, shooting and editing of video projects in film-style production. (T)

**543. Film Production I. Cr. 4**

Prereq: junior standing or above. Introduction to principles of cinematography (including cameras, lenses, film stock, pictorial composition, and lighting) and editing (including screen continuity and sound interlock); projects utilize Super 8mm and 16mm equipment. (I)

**544. Film Production II. Cr. 4**

Prereq: SPF 540. Continuation of SPF 543. All aspects of sound motion picture production including emphasis on scripting, budgeting, shooting and direction, post-production, sound mixing and AB roll editing. (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: ENG 301; sophomore standing; basic typing skills. Basic reporting: getting the facts and writing them well. Journalism skills course. (T)

**211. Investigative Reporting. Cr. 4**

Prereq: SPJ 210 with grade of C or better. Emphasis on gathering and reporting news. (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. 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, 211, 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)
- 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)
- 521. Newsletters and Corporate Publications. Cr. 3**  
Prereq: SPJ 321. Editing journalism newsletter; field trips to area magazines; editing internal publications. Journalism skills course. (T)

## 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)
- 544. Practicum in Audiology. (AUD 544) (SED 541). (Lab: 6). Cr. 1**  
Prereq: SPM 540. Material fee as indicated in *Schedule of Classes*. Supervised training and practice for clinical certification; not open for credit to graduate students in audiology. (I)
- 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)
- 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. 4**  
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. 4**  
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)

## 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. (Y)
- 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. (Y)
- 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)
- 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 Interpreter's Theatre productions and Readers' Bureau programs. (Y)
- 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)

### 221. 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)

### 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)

### 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; junior standing or above. 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 221 or SPF 201. 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 I. Cr. 4

Prereq: SPR 211; 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. Television Production II. Cr. 4

Prereq: SPR 541; junior standing or above. Material fee as indicated in *Schedule of Classes*. Continuation of SPR 541. Emphasis on the organization and execution of the television studio director's tasks. (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 in Electronic Media. Cr. 3

Prereq: SPR 201; junior standing or above. Theory and application of quantitative research techniques in surveying audiences for electronic media. (B)

### 555. Broadcast Management. Cr. 3

Prereq: SPR 201; junior standing or above. Principles of radio and television management; objectives, procedures and policies in radio and television station development and operation. Discussions with management executives. Market 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. Individual Projects and Internships in Radio-Television-Film. Cr. 1-4(Max. 8)

Prereq: senior or graduate standing and written consent of instructor. (T)



# STATISTICS

In addition to the interdepartmental course described below, several specialized advanced courses in statistics are offered by individual departments:

ECO 410 — Economics and Business Statistics I  
ECO 510 — Economics and Business Statistics II  
ECO 610 — Introduction to Economics  
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 770 — Advanced Probability Theory I  
MAT 771 — Advanced Probability 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.

## COURSES OF INSTRUCTION<sup>1</sup> (STA)

### 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: 431 State Hall

Co-Directors: Marilyn L. Williamson, Marlyne Kilbey

Adviser: Joan Ferguson

## 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:

*English 291/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, black studies, classics, English, philosophy, romance and Germanic languages, and speech communication.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations



## Courses in Women's Studies

### Credits

ANT 524 — Anthropological Perspectives on Women.....	3
ANT 631 — Comparative Family Patterns.....	3
BKS 511 — Black Women in America.....	3
ENG 257 — Introduction to Women's Studies Through Literature.....	3
ENG 503 — Topics in Women's Studies.....	3
FRE 290 — Studies in French Literature (when appropriate).....	3
GER 290 — Studies in German Literature (when appropriate).....	3
HIS 325 — The Family in History.....	3
HIS 520 — Women in American Thought and Life.....	3
PHI 110 — Contemporary Moral Issues (when appropriate).....	3
PHI 111 — Ethical Issues in Health Care.....	3
P S 504 — American Political Reform Movements.....	4
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 Life Span.....	3
PSY 564 — Psychology of Attitudes and Interpersonal Attraction.....	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
SPA 290 — Studies in Spanish Literature (when appropriate).....	3
SPC 220 — Interpersonal Communication.....	3
SPC 501 — Psychology of Human Communication.....	3
SPC 617 — Theories of Interpersonal Communication.....	3

Minor Requirements consist of eighteen credits distributed as follows:

W S 301 — Introduction to Women's Studies.....	3
SOC 446 — Women and Society.....	3
PSY 325 — Psychology of Women.....	3
Women in history (elective in black 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 Department of English and the Department of Psychology.

## COURSE OF INSTRUCTION (W S)

### 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)

# INTERDISCIPLINARY LIBERAL ARTS

## COURSES OF INSTRUCTION<sup>1</sup> (I D)

### 95. Cooperative Work Experience. Cr. 0

Offered for S and U grades only. No degree credit. Participation in a cooperative work study situation.

### 101. (BKS 101) Dimensions of the Black Experience: An Introduction. Cr. 3

Interdisciplinary approach to black studies, exploring several broad issues, topics, theories, concepts and perspectives which describe and explain the black experience in America. (T)

### 201. (BKS 201) Afro-American Culture: Historical and Aesthetic Roots. Cr. 4

Core requirement for black studies co-major. Examination of the historical and aesthetic bases of a variety of forms of cultural reflection - language, literature, music - of the black experience in America. (T)

### 221. (BKS 221) Contemporary Black Social and Political Thought: Theory and Practice. Cr. 4

Prereq: I D 101 or consent of instructor. Core requirement for Black Studies Co-Major. Surveys the major social and political themes in the black experience with emphasis on the black movements of the 1950s-1970s from a dialectical and social movements model. (T)

### 301. (BKS 301) Afro-American Culture: Development and Transformation. Cr. 4

Theoretical perspectives on development of Afro-American creative culture and expression; emphasis on modern transformations and contemporary forms. (T)

### 321. (BKS 321) The Black Community and Public Policy. Cr. 3

Core requirement for black studies co-majors. Core requirement for black studies co-major. Identifies and explores questions of black community interests, raised in relation to important issues in several areas of public policy - education, employment, equal opportunity, development of political and social institutions - which have significant impact on the black community. (T)

### 511. (BKS 511) Black Women in America. Cr. 3

Prereq: I D 201 or 221 or consent of instructor. Examination of the historical, social, political and economic oppression of black women in America: racism, sexism, marriage, motherhood, feminism, the welfare system, implications for advancement in the black community. (F)

### 513. (BKS 513) The Black Family. Cr. 3

Prereq: one 200-level Black Studies course, or consent of instructor. Survey and analysis of historical and social issues relative to the study of the black family. (Y)

### 531. (BKS 531) Special Topics in Black Studies. Cr. 3

Prereq: I D 201 or 221 or consent of instructor. A seminar for investigating special topic areas related to the black experience - such as the black family, the black woman, and male/female relationships among black people - which emerge from contemporary or historical issues and conditions. (Y)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**591. (BKS 591) Field Work in the Black Community. Cr. 4-12**

Prereq: two black studies courses and written consent of instructor. Offered for undergraduate credit only. Field placement in a variety of possible settings within community-based organizations and institutions which deal substantially with the concerns of the black community. (T)

**690. (BKS 690) Directed Study in Black Studies. Cr. 3-12**

Prereq: I D 201 or 221 and written consent of instructor. Reading and research projects. (T)

**699. (BKS 699) Advanced Research Seminar. Cr. 3-12**

Prereq: senior or graduate standing or consent of instructor. Specific themes or subjects for advanced level research seminar in the black experience. Topics to be announced in *Schedule of Classes*. (T)



# **Library Science Program**

*DEAN: PETER SPYERS-DURAN*

# Foreword

## History

The Library Science Program at Wayne State University traces its origins to 1918, at which time courses in school library were offered to elementary teachers in the Detroit Public Schools by the Detroit Normal Training School. When the Training School later became the Detroit Teachers College, 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 librarianship 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 Librarianship was created to serve those practicing librarians who wished to update their knowledge and professional skills. The most recent change in the Library Science Program is the addition of a certificate program in archival administration, offered in conjunction with the History Department of the College of Liberal Arts.

Today 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 what is now the dynamic field of library and information sciences.

## Objectives

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, 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 and examine the concepts, structure, and organization of knowledge;
4. To select, acquire, organize, store, retrieve, and disseminate information and materials;
5. To apply the concept of information transfer to facilitate access to recorded knowledge;

6. To develop sensitivity to the opportunity and responsibility of library/information service in an urban, multi-ethnic setting as well as an understanding of the distinctiveness of each library/information center as a component of a specific environment;

7. To identify the needs of individuals and groups for library/information services, design plans, and implement programs that respond to identified needs;

8. To evaluate and utilize current and emerging technologies in the organization and retrieval of information;

9. To apply principles of effective management to the operation of library/information centers;

10. To examine, assess, and apply research in professional practice in the solution of library/information problems;

11. To develop a personal philosophy of ethics, professionalism, and professional accountability;

12. 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 two million books and twenty-one thousand current subscriptions to 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, microfilms, 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 (IBM 4381-2) 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.

## Undergraduate Program

Undergraduate students interested in preparing for a career as library/media specialists in elementary or secondary schools, or those Liberal Arts students interested in public, academic, or special library work, are eligible to take a limited number of courses in the Library Science Program. Interested students should consult with an adviser in the Library Science Program.

## Graduate Degrees and Certificates

- \* *Master of Science in Library Science*
- \* *Specialist Certificate in Librarianship*
- \* *Certificate in Archival Administration*

## Faculty

Office: 106 Kresge Library; (313) 577-1825

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), Charles Churchill (Visiting), Margaret Grazier (Emerita), Philip Mason, Joseph J. Mika, Vern Pings (Emeritus), Peter Spyers-Duran

### Associate Professors

Miriam Larson (Emerita), Betty Maurstad (Emerita), Edith Phillips, Bruce Shuman

### Assistant Professors

Arthur Gunn, Carole McCollough, Bor-sheng Tsai

### Adjunct and Cooperating Faculty

Donald Bissett, Professor, College of Education; John Childs, Professor, College of Education; Georgia Clark, Arthur Neef Law Library; Anaclare Evans, Purdy Library; Edna Jolliff, Harper Hospital; Margery Long, Associate Professor, Archives; Genevieve Oldani-Caruso, Detroit Public Library; R. Craig Roney, Associate Professor, College of Education; Albert Stahl, Associate Professor, College of Education; Jacqueline Tilles, Associate Professor, College of Education; Faith Van Toll, Shiffman Medical Library

# 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, 222 Administrative Services Building.

## 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. Participation is voluntary; however, 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 students' 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 available also 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 Winter term for Fall term placements; and by the first day of the Fall term for Winter 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 maintains an extensive listing of currently available positions in all types of libraries throughout the United States.

\* For information consult the Wayne State University Graduate School Bulletin.

## 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.

*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.

## COURSES OF INSTRUCTION<sup>1</sup> (L S)

### 601. Introduction to Librarianship. Cr. 3

The development and place of libraries in society; objectives, functions of and trends in major types of libraries. (T)

### 610. Bibliographic Data Base Command Languages. Cr. 1

Offered for S and U grades only. Explanation and demonstration of command languages used to access online data bases of DIALOG Information Services, System Development Corporation, Bibliographic Retrieval Systems, and H.W. Wilson Company. (T)

### 611. General Reference Service. 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; processes used in exploiting library resources to supply information. (T)

### 621. Technical Services in Libraries. Cr. 3

Survey of objectives and methods of acquisition, classification, cataloging, preparation of books and related materials in libraries. (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 on instruction and library service. (F,S)

### 636. (I T 511) Educational Technology. Cr. 2

Technological applications to education, training, and instruction within educational, industrial, and human services settings. Students examine, develop, and/or evaluate unique instructional programs. For educators and non-educators interested in exploring technological applications in education.

### 637. (I T 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. (I T 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 non-fiction.

(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 extra-literary factors affecting the older child's experiences with fiction and non-fiction. (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)



<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

# **College of Lifelong Learning**

*DEAN: LAWRENCE MURPHY*

# Foreword

The College of Lifelong Learning (CLL) is principally responsible for outreach programs and off-campus course offerings of CLL and other schools and colleges of Wayne State University. To perform its duties, the College operates numerous instruction centers throughout the Detroit metropolitan area and engages in the delivery of instructional programs through television broadcasting. By way of such efforts, the College serves a diverse student audience: 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; persons working on university degrees; 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. Additionally, CLL offers off-campus 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 College administers a Community Education program and a Division of Adult Learning Services. The latter department helps adult students plan a university education by evaluating their preparedness for college and providing remedial and tutorial assistance where needed. Counselors of this agency work closely with students in program planning and the selection of classes.

## 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 the CLL Marketing and Public Relations Office, 6001 Cass Ave., Detroit Michigan 48202.

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.

## 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  
Manager: W. Kathryn Flack

**Livonia Center**  
Bentley High School  
15100 Hubbard  
Livonia, MI 48154  
Telephone: 284-5335  
Manager: Sharon O'Brien

**Downriver Center**  
Schafer High School  
15100 Northline  
Southgate, MI 48195  
Telephone: 284-5335, 577-4680  
Manager: Sharon O'Brien

**Detroit Center**  
3127 E. Canfield  
Detroit, MI 48207  
Telephone: 577-4701  
Manager: Michael Wright

**Northeast Center**  
St. Basil School  
22860 Schroeder  
East Detroit, MI 48021  
Telephone: 771-3730, 577-3590  
Manager: Irene Gordon

**Eastside Northwest Detroit Center**  
18100 Meyers Road  
Detroit, MI 48235  
Telephone: 577-2937  
Manager: Cynthia Ward

**Harper Woods Center**  
Bishop Gallagher High School  
19360 Harper Avenue  
Harper Woods, MI 48225  
Telephone: 771-3730  
Manager: Irene Gordon

**Southfield Center**  
25610 W. Eleven Mile  
Southfield, MI 48034  
Telephone: 358-2104, 577-3592  
Manager: Robert Erickson

**Sterling Heights Center**  
Heritage Junior High School  
37400 Dodge Park  
Sterling Heights, MI 48077  
Telephone: 978-7881, 577-4470  
Manager: Sue English

## Degree Programs

*Bachelor of General Studies*

*Bachelor of Technical and General Studies*



# UNIVERSITY STUDIES WEEKEND COLLEGE

Office: Fourth Floor, Criminal Justice Building, 6001 Cass Avenue,  
Detroit, MI 48202

Associate Dean and Director: Robert L. Carter

Associate Director: Roslyn Schindler

## Professors

A. Ronald Aronson, Jerry G. Bails, Martin Glaberman, Clifford L. Maier, Lawrence R. Murphy, Richard Raspa, Rolland Wright

## Associate Professors

Eric A. Bockstael, David Bowen, Mary Lee Field, Julie T. Klein, Carlton Maley, Guerin C. Montilus, Norma Shifrin, Francis Shor, Roland Wacker

## Assistant Professors

Sandor Agocs, Robert L. Carter, Peter Friedlander, Andre Furtado, Gloria House, Claude Jacobs, Theodore Kotila, Penelope Majeske, James Michels, Roslyn Schindler, 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 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 20) and the credit distribution requirements as stated below. 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.....	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 transferrable from the associate degree level. Transfer credit may be allowed for requirements in social science, humanities, and science/technology, but NOT for the Foundations of Knowledge Sequence (GIS) or AGS 492 and GIS 308 cited below. The 128 credits must include satisfaction of the University General Education Requirements (see below and page 20) and the following distribution requirements.

### Capstone Program Credit Distribution Requirements

#### ASSOCIATE DEGREE TRANSFER CREDIT (Sixty-four Credits)

#### INTERDISCIPLINARY STUDIES (Forty Credits)

	Credits
GIS 308 — Capstone Conference .....	4
GIS 151 — 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 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 20) 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

<i>Basic Composition</i> .....	GIS 151
<i>Intermediate or Advanced Composition</i> .....	AGS 491
<i>Writing-Intensive Course</i> .....	AGS 496
<i>Oral Communication</i> .....	GIS 156
<i>Computer Literacy</i> .....	GST 271
<i>Critical Thinking</i> .....	GIS 326

### Group Requirements

<i>Life Science</i> .....	GST 202
<i>Physical Science</i> .....	GST 232
<i>Historical Studies</i> .....	GIS 316
<i>Social Science</i> .....	GSS 271
<i>American Society/Institutions</i> .....	GSS 151
<i>Foreign Culture</i> .....	GIS 341, GIS 343
<i>Visual and Performing Arts</i> .....	GUH 273
<i>Philosophy and Letters</i> .....	GUH 271

## Academic Procedures

**Fees:** Students in the US/WCP pay tuition according to the regular University fee schedule (see page 16).

**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, 222 Administrative Services Building.

## COURSES OF INSTRUCTION<sup>1</sup>

### General Science and Technology (GST)

**51. Practical Mathematics: Concepts and Applications. Cr. 3**  
Prereq: failure of mathematics proficiency test. No degree credit. 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. (S)

**201. Life and the Environment. Cr. 3**  
Critical health issues relevant to an industrialized society form the basis of this workshop course: the ecological and ethical factors associated with health in an urban context. (F)

**202. (LS) Changing Life on Earth. Cr. 3-4**  
Material fee as indicated in *Schedule of Classes*. The living world in context of theory of evolution; relations between physical and living worlds, and how humans have influenced them. Laboratory covers molecular genetics, adaptation, and population dynamics. (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. Energy Needs and Modern Society. Cr. 4**  
Workshop course leads students to consider problems and exercises concerned with energy that focus on the experimental approach to problem-solving, developing mathematical, reading and analytical skills and exploring fundamental principles of the concept of energy. (W)

**232. (PS) Energy, Technology, and Society. Cr. 3**  
Television course. Nature and forms of energy and energy transformations; emphasis on the physical sciences. (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)

**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)

**272. Values, Technology and Society. Cr. 3**  
Television course. History of techno-social change, impacts of new technics, international aspects of technology, and the nature and uses of models, changes in work and leisure, and theoretical analysis of technological change. (I)

**273. Conference on Socio-Technological Issues. Cr. 3**  
Semester-long course with periodic weekend sessions. Conference themes and dates announced each semester. (I)

**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)

**183. (GUH 183) The Sciences and Humanities: Understanding the Human Condition. 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

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

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**

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. Cr. 3**

Multidisciplinary television course defines and examines the problem of work and the lives of working people in modern society. (W)

**203. Conference on Work and Labor Today. Cr. 3**

Semester-long course with periodic weekend sessions. Analysis of specific economic and social issues related to institutions and individuals in modern American society. Dates and themes announced each semester. (W)

**271. (SS) Selected Perspectives on Ethnicity. Cr. 4**

Interdisciplinary social science approach to ethnicity and immigration, historical and contemporary. Development of analytical skills. (F)

**272. Culture, Community and Identity. Cr. 3**

Television course. Concepts of culture, community and identity examined as reflective of social life in North America and as analytic tools which are used by social scientists to broaden our understanding. (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. Cr. 4**

Origins, ideals, symbols and substance of American culture and character. Distinguishing features of American thought and culture and reasons for their uniqueness. (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.

**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. (I)

**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)

**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. (T)

**251. Representation and Analysis of Quantitative Information. Cr. 4**

Prereq: passing in-class arithmetic test or Mathematics Qualifying Examination. Introduction to mathematical methods for representing and analyzing data; model building in the natural and social sciences. Use of algebra, graphs, transcendental functions, probability and statistics is discussed. (I)

**277. Travel Study: Lower Division. Cr. 4-12**

Interdisciplinary examination of cultural, political, social and/or scientific-technological aspects of the destination country by accompanying instructor or guest lecturers. (S)

**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. (F)

**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)

**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. (T)

**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. (T)

**477. Travel Study: Upper Division. Cr. 4-12**

Prereq: upper division standing. Interdisciplinary examination of cultural, political, social and/or scientific/technological aspects of the destination country by accompanying instructors or guest lecturers. Assignments, papers, and projects appropriate to upper division students. (S)

## Advanced General Studies (AGS)

**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)

**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)

**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)

**403. Senior Elective Conference I. Cr. 3**

Prereq: upper division standing. Semester-long course with periodic weekend sessions. Dates and topics announced each semester. Offered once each academic year. (Y)

**413. Senior Elective Conference II. Cr. 3**

Prereq: upper division standing. Semester-long course with periodic weekend sessions. Dates and topics announced each semester. Offered once each academic year. (Y)

**423. Senior Elective Conference III. Cr. 3**

Prereq: upper division standing. Semester-long course with periodic weekend sessions. Dates and topics announced each semester. Offered once each academic year. (Y)

**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 US/WCP curriculum. Core readings and a substantial paper are assigned. (T)

**486. Senior Seminar II: Problems of Humanity. Cr. 4**

Prereq: AGS 476, upper division standing. Topics determined by the upper division faculty in science and technology, social science, and the humanities to be announced each semester. Readings and a substantial paper are assigned. (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. Senior Capstone Essay/Project. Cr. 4**

Prereq: senior level standing. 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. (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)

# ADULT LEARNING SERVICES AND COMMUNITY EDUCATION PROGRAM

*Associate Dean/Director:* Robert L. Jackson II

*Associate Director:* Mary C. Dickson

## *Lecturers*

*English:* Julie Mix; *Mathematics:* Fred Labafinejad; *Instructional Support:* Melinda Hodges

## *Counselors*

Dannie Brown, Pamela Dale, Satrina John

This Division is principally responsible for supervision of the Community Education Program. Founded in 1969, this program provides matriculation 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.

In addition, the Division of Adult Learning Services provides comprehensive counseling and advisement for any CLL student seeking to enter or continue higher education. Skilled counselors are available to meet with individuals; and career planning workshops are offered at convenient metropolitan area locations.

## Community Education Program

Participants in the Community Education Program are individuals who, though otherwise inadmissible to Wayne State University, may become 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 an open admissions policy with 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 the Comparative Guidance Placement (CGP) test. The results of this examination are used to evaluate academic needs and career potentials and to assist students 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:** The primary semesters for enrollment in the Community Education Program are fall and winter. Applicants must apply by July 31 for the fall term and November 15 for the winter term. Applications for admission should be completed and forwarded to the Community Education Program Administrative Office, 6001 Cass Avenue, Suite 302, Detroit, MI 48202.

**Program Requirements:** To be eligible to transfer from 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 from the following list of courses:

*credits*

ANT 210 — Introduction to Anthropology.....	3-4
ANT 211 — Introduction to Physical Anthropology.....	3-4
BIO 101 — Basic Biology I.....	4
BIO 105 — An Introduction to Life.....	3
BKS 201 — Afro-American Culture.....	4
BKS 221 — Contemporary Black Social and Political Thought.....	4
BKS 321 — Black Community and Public Policy.....	3
CHM 100 — Chemistry and Your World.....	3-4
CHM 102 — General Chemistry I.....	4
CSC 100 — Introduction to Computer Science.....	3
CSC 101 — Introduction to Computing.....	3
CSC 210 — Introduction to COBOL.....	3
ECO 100 — Survey of Economics.....	4
ENG 101 — Basic Writing.....	4
ENG 102 — Introductory College Writing.....	4
ENG 221 — Great English Novels.....	3
ENG 239 — Introduction to Afro-American Literature.....	4
GEG 110 — World Regional Patterns.....	4-5
GEL 101 — Science of the Earth.....	4
HIS 110 — The Ancient World.....	3-4
HIS 130 — The World & the West: 1500-1945.....	3-4
HIS 161 — African Civilizations Since 1800.....	3
HUM 101 — Introduction to Art & Music: Western Civilization.....	4
HUM 210 — Humanities and Western Tradition I.....	4
HUM 211 — Humanities and Western Tradition II.....	4
MAT 091 — Basic Concepts in Mathematics.....	3
MAT 150 — Finite Mathematics for Social & Management Sciences.....	3
MAT 180 — Elementary Functions.....	4
PHI 103 — Introduction to Philosophical Problems.....	3-4
P S 100 — Introduction to Political Science.....	3
PSY 101 — Introductory Psychology.....	4
PSY 102 — Elements of Psychology.....	3
SPB 101 — Oral Communication: Basic Speech.....	2-3
SPC 211 — Argumentation and Debate.....	3
UGE 100 — The University and Its Libraries.....	1
U S 200 — Introduction to Urban Studies.....	4

**Counseling** is a major component of the Community Education Program. Community Education students are required to utilize the counseling 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 Community Education Program may apply for federal, state, or University grants using applications available from College of Lifelong Learning centers, the Community Education office, or the University Financial Aids office.

# METROPOLITAN PROGRAMS AND SUMMER SESSIONS

*Associate Dean:* Phyllis J. Jonas

*Associate Director of Off-Campus Centers:* Kris Krzyanski

*Associate Director of Programming Administration:* Donna Sottile

## Center Managers

Susan English, W. Kathryn Flack, Irene Gordon, Sharon O'Brien, Linda Robertson, Barbara Roseboro, Cynthia Ward

## Programmers

Lynne Fuller, Lorraine Serra, William Slater, Fredrick Smith, Mary Kay Urick

The Division of Metropolitan Programs and Summer Sessions is responsible for making available off-campus enrollment in the 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. Many courses carry full university credit and 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 non-credit 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 courses on a non-credit basis at reduced tuition rates. Program centers are maintained at convenient locations (see page 328).

## Admission Requirements

Most credit courses offered through the Division of Metropolitan Programs 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 recorded on their transcripts in the same manner as credits earned on campus.

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, some credits earned in this status may be applied toward degrees, but students are advised to consult specific degree program and are urged to process formal application and admission documents as soon as possible.

## Counseling and Advising

Counseling and advising services for students in the Division of Metropolitan Programs are provided through CLL's Division of Adult Learning Services and by the managers of CLL's suburban centers. Students who do not have formal matriculated status in the University are especially urged to confer with a counselor before registration. Skilled counselors offer assistance with educational problems or degree objectives. Appointments may be arranged by telephone: 577-4671.

## Academic Programs

The Division of Metropolitan Programs 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 CLL:

**Business Administration:** Bachelor's and Master of Business Administration programs are offered in Oakland County at the Birmingham Center, and in Macomb County at the Sterling Heights Center. A large number of evening courses are also available on the main University campus.

School of Business Administration courses in the 600-609 series are open only to students holding matriculated graduate status at Wayne State University.

**Education:** Bachelor's, master's, and doctoral programs are offered at off-campus locations, at the request of local schools and/or districts; and during the late afternoon and evening on the main campus.

**Engineering:** Limited course offerings, primarily in Engineering Technology, are offered off-campus; a larger variety of bachelor's and master's courses are available on campus during the evening.

**Fine and Performing Arts:** Undergraduate courses in music, art, and dance are offered at several off-campus centers and on campus during the evening.

**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. A large number of undergraduate, master's and doctoral programs are also offered on campus during the evening.

**Nursing:** Bachelor's and master's courses are offered at several locations, including Macomb County Community College. A variety of late afternoon and evening courses is also offered on the main campus.

**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 alumni.

**Social Work:** Bachelor's and master's courses are offered at some off-campus locations and on the campus during evening and weekend hours. Professional continuing education programs are also offered.

**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.

## Career and Professional Development Programs

The Division of Metropolitan Programs 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 non-credit 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.

### GENERAL MOTORS TECHNICAL CENTER PROGRAM

Approximately seventy courses are scheduled at the Technical Center each year. They are typically scheduled for one evening a week for twelve weeks. Subjects include management, professional development, electronics, computer programming, and automotive technology.

### PERSONAL COMPUTING CENTER

Since 1984 Wayne State University has operated a Personal Computing Center in Southfield. Twenty-five IBM Personal Computers, experienced faculty, instruction on best-selling software, hands-on course presentation, qualified laboratory assistance, and free weekend laboratory time assure a degree of quality found among few universities or commercial computer programs. A twelve clock-hour introduction to personal computers course is offered; in addition, classes are available in a variety of software programs. A second Center is located in Sterling Heights.

### CERTIFIED EMPLOYEE BENEFIT SPECIALIST PROGRAM

This ten-course program is co-sponsored by the International Foundation of Employee Benefit Plans and the Wharton School of the University of Pennsylvania. It offers an opportunity for participants to earn a professional designation. Course materials, examinations, and grading standards are comparable to the junior and senior level of a typical university. The program covers the legal, financial, and organizational framework within which an employee-benefit plan must function. Emphasis is placed on the principles underlying the design and operation of benefit plans. Two courses are offered each term; certifying examinations covering the subject matter of each of the ten courses are given in January and June.

### CERTIFIED FINANCIAL PLANNING

The College of Lifelong Learning offers courses to prepare individuals for the examinations to become a Certified Financial Planner (CFP). This is a two-year, six-course program designed for financial professionals—stockbrokers, insurance specialists, attorneys, accountants—who intend to work with clients to create and implement comprehensive financial plans. Participants who successfully complete the program by passing the six requisite examinations earn a nationally-recognized CFP designation from the International Board of Certified Financial Planners.

### VISITOR'S PROGRAM

Individuals interested in taking a class without grades, degree requirements, written assignments or examinations may participate in the Wayne State Visitor's Program. It allows individuals to attend a wide range of selected undergraduate and graduate courses on or off campus for one-half of the freshman tuition rate. Registration for off-campus courses may be completed by mail or telephone through any CLL center or the campus CLL Registration Services office. On-Campus course registration must be completed in person at the University Registration Office, 150 ASB, during the first week of classes.

### CONTRACT PROGRAMMING

Courses are provided through CLL 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.



## Registration Services

*Coordinator:* Kristopher Kryzanski

*Office:* Room 329, Criminal Justice Building, 6001 Cass Ave., Detroit, Michigan 48202; Telephone: 577-4671

**Registration** for Off-campus 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 and Public Relations Office, 6001 Cass Avenue, Detroit Michigan 48202; telephone: 577-4597.

**Fees** for credit classes offered by CLL 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.

Noncredit classes have no admission requirements and are open to all interested individuals.

CLL also offers courses on alternative schedules, such as seminars and workshops, that are convenient to particular audiences. Half-semester courses are offered on a regular basis at the Livonia Center.

## Center for Telecommunications

*Director:* 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.

## Marketing and Public Relations

*Director:* Joann Condino

The Marketing and Public Relations 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 and editing of copy, develops and maintains mailing lists, and designs and distributes public relations materials.

## College Directory

Dean .....	577-4575
Assistant Dean .....	577-4595
Administrative Officer .....	577-4659

### CENTER FOR TELECOMMUNICATIONS

Director .....	577-4636
Studio .....	577-4205

### DIVISION OF ADULT DEGREE PROGRAMS AND UNIVERSITY STUDIES/WEEKEND COLLEGE

Associate Dean/Director .....	577-4627
Associate Director, University Studies/Weekend College.....	577-4627

### DIVISION OF ADULT LEARNING SERVICES AND COMMUNITY EDUCATION PROGRAM

Associate Dean/Director .....	577-4590
Associate Director, Community Education Program .....	577-4591
Coordinator, Registration Services.....	577-4671
Counseling Services.....	577-4671

### DIVISION OF METROPOLITAN PROGRAMS AND SUMMER SESSIONS

Associate Dean .....	577-4682
Associate Director, Off-Campus Centers .....	577-4682
Birmingham Center .....	577-3605 or 642-2661
Downriver Center .....	577-4680 or 284-5335
Eastside Detroit Center .....	577-4701
Harper Woods Center.....	771-3730
Livonia Center .....	284-5335
Northeast Center .....	577-3590 or 771-3730
Northwest Detroit Center .....	577-2937
Southfield Center .....	577-3592 or 358-2104
Sterling Heights Center .....	577-4470 or 978-7881

<i>Associate Director,</i>	
<i>Programming Administration .....</i>	<i>577-4682</i>
Business Administration.....	577-4682
Career and Personal Development .....	577-4665
Certified Employee Benefit Specialist Program .....	577-4665
Certified Financial Planning Program.....	577-4665
Education.....	577-4616
Engineering.....	577-4682
Fine and Performing Arts .....	577-4682
General Motors Technical Center Program .....	577-4665
Health and Physical Education .....	577-4616
Liberal Arts.....	577-4682
Library Science .....	577-4682
Nursing .....	577-4616
Personal Computing Center .....	577-3595 or 356-1540
Pharmacy and Allied Health.....	577-4616
Social Work .....	577-4616
Telecourses .....	577-4636
Urban, Labor and Metropolitan Affairs.....	577-4682
Visitor's Program .....	577-4665

### DIVISION OF MARKETING AND PUBLIC RELATIONS

Director .....	577-4597
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# **School of Medicine**

*DEAN: HENRY L. NADLER*

# Foreword

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 1950 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. Other campus facilities include Shiffman Medical Library, the Lande Medical Research Building, and the C. S. Mott Center for Human Growth and Development. A new clinical research building is planned for completion by 1988.

The primary mission of the School of Medicine is to improve the health of the community through its combined educational, research, and service programs. Wayne State University School of Medicine has been attentive to its obligation and commitment to multiple levels of our society. Because Wayne State has no University hospital, it 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 City and 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.

## 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 internal medicine, oncology, cardiology, ophthalmology,

general surgery and a number of additional surgical specialties and subspecialties;

*Hutzel Hospital*, which includes among its areas of excellence: obstetrics, gynecology, gynecologic oncology, neonatology, perinatology, urology and the treatment of infectious and renal diseases, ophthalmology, and orthopedics;

*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 Harper 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.

## Other Clinical Affiliations

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.

## Shiffman Medical Library

*Head Librarian:* Faith Van Toll

*Librarians:* Anaclara Evans, Lora Robbins, Ruth Taylor

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 170,000 volumes and including over 2,800 current journal subscriptions. These resources comprise the major biomedical collection in the area.

In addition to the usual circulation, reference assistance and computerized database search services to the School of Medicine faculty, students and staff, the library furnishes material to other institutions through interlibrary loan. Interlibrary loan requests number approximately 22,000 per year.

To aid community health care and health sciences education, the library cooperates with other institutions to study present information services in order to establish a suitable library network for the metropolitan Detroit area. The library operates the Detroit Cooperative Cataloging Center (DC3), cataloging the collections of fifteen major health care institutions.

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.

## Office of Student Affairs

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.

## 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.

*Associate 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 Requirements 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.

The specific 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 American medical and osteopathic schools, and American citizens enrolled in foreign 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 medical or osteopathic 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 or osteopathic 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:* Marjorie A. Edwards, 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 following areas: anatomy and cell biology, biochemistry, immunology and microbiology, molecular biology and genetics, medical physics, pathology, pharmacology, and physiology. Master's degree programs are offered in community health services, radiological physics, and audiology. A graduate certificate program is offered in health services research.

## 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  
Immunology and Microbiology  
Medical Physics  
Molecular Biology and Genetics  
Pathology  
Pharmacology  
Physiology

### \* *Master of Science with specialization in:*

Anatomy and Cell Biology  
Biochemistry  
Community Health Services  
Immunology and Microbiology  
Molecular Biology and Genetics  
Pathology  
Pharmacology  
Physiology  
Psychiatry  
Radiological Physics

### \* *Master of Arts with specialization in Audiology*

### \* *Graduate Certificate in Community Health Services Research and Evaluation*

## School Directory

Dean .....	1241 Scott Hall; 577-1335
Associate Dean for Admissions .....	1310 Scott Hall; 577-1466
Associate Dean for Curricular Affairs .....	1206 Scott Hall; 577-1546
Assistant Dean for Student Affairs .....	1261 Scott Hall; 577-1463
Assistant Dean for Administration and Finance .....	1241 Scott Hall; 577-1048
Assistant Dean for Research and Graduate Programs .....	1253 Scott Hall; 577-1455
Assistant Dean for Medical Center Relations .....	University Health Center; 745-5194
Assistant Dean for Veterans Administration Hospital Affairs .....	V.A. Hospital, Allen Park; 562-6000
Affiliated Hospitals Resident Program .....	University Health Center; 745-5146
Financial Aid .....	1374 Scott Hall; 577-1039
Records and Registration .....	1272 Scott Hall; 577-1470

Mailing address for all offices:

Wayne State University  
School of Medicine  
540 East Canfield  
Detroit, Michigan 48201  
Information: (313) 577-1460

\* For complete information, consult the Wayne State University Graduate School Bulletin.

# **College of Nursing**

*DEAN: LORENE R. FISCHER*

# Foreword

## History

The College of Nursing began in 1930 as one of the departments of the College of Liberal Arts. During the first fifteen years the nursing programs became so varied, the enrollment so large, and the contribution to the total community so important that some commensurate reorganization was deemed necessary. Thus, in 1944, at the request of the Detroit Council on Nursing and the College of Liberal Arts, the Board of Education authorized the establishment of the College of Nursing. The College began to function as one of the components of the University in the spring of 1945.

In 1947 for the first time, the College assumed responsibility for teaching clinical nursing courses in a program leading to the degree of Bachelor of Science in Nursing. A number of hospitals and health agencies were selected by the faculty as settings for the clinical instruction and students from this program were eligible to take the examination for the registered nurse license.

Since 1945, the College has had programs in nursing leading to the degree of Master of Science in Nursing. These programs offer preparation in clinical specialties in nursing and in teaching and administration. The development of the graduate program has contributed to the strengthening of the research effort of the faculty.

The College has had substantial financial support from public and private sources such as the United States Public Health Service, the Children's Bureau, the W.K. Kellogg Foundation, Greater Detroit Hospital Fund, the Rockefeller Foundation, Richard Cohn Foundation, and the Helen Newberry Joy Fund. Support from these sources made it possible for the College to develop its clinical courses on the undergraduate and graduate levels; to have a new home, the Richard Cohn Memorial Building, in 1960; to contribute to the building of the Helen Newberry Joy residence for women students of the University; and to provide financial assistance to nursing students.

Detroit Education for Nursing via Television (DENT) began in 1966 in response to a request from the Michigan League for Nursing for the College to take the leadership in a project involving twelve schools of nursing. Initially, the project was funded by the Department of Health Education and Welfare to develop televised lessons for the schools. These programs are currently organized through the Learning Resources Center.

In response to the need for advanced research training in clinical nursing, the graduate faculty in nursing developed a doctoral program leading to the Doctor of Philosophy Degree in Nursing. In October 1974, the Board of Governors approved the program, which began in September 1975.

An Office of Community Educational Services was established within the College in 1974, to promote and coordinate the development of continuing education and academic programs off-campus. With this support the master's program in nursing was extended to the Upper Peninsula of Michigan in 1975, to the west Michigan area in 1977, to Saginaw in 1979, to Traverse City in 1982, and to Kalamazoo in 1985. A part-time Outreach Bachelor of Science in nursing program for the employed nurse in the greater Detroit metropolitan area was begun in 1980.

## Philosophy

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, 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 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 rights of students to question, challenge and debate within the context of inquiry as an essential ingredient to their development.

## Goals and Objectives

Human beings are continuously developing, influenced by biological, psychological, sociological and cultural factors. They respond as total systems to internal and external changes in environment in order to maintain dynamic equilibrium. It is the nature of this response which determines health or illness. Since people may require assistance in adaptation toward health, nursing as a dynamic process is concerned with supporting those adaptations that they would make unaided if they had the necessary strength, will, knowledge, and/or other resources. In preparing nursing students to assist with this adaptation, the College has the following goals and objectives:

1. The student will be prepared as a professional nurse practitioner who is responsive to current health exigencies, and who is self-directed in meeting the evolving health care needs of the society.
2. The student will gain a general education in communication, the humanities, and natural and social sciences.
3. The program will enhance the student's personal development and promote her/his professional development so as to form a basis for continued professional growth.

The graduate of the baccalaureate program is expected to:

1. Practice nursing within the framework of holism and human adaptation in the care of individuals, families, and groups across the health and age continua.
2. Use the nursing process in nursing care of individuals, families, and other groups, across the health and age continua.
3. Accept accountability to self for personal and professional development, to the recipient for quality nursing care, and to the profession for improvement of professional nursing standards.



4. Teach, supervise, guide and/or collaborate with, members of the health team to promote the health of individuals, families, groups, and communities.

5. Evaluate the interactive processes inherent in nursing practice.

## 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 focuses in*

advanced medical surgical nursing  
adult psychiatric-mental health nursing  
child and adolescent psychiatric-mental health nursing  
community health nursing — parenting and families  
primary care nursing — adult

#### \* *Post-master's certificate in nursing administration*

#### \* *Doctor of Philosophy with a major in nursing*



# 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.

## Admission Requirements

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.

**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 13). 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) by July 10 in order to proceed to the immediate subsequent 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 and upon available space in the program in upper division courses. The College determines transfer credit applicable to the B.S.N. degree.

**Registered Nurse Students:** Licensed R.N. students are admitted initially to the College of Nursing in a non-degree granting category. Upon completion of all prerequisite courses and requirements (see page 346), the R.N. student may apply for advanced standing to the senior year in the College of Nursing.

## Application

All students must file an Application for Admission 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 is limited in the number of students that can be accommodated in the B.S.N. program and has final jurisdiction in the selection of its 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 Services, College of Nursing; telephone: 577-4082.

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

## 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 100 or BIO 101	
– An Introduction to Life.....	4
– Basic Biology I.....	4
BIO 220 – Introduction to Microbiology (Laboratory).....	4
CHM 102 – General Chemistry I.....	4
CHM 103 – General Chemistry II (Laboratory).....	4
ENG 102 – Freshman Composition.....	4
PSY 101 – Introductory Psychology.....	4
SOC 200 or ANT 210	
– Understanding Human Society.....	3
– Introduction to Anthropology.....	3-4
Completion of University Proficiency Requirements in English and Mathematics (see page 21)	

Additional courses must be completed to achieve the thirty-credit minimum. Students admitted to Wayne State University for the first time in Fall Semester 1987 and thereafter will be required to have also completed:

PSY 240 – Developmental Psychology.....	4
UGE 100 – Introduction to the University and its Libraries.....	1

## Admission to Nursing Courses

### Prerequisites for All Students:

1. *Admission to the College of Nursing* or approval of the Associate Dean for Undergraduate Studies.

2. *Health Status Report:* Students admitted to the College are required to have a *Health Clearance Form* on file in the Office of Student Services. 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. 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 Undergraduate Studies. 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 the duration of the student's nursing studies. Each student is to present a copy of his/her insurance policy to the Office of Student Services 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* and the *Nursing Handbook*. The cards must be presented to the Office of Student Services by August 31, January 2, or May 4 prior to the beginning of the respective semesters in which the student is enrolling for courses requiring fee cards.

5. *BCLS Certification:* All students must have the equivalent of BCLS (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 Services by August 31 of each year. Faculty may deny students access to clinical experiences if students cannot present proof of current health clearance, BCLS certification, and malpractice insurance.

**Registration:** Prior to mail-in registration, the student selects courses and laboratory sites by means of a lottery system. These classes and laboratory sections are thereby reserved, and the student must register during the mail-in registration period in order to hold his/her space in the program. Students may not attend classes unless they are officially registered. The usual full-time undergraduate program is 12-16 credits per term.

## Admission to the Senior Year

**Prerequisites for Registered Nurses:** Admission in this status is contingent upon current licensure as a Registered Nurse in the State of Michigan. National League of Nursing examinations in Medical Surgical Nursing, Parent Child Nursing, and Psychiatric Mental Health Nursing must be passed satisfactorily at least one semester prior to application to the Senior Year.

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. Natural science credits older than ten years will not count toward fulfillment of these requirements. A cumulative University h.p.a. of 2.00 or above must be maintained.

	credits
BIO 100 or BIO 101	
– An Introduction to Life.....	4
– Basic – Biology I.....	4
BIO 220 – Introduction to Microbiology (Laboratory).....	4
CHM 102 – General Chemistry I.....	4
CHM 103 – General Chemistry II (Laboratory).....	4
ENG 102 – Freshman Composition.....	4
ENG 303 – Writing the Research Paper.....	3
NFS 221 – Human Nutrition.....	3
PSY 101 – Introductory Psychology.....	4
PSY 240 – Developmental Psychology.....	3
SOC 200 or ANT 210	
Understanding Human Society.....	3
Introduction to Anthropology.....	3-4
† IHS 310, 320, 321 – Basic Mechanisms of Human Disease.....	11
NUR 213 – The Nurse and the Individual.....	3
* NUR 330 – Pathophysiology Related to Nursing.....	3
NUR 554 – Assessment: History Taking & Physical Examination.....	3
Completion of University Proficiency Requirements in English and Mathematics (see page 21)	

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 20):

UGE 100 – Introduction to the University and its Libraries.....	1
One course in critical thinking	
One course in computer science	
One course in foreign culture	

† Or transfer of comparable credit in anatomy and physiology, plus NUR 330.

\* NUR 330 will be counted as general education natural science credit for the degree, if RNs elect this course in conjunction with transfer credit in anatomy and physiology as an alternative to IHS 310, 320, 321.

## 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 20-31 and 349-350, 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.

### 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.

**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, 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. See page 21).

### 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)

<b>Sophomore Year</b>		<i>credits</i>
<i>First Semester</i>		
NUR 200 — Basic Nursing Concepts .....	2	
NUR 211 — The Nurse and the Individual I .....	6	
IHS 310 — Basic Mechanisms of Human Disease I .....	5	
Liberal Arts Course .....	4	
<i>Second Semester</i>		
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	
IHS 320 — Basic Mechanisms of Disease II .....	5	
IHS 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 — 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

Senior Year: 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) .....	3
<i>and</i>	
NUR 450 — Perspectives in Nursing .....	3

### Professional and General Education Requirements for Generic Students Enrolled Fall 1987 or Thereafter

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.

### Freshman Year

<i>First Semester</i>	<i>credits</i>
ENG 102 — Freshman Composition .....	4
BIO 100 <i>or</i> BIO 101	
— An Introduction to Life .....	4
— Basic Biology I .....	4
CHM 102 — General Chemistry I .....	4
PSY 101 — Introductory Psychology .....	4
UGE 100 — Introduction to 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 — Understanding Human Society .....	3
† MAT 090 — Mathematics for Pre-Nursing Students .....	0
	Total: 15

† May be satisfied by competency examination. MAT 090, elected for three credits, does NOT carry degree credit.

## Sophomore Year

### First Semester

BIO 287 — Anatomy and Physiology .....	5
Computer Literacy proficiency elective .....	0-2
Critical Thinking elective .....	3
NUR 200 — Basic Nursing Concepts .....	2
NUR 211 — Nursing Care of the Well Client .....	3
NUR 300 — Assessment: History Taking & Physical Examination .....	1
<b>Total:</b>	<b>14-16</b>

### Second Semester

NUR 330 — Pathophysiology Related to Nursing Practice .....	2
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
ENG 303 -- Writing the Research Paper .....	3
Oral Communication proficiency elective .....	0-2
<b>Total:</b>	<b>13-15</b>

## Junior Year

### First Semester

NFS 221 — Nutrition .....	3
NUR 311 — Nursing Care of Adults with Complex Health Needs I .....	5
NUR 312 — Nursing Care of Adults with Complex Health Needs II .....	5
NUR 340 — Introduction to Research .....	2
NUR 300 — Assessment: History Taking & Physical Examination .....	1
<b>Total:</b>	<b>16</b>

### Second Semester

Philosophy/Letters elective .....	3
History elective .....	3
NUR 321 — Nursing Care of Childbearing Families .....	5
NUR 322 — Nursing Care of Childrearing Families .....	5
<b>Total:</b>	<b>16</b>

## Senior Year

### First Semester

American Society elective .....	3
Visual and Performing Arts elective .....	3
NUR 411 — Psychiatric/Mental Health Nursing .....	6
NUR 450 — Perspectives in Nursing (Capstone Course) .....	3
<b>Total:</b>	<b>15</b>

### Second Semester

Foreign Culture elective .....	3
NUR 412 — Community Focused Nursing Practice .....	6
Nursing elective .....	3
NUR 422 — Leadership and Management in Nursing Practice .....	4
<b>Total:</b>	<b>16</b>
<b>Total B.S.N. Credits</b> .....	<b>126</b>

## Professional Education Requirements for Registered Nurses Enrolled Prior to Fall 1987

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 page 346. 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 213 — The Nurse and the Individual III .....	3
NUR 330 — Pathophysiology Related to Nursing Practice .....	2
NUR 340 — Introduction to Research .....	2
* NUR 554 — Assessment: History Taking & Physical Examination .....	3

The following courses may also be taken in Phase I depending on completion of prerequisites and available space:

NUR 450 — Perspectives in Nursing .....	3
NUR 434 — Group Theory Process and Dynamics Applied to Nursing .....	1
NUR 435 — Seminar in Process and Dynamics of Groups .....	2

**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 411 — Nursing within a Microsystem .....	7
NUR 340 — Introduction to Research .....	2
<i>and/or</i>	
NUR 434 — Group Theory Process and Dynamics .....	1
<i>and/or</i>	
NUR 435 — Seminar in Process and Dynamics of Groups .....	2
<i>and/or</i>	
NUR 450 — Perspectives in Nursing .....	3
<i>and/or</i>	
Senior Elective (NUR 420, 426, 427, 428, or 429) .....	2-4

#### Winter Semester

NUR 412 — Nursing within a Macrosystem .....	7
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Plus: All of the remaining courses listed above which were not completed in the Fall semester, to include: NUR 340: Research; NUR 434: Group Theory; NUR 435: Seminar; NUR 450: Perspectives; and one of the senior electives.

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

<sup>1</sup> NUR 413 — Nursing in a Microsystem (HPTG) .....	3
NUR 340 — Nursing Research .....	2

#### Winter Semester

<sup>2</sup> NUR 414 — Nursing in a Microsystem (Family) .....	4
NUR 434 — Group Theory Process and Dynamics .....	1

\* Or the IHS alternative sequence.

<sup>1</sup> NUR 413 equates to three credits of NUR 411.

<sup>2</sup> NUR 414 equates to four credits of NUR 411.

### Summer Semester

<sup>1</sup> NUR 415 — Nursing in a Macrosystem (HCDS).....	3
Senior Elective .....	2-4

### Fall Semester

<sup>2</sup> NUR 416 — Nursing in a Macrosystem (Community).....	4
NUR 435 — Seminar in Process and Dynamics of Groups .....	2

## Professional and General Education Requirements for Registered Nurses Enrolled Fall 1987 or Thereafter

1. Registered Nurses must satisfy the University Requirements for General Education (see page 20).
2. The revised professional curriculum outline above should be pursued by all Registered Nurses beginning 200-level nursing courses in Fall 1988 or thereafter.
3. While individualized plans of study may be necessary for Registered Nurses already enrolled in part-time pursuit of a B.S.N., nurses who plan to be seniors beginning in the Fall 1990 semester must follow the revised professional curriculum.



<sup>1</sup> NUR 415 equates to three credits of NUR 412.

<sup>2</sup> NUR 416 equates to four credits of NUR 412.

# Academic Procedures

## Attendance

Regularity in attendance and scholastic performance is necessary for success in college work. 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. When faculty cannot be located, students are to notify the Undergraduate Office of their absence from field practice; telephone: 577-4188.

## 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. (Withdrawals from nursing courses after the twelfth week of the semester will be interpreted as the student's having taken the course for the purpose of calculated repeats of the course.) Students who demonstrate failing performance at the end of the fourth week of classes may not be permitted to withdraw from a course.
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 Assistant Dean for Undergraduate Studies.
7. A student receiving an 'D' grade in either the theory or the clinical portion of any nursing course will fail the course.
8. Grades of 'I' received in course(s) prerequisite to courses in the subsequent semester must be completed by no later than the second week of class of the following semester.
9. Students must achieve at least a grade of 'C' in Basic Mechanisms of Disease I and II 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 Student Services 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 With Distinction

A candidate eligible for the bachelor's degree may receive a special diploma 'with distinction' or 'with high distinction' under the following conditions: Distinction—an honor point average of 3.3 if the candidate has earned at least 100 credits in residence, 3.4 if between 60 and 99 credits; High Distinction—an honor point average of 3.6 if the candidate has earned at least 100 credits in residence, 3.7 if between 60 and 99 credits.

## 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 Honor's 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 30.

## College of Lifelong Learning

The College of Nursing, through the College of Lifelong Learning (CLL), offers courses and other educational programs, credit and non-credit, in various locations throughout the greater Detroit metropolitan area and the state. 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.* Information concerning off-campus courses or programs may be obtained from: Office of Community Educational Services, College of Nursing.

## Financial Assistance

The University Office of Scholarships and Financial Aids, Room 222, Administrative Services Building (see page 19), 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 Student Services, 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.

*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, 111 Mackenzie Hall. 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.

# FACULTY

Offices: 5557 Cass Avenue

## Professors

Lorene Fischer, Madeline Leininger, Barbara McArthur, Dorothy Reilly

## Associate Professors

Marcia Andersen, Arnold Bellinger, Mary Denyes, Judith Floyd, Effie Hanchett, Ingvarda Hanson, Marjorie Isenberg, June Kuczynski, Norma McHugh, Kathleen Monahan, Darlene Mood, Bernice Morton, Marilyn Oermann, Noreen O'Neill, Barbara Pieper, Jeannette Poindexter, Virginia Rice, Fredericka Shea, Doris Slater-Stewart, Dawn Zagornik

## Assistant Professors

Yvonne Abdo, Dorothy Booth, Jacquelyn Campbell, Joette Clark, Geraldine Flaherty, Marie Luise Friedemann, Judith Fouladbakhsh, Hertha Gast, Mark Hirschmann, Paulette Hoyer, Lois Hunt, Mary Jirovec, Carolyn Lindgren, Laurel Northouse, Fern Sturgis, Carol Tenerowicz, Beverly Tyler, Olivia Washington, Alice West, Regina Williams, Margo Zink

## Lecturers

Barbara Banfield, Susan Benesh, Francis Board, Rosellen Burkart, Margery Caldwell, Diane Hischke, Mary Jacobsen, Diane Lancaster, Margie Miller, Sara Mooney, Sukhta Pradatsundarasar, Chandra Sharma, Helen Shaw, Judy Wheeler

## Part-Time Faculty

Rhonda Amber, Patricia Carney, Beverly Kober, Jo Anna Risk, Mary Wilde

## College of Nursing Directory

Dean.....	230 Cohn; 577-4070
Administrative Officer.....	244 Cohn; 577-4086
Associate Dean, Graduate Studies.....	344 Cohn; 577-4138
Associate Dean, Undergraduate Studies.....	252 Cohn; 577-4131
Center for Health Research.....	315 Cohn; 577-4134
Learning Resource Center.....	15 Cohn Cohn; 577-4097
Office of Student Services.....	225 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

# COURSES OF INSTRUCTION<sup>1</sup> (NUR)

## 111. (CL) Introduction to Computers and Technology for Health Care Professionals. Cr. 2

Introduction to computer terminology, hardware, software, telecommunication, word processing; impact of computer technology on health care practitioners. (F, W)

## 200. Conceptual Basis of Professional Nursing Practice. Cr. 2

Introduction to conceptual foundations of professional nursing practice. Students assisted in conceptualizing nursing role: theory, conceptual frameworks, research, process, and practice. (F, W)

## 211. Nursing Care Needs of the Well Client. Cr. 3

Prereq: admission to College of Nursing; coreq: NUR 200, BIO 187, one credit in NUR 300, PSY 240. BCLS 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. (F, W)

## 212. Foundations of Nursing Care in Illness. Cr. 5

Prereq: NUR 200, BIO 187; coreq: NUR 221, one credit in 300, ENG 303. BCLS 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, W)

## 213. The Nurse and the Individual III. Cr. 3

Prereq: R.N. licensure in Michigan. Theories basic to understanding therapeutic relationships and conceptual models of professional nursing practice. Focus on nursing process within a conceptual framework. (T)

## 221. Nursing Implications of Drug Administration. Cr. 2

Emphasis on the clinical application of content related to the effects of various classes of drugs and the response of patients. Concepts of drug and solution calculations. (F, W)

## 300. Assessment: History Taking and Physical Examination. Cr. 1 (3 req.)

Prereq: admission to College of Nursing and/or R.N. licensure in Michigan. Offered for undergraduate credit only; 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)

## 311. Nursing Care of Adults with Complex Health Needs I. Cr. 5

Prereq: NUR 212, 221, ENG 303; coreq: NFS 221, one credit in NUR 300, NUR 340. BCLS certification, liability insurance, health clearance required. Material fee as indicated in *Schedule of Classes*. Providing holistic health care to individuals throughout adult life experiencing acute or chronic complex health problems. Techniques of coping with stressors associated with illness and hospitalization; respect for personal dignity and autonomy of client; assisting client in setting goals to achieve level of wellness. (F, W)

## 312. Nursing Care of Adults with Complex Health Needs II. Cr. 5

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

Prereq: NFS 221; coreq: one credit in NUR 300. BCLS certification, liability insurance, health clearance required. Material fee as indicated in *Schedule of Classes*. Continuation of NUR 311. Comprehensive assessment of patient needs, derivation of nursing diagnosis, planning and implementation of appropriate nursing care, evaluation of effectiveness of interventions. Psycho-social and physical/spiritual aspects of acutely and chronically ill patients; transcultural factors and ethical issues affecting clinical decision-making. (F,W)

**321. Nursing Care of Childbearing Families. Cr. 5**

Prereq: NUR 312, 340. BCLS certification, liability insurance, health clearance. Caring for parents and infants during perinatal period. Examination of human responses and health needs precipitated by maturational and situational crises. Theories about family, developmental stages, teaching-learning experiences, health promotion, nursing care of infants and parents at various stages of health. (F,W)

**322. Nursing Care of Childrearing Families. Cr. 5**

Prereq: NUR 312, 340. BCLS certification, liability insurance, health clearance. Use of nursing process to promote well-being of childrearing families which have children with acute and chronic health problems. Development of theories and principles introduced in NUR 321; health care economics, bioethics in family nursing. (F,W)

**330. Pathophysiology Related to Nursing Practice. Cr. 2**

Prereq: at least two semesters in anatomy and physiology courses, including a 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, 211, or 213. Introduction to the research process in nursing. Relationship of research methods to the study of nursing problems.

**411. Psychiatric/Mental Health Nursing Care of Individuals and Groups. Cr. 6**

Prereq: senior standing. BCLS certification, liability insurance, health clearance, licensure for R.N. students required. Course equates with BSN outreach courses NUR 413 and NUR 414. Material fee as indicated in *Schedule of Classes*. 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,W)

**412. Community Focused Nursing Practice. Cr. 6**

Prereq: NUR 411. BCLS certification, liability insurance, health clearance, licensure for R.N. students required. Material fee as indicated in *Schedule of Classes*. 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. (F,W)

**413. Nursing of Individuals, Families and Groups within a Microsystem (Focus: HPTG). Cr. 3**

Prereq: admission to nursing senior year; Michigan R.N. licensure; BCLS certification; liability insurance; health clearance. Course equates to 3 credits in NUR 411, which may not be taken for credit after NUR 413. Material fee as indicated in *Schedule of Classes*. Nursing care supporting the adaptation of individuals, families and groups as microsystems with complex health needs. Teaching learning theory and primary prevention concepts related to groups in the community. (Y)

**414. Nursing of Individuals, Families and Groups within a Microsystem (Focus: Family). Cr. 4**

Prereq: admission to nursing senior year; Michigan R.N. licensure; CPR certification; liability insurance; health clearance. Course equates to 4 credits in NUR 411, which may not be taken for credit after NUR 414. Material fee as indicated in *Schedule of Classes*. Nursing care supporting the adaptation of individuals, families and groups as a microsystem with complex health needs. (Y)

**415. Nursing of Individuals, Families and Groups within a Macrosystem (Focus: HCDS). Cr. 3**

Prereq: admission to nursing senior year; Michigan R.N. licensure; BCLS certification; liability insurance; health clearance. Course equates to 3 credits in NUR 412, which may not be taken for credit after NUR 415. Material fee as indicated in *Schedule of Classes*. Nursing care supporting the adaptation of individuals and groups with complex health needs within the community and health care macrosystem. General systems theory, health care delivery system and organizational theory. (Y)

**416. Nursing of Individuals, Families and Groups within a Macrosystem (Focus: Community). Cr. 4**

Prereq: admission to nursing senior year; Michigan R.N. licensure; BCLS certification; liability insurance; health clearance. Course equates to 4 credits in NUR 412, which may not be taken for credit after NUR 416. Material fee as indicated in *Schedule of Classes*. Nursing care supporting the adaptation of individuals and groups with complex health needs within a community; community assessment, health care delivery system, epidemiology and primary prevention concepts related to the community, broad-scale health issues, values and sanctions of communities. (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. BCLS 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; ethical issues in nursing practice. (F,W)

**426. Research Process Applied to Health Problems. Cr. 2-4(4 req.)**

Prereq: senior standing. Research experience dealing with health variables; formulation of research questions; development and implementation of a small study. (I)

**427. Special Topics in Maternal and Child Nursing. Cr. 2-4(4 req.)**

Prereq: senior standing. BCLS 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. 2-4(4 req.)**

Prereq: senior standing. BCLS 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. (Y)

**429. Special Topics in Community Health Nursing.**  
**Cr. 2-4(4 req.)**

Prereq: senior standing. BCLS 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)

**434. Group Theory, Process and Dynamics Applied to Nursing.**  
**Cr. 1**

Prereq. or coreq: NUR 435 for R.N. or transfer students. Theories of the group and their use in nursing; use of group processes and dynamics in nursing; communication networks and development phases in nursing groups; strategies for decision-making and conflict resolution; leadership and nurse leader interventions and power in small groups; strategies for obtaining power relevant to nursing. (F,W)

**435. Seminar in Processes and Dynamics of Groups Applied to Nursing.** Cr. 2

Prereq. or coreq: NUR 434 for transfer or R.N. students. Experiential seminar. Concepts related to group process in health care settings; concepts and methods of group assessment analysis and evaluation; nursing intervention approaches and strategies useful in working with staff groups to increase the quality of nursing care; the process of making clinical nursing judgments within a group context. (T)

**450. Perspectives in Nursing.** Cr. 3

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 554 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

Prereq: introductory course in anthropology. 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. Organization and Change of Health Care Services.** Cr. 2

Analysis of the organization and effectiveness of the health delivery system. Emphasis on dynamic interaction of system components and the evolutionary nature of change through health planning and financing. (F,W)





# **College of Pharmacy and Allied Health Professions**

*INTERIM DEAN: HANLEY N. ABRAMSON*

# 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.

## 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.

## 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:

### Undergraduate Programs

*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*

*Certificate in Occupational Therapy*

*Bachelor of Science in Pharmacy*

*Bachelor of Science in Physical Therapy*

*Bachelor of Science in Radiation Therapy Technology*

*\* 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  
Pharmaceutical Administration  
Pharmaceutics  
Pharmacology/Toxicology

*\* Master of Science in Anesthesia*

*\* Master of Science in Medical Technology*

with specialization in  
Clinical Laboratory Instrumentation  
Education/Management  
Hematology  
Immunohematology

*\* Master of Science in Occupational Therapy*

*\* Doctor of Philosophy — with a major in*

Pharmaceutical Sciences with specialization in  
Medicinal Chemistry  
Pharmaceutical Administration  
Pharmaceutics  
Pharmacology/Toxicology

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

## COLLEGE DIRECTORY

### *Interim Dean:*

Hanley N. Abramson .....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

### *Assistant to the Dean:*

Billie L. Brown .....127 Shapero Hall; 577-1574

### *Business Manager:*

Mary Mistaleski .....101 Shapero Hall; 577-1576

### *Graduate Officer:*

Gary D. Fenn .....121 Shapero Hall; 577-0820

### *Continuing Education Programs:*

Willis E. Moore .....628 Shapero Hall; 577-1714

### *Minority Recruitment and Retention:*

T. Delores Clark .....145 Shapero Hall; 577-4814

### *Registrar:*

Richard H. Schell .....139 Shapero Hall; 577-1716

### *Student Affairs:*

Frank P. Facione ..... 143 Shapero Hall; 577-1719

## *Faculty of Pharmacy*

### *Pharmaceutical Sciences:*

Hanley N. Abramson .....528 Shapero Hall; 577-1737

### *Pharmacy Practice:*

Salvador A. Pancorbo .....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:*

625 Mullett; 577-1210

### *Occupational Therapy:*

Miriam C. Freeling .....309 Shapero Hall; 577-1435

### *Physical Therapy:*

Mable Sharp .....439 Shapero Hall; 577-1432

### *Radiation Technology:*

Diane Chadwell ..... 117 Shapero Hall Annex; 577-1137

Mailing address for all offices: College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, Michigan 48202.

## FACULTY OF PHARMACY

### Pharmacy Practice

*Office:* 328 Shapero Hall

*Chairperson:* Salvador A. Pancorbo

### *Associate Professors*

Gary D. Fenn, Paul J. Munzenberger, Salvador A. Pancorbo, David K. Solomon, Gregory S. Umstead

### *Adjunct Associate Professors*

Brack A. Bivins, Kenneth H. Fish, Richard L. Lucarotti, Percy R. McCain, Douglas A. Miller, Larry K. Shoup, Dennis P. Swanson, Vern F. Thudium, Ronald T. Turnbull

### *Assistant Professors*

Terry J. Baumann, David J. Edwards, Frank P. Facione, Susan C. Fagan, Martha J. Miller, Merlin V. Nelson, David R. Rutledge, Michael J. Rybak, Paul C. Walker, Nancy J. Wenzloff,

### *Adjunct Assistant Professors*

Mona Abul-Husn, J.V. Anandan, Daniel M. Ashby, David S. Bach, Richard C. Berchou, Julie R. Berman, Roger D. Blevins, Steven C. Boike, Christine M. Brettfeld, Thomas C. Brown, Thomas G. Burnakis, Paul W. Bush, Pranatharthi H. Chandrasekar, James N. Clarke, Daniel M. Colaluca, Clyde N. Cole, William A. Cornelis, Simon M. Cronin, Brian W. Dennis, Cynthia G. Derouin, Gerald L. Emmer, Joseph A. Harris, Ashwaq E. Hermes, Richard H. Jennings, Matthew H. Johnson, Barry M. Karath, Ilona D. Levay, Donald P. Levine, Ronald H. Lukaszewicz, William J. Martin, Neil Massoud, Robert Milewski, John F. Mitchell, George H. Peck, Jr., William C. Porter, Michael F. Powell, Michael A. Preuss, Terrance L. Rehder, Stephanie A. Rybak, Randy F. Schad, Cynthia K. Schnaar, Janice M. Shier, Candice V. Simkins, Susan A. Sluis, Geralynn B. Smith, Andrew Sopchak, Diana L. Twyman, Bruce E. Vinson, Debra M. Wallingford, Patrick W. Waters, David B. Wright, Barbara J. Zarowitz

### *Adjunct Instructors*

Maudestine Bell, James W. Bock, Gerald E. Bodendistel, Marija G. Brandoline, Lawrence Cantor, Michael G. Ciluffo, E. Philip Cole, John S. Dryps, Thomas C. Feltz, Ervin A. Galecki, Timothy R. Geniac, David L. Jakubowski, Dennis B. Halstead, Keith D. Hazely, George C. Jacobs, Thomas R. Jantz, Evlambio B. Johnson, Kevin L. KKauffmann, Beverly P. Kershaw, G. Richard Krieger, Jack Kutnick, Bert E. Labadie, Ruth A. LaFontaine, Anne E. Laginess, William W. MacDonald, Gary I. Mark, Stella R. Martin, Ronald A. McEachen, Julius S. Megyesi, Sheila A. Meshinski, Thomas P. Michalski, Joslyn Miller, Zdzislaw J. Miloboszewski, Jerome D. Mills, Henry J. Mioduch, Mark E. Mlynarek, Michael M. Mouzakis, John J. Nagelhout, Marilyn T. Nash, Estella M. Pierce, Leonard W. Ptak, Linda Ringer, Alan Rogalski, Thomas F. Rolands, Bernard A. Schiff, Deborah H. Schweyen, Richard Shore, Elizabeth A. Simpson, Laurence M. Sirois, Robert F. Smith, Richard T. Smolarek, Martha K. Sorrentino, Robert T. Stankiewicz, Joseph A. Stark, Lawrence M. Stein, Kris R. Stiles, Linda S. Strausbaugh, Edward G. Szandzik, Cheryl A. Szof, Steven J. Tebay, Mary C. Thorsby, Phillip Vasquez, Bernard J. Victor, Lisa R. Welford, James E. Williams, Christopher Witting, Joseph Wolf, Alison Q. Wolfson, Moses C. Wu

## Pharmaceutical Sciences

Office: 528 Shapero Hall

Chairperson: Hanley N. Abramson

### Professors

Hanley N. Abramson, Harold E. Bailey (Emeritus), Martin Barr, Raymond J. Dauphinais, Melvin F. W. Dunker (Emeritus), Robert T. Louis-Ferdinand, Willis E. Moore, Janardan B. Nagwekar, Henry C. Wormser

### Associate Professors

Bhupendra R. Hajratwala, Richard K. Mulvey (Emeritus)

### Assistant Professors

Jon W. Banning, Randall L. Commissaris, Joseph P. Nachtman, Craig K. Svensson

### Instructor

Cecelia N. Turczynski (Emeritus)

### Adjunct Instructor

John J. Nagelhout

## Degree Programs

### *Bachelor of Science in Pharmacy*

#### \* *Doctor of Pharmacy—*

*with a major in Clinical Pharmacy*

#### \* *Master of Science—with majors in*

*Hospital Pharmacy*

*Pharmaceutical Science with specialization in*

*Medicinal Chemistry*

*Pharmaceutical Administration*

*Pharmaceutics*

*Pharmacology/Toxicology*

#### \* *Doctor of Philosophy—with a major in*

*Pharmaceutical Sciences with specialization in*

*Medicinal Chemistry*

*Pharmaceutical Administration*

*Pharmaceutics*

*Pharmacology/Toxicology*

## 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 settings.

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.

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

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.



# 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.....	3-4 units
Foreign Language.....	1-2 units
Mathematics.....	3-4 units
Laboratory Science.....	2-3 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.

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.

## First and Second Years — Preprofessional Core

	Credits
BIO 101 — Basic Biology I.....	4
BIO 220 — Introduction to Microbiology.....	4
CHM 107 — Principles of Chemistry I.....	4
CHM 108 — Principles of Chemistry II.....	5
CHM 224 — Organic Chemistry I.....	4
CHM 226 — Organic Chemistry II.....	4
CSC 101 — Introduction to Computing.....	3
ECO 100 — Survey of Economics.....	4
ENG 102 — Freshman Composition.....	4
ENG 2xx — Any 200 level elective.....	3
MAT 201 — Calculus I.....	4
PHY 213 — General Physics.....	4
PHY 214 — General Physics.....	4
P S 101 — American Government.....	4

(These requirements *must* be completed by the end of the Spring/Summer Term 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.)

For students applying to the Professional Program in 1987 and 1988, eighteen credits of electives (liberal arts courses other than the core courses above) should be distributed between humanities or social sciences. For students applying to the Professional Program in Fall 1991 and thereafter, the remaining eighteen credits must be from courses chosen to meet the University General Education Requirements not satisfied by the above required core courses. Students entering the University prior to Fall 1991 should contact the University Advising Office regarding satisfaction of General Education Requirements. Ideally, all of these credits should be completed prior to commencing professional study; however, up to thirteen credits may be completed during summer terms after admission into the professional program:

	Credits
* Oral Communication.....	2
* Critical or Analytical Study.....	3
History Studies.....	3
Foreign Culture.....	3
Visual and Performing Arts.....	3
Philosophy and Letters.....	3
Library Orientation (UGE 100).....	1

Admission to the pharmacy curriculum is competitive and consideration is given to the following criteria:

A. Core honor point average which is calculated from the grades earned in the required courses listed in section 2 above.

Honor point averages are calculated on the basis of the last grade earned in any course. Core courses may be repeated to elevate a student's h.p.a. However, students with an excessive number of repeats will be given lower priority in the admissions evaluation.

B. Two completed recommendation forms—from either two faculty members, or one faculty member and one employer. (These forms are available in the Office of the Registrar and must be submitted before the application will be evaluated.)

C. Biographical essay (part of pharmacy application).

D. Fulfillment of the University English Proficiency Requirement (see page 21).

*In addition*, a personal interview with a member of the Admissions Committee may be required.

## Professional Program Admission

Enrollment in the 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. Admissions decisions are made by the Admissions Committee of the Faculty of Pharmacy. Admission to the Pharmacy Curriculum is granted *only* for the fall semester.

**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*. This application is available from, and should be submitted to, the Office of the Registrar, College of Pharmacy and Allied Health Professions, 139 Shapero Hall.

This application is in addition to the *Application for Undergraduate Admission* or the *Application for Change of Undergraduate College Within Wayne State University* required for those applicants attending another college within the University.

**Application Deadline:** The pharmacy application should be submitted by May 1, in order to ensure a decision before the Fall semester begins.

Students transferring from outside the University who anticipate admission to the pharmacy curriculum (see page 361), granted only in the fall semester, will find it advantageous to have their Wayne application *completed no later than April 1, and their Pharmacy application no later than May 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.

\* Can be waived by passing a competency examination, but equivalent number of credits must then be elected in humanities or social science courses.



## 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 360), 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 362). All course work must be done in compliance with the academic procedures of the University (see pages 20-31) and the College (see page 363) as well as the following standards:

**Residence:** a student must have devoted at least three academic years to resident study in an accredited college or colleges of pharmacy, of which the final professional year and last thirty credits must be taken at the Wayne State University College of Pharmacy and Allied Health Professions.

**Honor Point Average:** a student must maintain an honor point average of at least 2.0 in total residence credit and in all pharmacy courses.

**Curriculum and Program Requirements:** a student must complete the curriculum and program requirements, remove any marks of 'I' or 'Y', and be recommended by the faculty for the degree. The student must complete the required minimum number of credits, elect courses in the proper sequence in the appropriate curriculum shown below, and meet any course prerequisite or corequisite, unless excused from doing so by the Dean.

### PHARMACY CURRICULUM

#### First Professional Year

<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 .....	3
PSC 330 — Pharmaceutical Biochemistry I .....	2
<b>Total:</b>	<b>17</b>

#### *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
<b>Total:</b>	<b>17</b>

#### 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
<b>Total:</b>	<b>17</b>

##### *Winter Semester*

PPR 400 — Evaluating Pharmacy Literature .....	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 .....	2
<b>Total:</b>	<b>17</b>

#### 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 and one elective rotation (no other course work may be taken during this term):

	<i>Credits</i>
PPR 512 — Hospital Pharmacy Externship .....	7
PPR 513 — Community Pharmacy Externship .....	4

##### *One of the following:*

PPR 514 — Pediatric Pharmacy Externship .....	4
PPR 515 — Psychiatry/Neurology Pharmacy Externship .....	4
PPR 516 — Ambulatory Pharmacy Externship .....	4
PPR 517 — Enteral/Parenteral Nutrition Externship .....	4
PPR 518 — Geriatric Pharmacy Externship .....	4
<b>Total:</b>	<b>15</b>

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

##### *Fall Semester*

	<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
<b>Total:</b>	<b>14</b>

#### Hospital/Institutional Practice Option

##### *Winter Semester*

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
<b>Total:</b>	<b>14</b>

#### Pre-Graduate Study Option

##### *Fall/Winter Semester*

PSC 580 — Introduction to Research .....	4
* PSC 58x or PPR 58x — Seminar .....	1
* PSC 59x or PPR 59x — Directed Study .....	3
Professional Electives .....	6
<b>Total:</b>	<b>14</b>

#### 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 Term immediately

\* Selected from: medicinal chemistry, pharmaceutical administration, pharmaceutics, or pharmacology.

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* *Credits*

PPR 512 – Hospital Pharmacy Externship .....	7
PPR 513 – Community Pharmacy Externship .....	4

*One of the following:*

PPR 514 – Pediatric Pharmacy Externship.....	4
PPR 515 – Psychiatry/Neurology Pharmacy Externship.....	4
PPR 516 – Ambulatory Pharmacy Externship.....	4
PPR 517 – Enteral/Parenteral Nutrition Externship.....	4
PPR 518 – Geriatric Pharmacy Externship .....	4
<b>Total:</b>	<b>15</b>

*Fall Semester*

PPR 5xx – Pharmacy Professional Elective.....	2
PPR 590 – Directed Study.....	3
PPR 660 – Biostatistics.....	3
<sup>1</sup> 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
<b>Total:</b>	<b>15</b>

*Winter Semester*

<sup>1</sup> PPR 664 – DP&T 4: Psychiatry/Neurology.....	2
PPR 665 – DP&T 5: Gastro/Endocrinology.....	2
PPR 666 – DP&T 6: Nephrology/Fluid & Electro.....	3
PPR 667 – DP&T 7: Rheumatology/Pediatric/Patient Assess.....	2
<sup>2</sup> PPR 760 – Introduction to Clinical Research.....	2
<sup>2</sup> PPR 767 – Applied Pharmacokinetics: Advanced.....	4
<sup>2</sup> PPR 784 – Clinical Pharmacy.....	2
<b>Total:</b>	<b>17</b>

## 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 520 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.



<sup>1</sup> Disease Processes and Therapeutics.

<sup>2</sup> Graduate credit under Senior Rule.

# ACADEMIC PROCEDURES

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 pharmacy students.

## Credits

A credit (credit hour) is defined as one class hour requiring a minimum of two hours of preparation per week carried through a semester. A three hour laboratory period is generally regarded as the equivalent of one class hour.

Some of the early course work of a student attempting to complete degree requirements may become out-of-date, because of a protracted interruption in his/her education or irregular registration over an extended period of time. Such determinations are made by the Faculty of Pharmacy and a student may be required to take refresher work or otherwise demonstrate preparation for advanced courses.

## 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.

## Time Limitation

Because of the rapid changes in technology and in the methods and concepts of patient care, students in the pharmacy program 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 five years. Students who interrupt their academic program will have to apply for reinstatement on an individual basis.

## Probation

Probationary status is a warning that, unless a student's academic performance improves, he/she is subject to dismissal from the College. Any student who is on probation is required, as a condition of his/her continued registration, to meet with his/her faculty adviser not less than three times during each semester he/she remains on probation. While on probation, a student may not represent the college in student activities nor hold student elective offices. The Report of Final Marks sent to a student is notice of his/her academic status. Receipt of a mark/grade of 'I,' 'E,' 'X,' or 'W,' continuation on professional and/or academic probation or failure to meet requirements specified by terminal or special probation may be considered sufficient reason to dismiss a student from the pharmacy curriculum.

**Semester Probation:** A student in the pharmacy curriculum is on semester probation when his/her semester honor point average is below 2.0.

**Professional Probation:** A student in the pharmacy curriculum is on professional probation when his/her honor point average in pharmacy courses (i.e., professional honor point average) falls below 2.0 (supercedes semester probation).

**Academic Probation:** A student in the pharmacy curriculum is on academic probation when his/her cumulative honor point average falls below 2.0 (supercedes professional probation).

**Terminal Probation:** A student in the pharmacy curriculum who has been on professional and/or academic probation has his/her status changed to terminal probation if his/her professional and cumulative honor point averages have not reached 2.0 after two semesters. This represents a *final* notice to the student that if the professional and cumulative honor point averages have not reached 2.0 by the end of that semester, the student will be dismissed from the program.

The undergraduate student on semester, professional, academic or terminal probation regains regular standing when the current semester, professional and cumulative honor point averages are at least 2.0.

**Special Probation:** A student in the pharmacy curriculum may be placed on special probation irrespective of his/her honor point average when, in the judgement of the Committee on Academic and Professional Progress, he/she has failed to satisfactorily complete curricular requirements (i.e., receipt of marks/grades of 'I,' 'E,' 'X,' or 'W') or by the accumulation of an excessive number of 'D' grades in pharmacy courses. The designation of special probation supercedes semester, professional and academic probation. A student who is on special probation has his/her program requirements (i.e., course elections and required minimum academic performance) specified for each semester until the student is either returned to regular status or dismissed from the program.

## Readmission Following Academic Dismissal

Undergraduate students who have been dismissed from the pharmacy program for academic reasons may apply for readmission after not less than one calendar year following the effective date of their dismissal. Application should be made 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. Readmission requires a favorable recommendation by *both* the Admissions Committee *and* the Committee on Academic and Professional Progress.

**Failure in a Pharmacy Course:** Consistent with University and College policy, each member of the Faculty of Pharmacy establishes criteria required for successful completion of individual courses. It is the student's responsibility to know these criteria, and to consult as appropriate or necessary, with the faculty member as to his/her progress in the course. Questions concerning any aspect of a student's performance in a course should always be directed to the faculty members who teach the course.

The status of a student receiving an 'E' grade in a course in the pharmacy curriculum will automatically be referred to the Academic and Professional Progress Committee for review of the student's academic performance in all pharmacy courses taken that semester. Based upon Committee assessment of the student's total status, a *recommendation* may be provided to the instructor that a re-examination be offered to the student and a deadline established for

completion of the re-examination, where appropriate. The faculty member retains the right to accept or reject this recommendation. The instructor always retains responsibility for setting criteria for adequate completion of a re-examination.

Decisions of the Committee on Academic and Professional Progress may be appealed to the Committee by the student involved. This should be in the form of a letter of petition 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.

## 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.

## Student Conduct

Every student is subject to all regulations set forth by the College and the Faculty of Pharmacy, governing student activities and student behavior within courses of the College and in use of its facilities. The College and Faculty have the responsibility of making these regulations known to its students. It is the student's responsibility to become thoroughly familiar with College regulations and obtain clarification of any rules unclear to him/her. 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, 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.

**Attendance at Commencement:** a student is expected to be present at Commencement exercises.

## 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, upon vote of the Committee on Academic and Professional Progress, 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.

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.)

## Outside Employment

The undergraduate curriculum has been arranged with the presumption that the student will devote full time and energy to the pharmacy 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, has the responsibility for maintaining the appropriate balance between work outside of the College and satisfactory achievement in the classroom.



# STUDENT AND ALUMNI ACTIVITIES

The Pharmacy Student Advisory Board (PSAB) is a representative organization of the pharmacy student body, organized 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.

A chapter of the Student American Pharmaceutical Association (SAPhA), the national professional society of pharmacists, was organized at the College in 1946 and affiliated with the A.Ph.A. in 1947. In 1961, members of the SAPhA chapter voted to affiliate with the Michigan Pharmacists Association (MPA) in a joint student-membership arrangement. Active participation in the joint SAPhA-MPA chapter and its varied programs of interest is encouraged.

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, the national honor society of pharmacy, elects students to membership who attain the required academic qualifications and who are recommended by the faculty.

The following national professional pharmaceutical fraternities maintain active chapters at the College: Alpha Zeta Omega, Kappa Psi, Phi Delta Chi, and Lambda Kappa Sigma.

## Pharmacy Alumni Association

The Pharmacy Alumni Association was established for the purpose of maintaining a close relationship between the Faculty of Pharmacy and its graduates.

The Alumni Association contributes to the development and general welfare of the Faculty of Pharmacy, its students, and the profession of pharmacy. The Association very actively cooperates with the Faculty in fostering various annual and special events of interest to the students, faculty, and alumni.

# FINANCIAL AIDS, SCHOLARSHIPS AND AWARDS

Students may apply directly for federal financial aids (both scholarship and/or loan programs) at the University Office of Scholarships and Financial Aids, Room 222, Administrative Services Building. 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 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 Room 143 Shapero Hall.

## Scholarships

*Martin Barr Rho Pi Phi Scholarship:* A \$100 check is awarded annually by Rho Pi Phi Fraternity to a second year student who, in the judgment of the faculty and a fraternity committee, has distinguished himself scholastically and professionally.

*Sidney Barthwell Pharmacy Scholarship/Loan Fund:* This fund is established to provide financial assistance primarily for black American pharmacy students in good standing for fees and books for a period not to exceed two semesters.

*Paul C. and Nettie Deutch Scholarship Fund:* 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.

*Fairlane Pharmacy Scholarship:* A fund established by Fairlane Pharmacies provides partial tuition for two pharmacy students each year. Preference is given to students residing in Warren, Michigan.

*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.

*Pharmacy Alumni Association Scholarship Fund:* A fund is maintained by the Pharmacy Alumni Association to assist financially needy and worthy pharmacy students.

*Frank O. Taylor Scholarship of Wayne State University (Pharmacy):* 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 shall be those indicating an interest in pursuing a career in Industrial Pharmacy.

## Loans

*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.

**Robert L. Fleischer Memorial 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 Wayne State University; it can be loaned to pharmacy students who are in good standing and who 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 Emergency 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.

**John L. Kirchner Memorial Emergency Loan Fund:** This fund established in memory of Mr. Kirchner by family and friends provides financial assistance to students in good standing for fees and books.

**Minnie and Max Millman Memorial Student Loan Fund in Pharmacy:** 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.

**Max Milstein Memorial Loan Fund:** A memorial fund established by the family and friends of Mr. Max Milstein, alumnus of the College, to provide loans (intended for fees, tuition, books, and supplies) to pharmacy students of the College who are in good academic standing. Available to undergraduate and graduate students.

**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 worthy students 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.

**Student Loan Funds** have been established by the following organizations to provide financial assistance to pharmacy students in good standing:

Metropolitan Detroit Pharmacists Association  
Oakland County Pharmacists Association  
Perry Drug Stores, Inc.  
Wayne County Pharmacists Association  
Wayne State University Pharmacy Alumni Association

**Student Loan Funds** have been established by the following pharmacy graduates and staff of the College as a result of gifts from the Burroughs-Wellcome Company: Martin Barr, Louis Bloch, Earl Cheresch, G. Oliver Daniel, Eugene Dembicki, Jack Kutnick, Ronald E. Mankowski, Leo Pikstein, Linda Ringer, Albert C. Rizzo, Lloyd V. Suey

## Awards

**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.

**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.

**Bristol Awards:** An appropriate book is awarded annually to the graduating student who, in the judgment of the faculty, has shown the greatest professional growth.

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.

**Ruth Davies Flaherty Award:** A certificate is presented by the Grand Council of Lambda Kappa Sigma 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.

**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 \$150 check is awarded by the Lemmon

Company to a graduating student in recognition of superior scholastic performance and outstanding co-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.

*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:* Two sets of books consisting of The Merck Index and The Merck Manual are awarded annually, one to the graduating student attaining the highest average in the overall College program; the other to the graduating student attaining the highest average in the pharmacology and pharmacotherapeutics courses, except that in the event the same individual qualifies for both awards, the second award will be presented to the graduating student with the second highest average in the overall College program.

*Mylan Pharmaceuticals Excellence in Pharmacy Award:* A distinctive certificate as well as a subscription to *Drug Interaction Facts* is presented annually to the graduating 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 Internship 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 second 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:* Upon recommendation of the practice faculty, a suitably engraved plaque is awarded by Roche Laboratories to a graduating student in recognition of superior patient communication skills in clinical pharmacy practice.

*Sandoz Doctor of Pharmacy Award:* Upon recommendation of the practice faculty, an engraved plaque and a check for \$100 is awarded by Sandoz Pharmaceuticals to a graduating Doctor of Pharmacy candidate in recognition of outstanding performance in the doctoral program.

*Smith Kline Beckman Award:* A plaque is presented annually to a graduating senior student in recognition of superior achievement in clinical pharmacy practice.

*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.

*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.

## COURSES OF INSTRUCTION<sup>1</sup>

### Interdisciplinary Health Sciences (IHS)

- 200. Introduction to Health Careers. Cr. 1-2**  
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, nursing, 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. 2**  
Prereq: last professional year standing or consent of instructor. 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,

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

- 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. Material fee as indicated in *Schedule of Classes*. 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) (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) (W)
- 576. Pharmaceutical Manufacturing. Cr. 2**  
Prereq: last year professional standing. The procedures employed in the manufacture of pharmaceuticals. (Formerly PHA 576) (I)
- 580. Introduction to Research. Cr. 4**  
Prereq: last professional year standing. Introduction to research in the pharmaceutical sciences for students contemplating graduate study. (Y)
- 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) (F,W)
- 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) (F)
- 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)
- 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)
- 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) (F)
- ## 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)

**512. Hospital Pharmacy Externship. Cr. 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**

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)

**517. Enteral/Parenteral Nutrition Externship. Cr. 4**

Prereq: last professional year standing. Practicum experience in the provision of enteral/parenteral nutrition to ambulatory and hospitalized patients, using a multidisciplinary team approach to total health care. (I)

**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. General Adult Internal Medicine Externship. Cr. 4**

Prereq: admission to Pharm.D. program. Practicum experience in provision of clinical pharmacy services in health care facilities. (I)

**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)

**571. Special Topics in Professional Practice. Cr. 1-2**

Prereq: last professional year standing. Offered for S and U grades only. Open only to undergraduates. Discussion of current problems affecting professional pharmacy practice. (W)

**572. Special Topics in Clinical Pharmacy. Cr. 2**

Prereq: last professional year standing. Lectures and discussions on pharmacotherapeutics and philosophies of clinical pharmacy practice. (W)

**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. (F)

**575. Oncology Therapeutics. Cr. 2**

Prereq: last professional year standing. Material fee as indicated in *Schedule of Classes*. Lecture and discussion on terminology and the basic principles of therapy of the major malignancies, including pathophysiology and therapy. Ancillary therapy of patients with malignancies. (F)

**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)

**589. Seminar in Pharmacy Practice. 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. (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. 3**

Prereq: last professional year, graduate, or graduate professional standing; consent of instructor. Formulation in interpretation, performance and discharge of contracts; resulting regulation of business, professional and trade practices in pharmacy. (Formerly P A 510) (I)

**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)

**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. (F)

**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. (F)

**663. Diseases Processes and Therapeutics III: Hematology/Oncology. Cr. 2**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: hematology and oncology. (F)

**664. Disease Processes and Therapeutics IV: Psychiatry/Neurology. Cr. 2**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: psychiatry and neurology. (W)

**665. Disease Processes and Therapeutics V: Gastroenterology/Endocrinology. Cr. 2**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: gastroenterology and endocrinology. (W)

**666. Disease Processes and Therapeutics VI: Nephrology/Fluid and Electrolytes. Cr. 3**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: nephrology and fluid electrolytes. (W)

**667. Disease Processes and Therapeutics VII: Rheumatology, Pediatrics and Patient Assessment. Cr. 2**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: rheumatology, pediatrics, patient assessment. (W)

**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)

**682. Sterile Products. Cr. 3**

Prereq: last professional year, graduate, or graduate professional year standing. Material fee as indicated in *Schedule of Classes*. An introduction to the principles, techniques, and equipment employed in the manufacture of sterile products. (I)

**683. Dermatological Preparations. Cr. 2**

Prereq: last professional year, graduate, or graduate professional standing. Material fee as indicated in *Schedule of Classes*. Discussion of common skin disorders, their treatment, and the formulation of topical pharmaceuticals and hypo-allergenic cosmetics. (I)

**685. Radiopharmacy. Cr. 2**

Prereq: last professional year, graduate, or graduate professional standing. Fundamentals of radiopharmacy; emphasis on diagnostic and therapeutic applications of isotopes as well as a general survey of non-medical applications of radioactive pharmaceuticals. (I)

**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. (W)

**687. Geriatric Pharmacy Practice. Cr. 2**

Prereq: last professional year standing, graduate or graduate professional standing. 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)

**688. Mental Health Pharmacy. Cr. 2**

Prereq: last professional year, graduate, or graduate professional standing. Classification of mental disorders, signs and symptoms associated with various forms of mental illness, and various drug regimens used in treatment. (I)

# 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.

**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 or disability, 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 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 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.

\* Consult the Graduate Bulletin.

# ACADEMIC PROCEDURES

*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.*

## UNDERGRADUATE ADMISSION

### 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 HNJ Student Services Building, 3 East, Wayne State University, Detroit, Michigan 48202; telephone: 577-3577. Admissions counselors are available for personal conferences to aid the prospective student.

### 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 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. To be considered, all applicants (except those in mortuary science) 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. 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 Office, second floor, Mackenzie Hall, 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 Shaper 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 374-394). Following are general College and University policies governing baccalaureate programs.

## University General Education Requirements

For complete description, see pages 20-24.

**University Requirement in American Government** —see page 23.

**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, page 24.

## 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 33.

# MEDICAL TECHNOLOGY

Office: 233 Shapero Hall

Chairperson and Deputy Dean of Allied  
Health Professions: Dorothy M. Skinner

## Associate Professor

Dorothy M. Skinner

## Assistant Professors

Janet Brown, Ruth Miles, Ann Wallace

## Adjunct Professors

A. William Shafer, Richard Walker, Joseph Wiener

## Adjunct Associate Professors

Barbara Jenkins, Aaron L. upovich, Gerald Mandell

## Adjunct Assistant Professors

James Adams, Kathryn Beattie, Mara Christiansen, Jean Garza, Grace Hill, Joyce Salancy, Shobha Shah

## Adjunct Instructors

Diane Crockett, Sheila Finch, William Sherman

## 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, hematology, and immunohematology.*

Medical technology is an 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.

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 13. High school prerequisites for applicants pursuing the Bachelor of Science in Medical Technology are:

	<i>high school units</i>
Physics.....	1
Chemistry.....	1
Algebra.....	1.5
Geometry.....	1
Trigonometry.....	0.5

**Recommended:** Latin, German or French, or proficiency in one or more computer programming languages (e.g., BASIC, FORTRAN).

Although the College of 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 269). 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.

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

**PREPROFESSIONAL PROGRAM**

Courses in this program are taken under direction of the College of Liberal Arts:

First Year	Credits
BIO 101 — Basic Biology I.....	4
CHM 105 or CHM 107 — Introductory Principles of Chemistry.....	6
— Principles of Chemistry I.....	4
CHM 108 — Principles of Chemistry II.....	5
CSC 101 — Introduction to Computing.....	3
ENG 102 — Introductory College Writing.....	4
M T 208 — Medical Technology Seminar.....	1
MAT 180 — Elementary Functions.....	4
SPB 101 — Oral Communication: Basic Speech.....	2
UGE 100 — 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 303 — Writing the Research Paper.....	3
* HIS 110 — The Ancient World.....	3
* P S 101 — American Government.....	3
* SOC 200 — Understanding Human Society.....	3
Humanities electives.....	6
Foreign Culture 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, 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. Have taken the Allied Health Professions Admissions Test (application available in the Testing Office, 343 Mackenzie Hall) before April 15. If unable to meet deadline, notify the Department Admissions Chairperson.

5. Submit, in addition to the application, the following:

- (a). References (reference forms available in the University Advising Office) from: One employer and one science faculty member (If no employer, two science faculty references may be submitted).

(b). If the student has transferred to Wayne, official transcripts from all former undergraduate schools must be included.

Since the clinical positions are limited, the Admissions Committee must consider each applicant individually. A sound academic background, a familiarity with the profession and its demands, together with a desire to advance the field of 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	credits
BCH 501, 503 — General Biochemistry Lecture.....	4
BCH 502 — General Biochemistry Laboratory.....	2
I M 550 — Principles of Immunology.....	2
I M 551 — Bacteriology and Immunology.....	5
M T 302 — Hematology I.....	2
M T 304 — Immunohematology.....	2
M T 305 — Hematology II.....	2
M T 306 — Clinical Techniques.....	2
M T 307 — Urinalysis/Hemostasis.....	2
M T 308 — Principles of Clinical Lab. Instrumental Methods I.....	3
M T 309 — Medical Technology Professional Seminar.....	1
M T 310 — 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 — Principles of Clinical Lab. Instrumental Methods II.....	3
M T 404 — Laboratory Administration.....	2

Fourth Year	credits
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 407 — 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.

\* Preferred course to satisfy General Education Requirement.

**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, with a grade of C or better, any of the following courses, need not repeat these courses upon final readmission. If more than one year elapses from the time these courses were successfully completed, the student must repeat the entire course of study. The faculty, however, reserves the right to alter this policy when warranted in any specific case.

MT 306 .....	Clinical Techniques
MT 309 .....	Professional Seminar for Medical Technologists
MT 307 .....	Urinalysis/Hemostasis
IM 550 .....	Immunology

**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 373.

**Time Limitation:** See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 373.

## 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 13. High school prerequisites for applicants pursuing the Bachelor of Science in Medical Technology with a concentration in cytotechnology are:

	<i>high school units</i>
Algebra.....	1.5
Biology.....	1
Chemistry.....	1
Geometry.....	1
Physics.....	1
Trigonometry.....	0.5
Typing.....	0.5

**Recommended:** Latin, German, and/or French, and proficiency in one or more computer languages (e.g., BASIC, FORTRAN).

Although the College of 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 269). 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 101 — Basic Biology I.....	4
BIO 287 — Anatomy and Physiology.....	5
* CHM 107 — Principles of Chemistry I.....	4
CHM 108 — Principles of Chemistry II.....	5
ENG 102 — Freshman Composition.....	4
MAT 180 — Elementary Functions.....	4
PHI 105 — Critical Thinking.....	3
SPB 200 — Effective Speech.....	3
UGE 100 — University and Its Libraries.....	1

### Second Year

BIO 102 — Basic Biology II.....	4
BIO 220 — Introduction Microbiology.....	4
BIO 271 — Comparative Vertebrate Zoology.....	4
CHM 224 — Organic Chemistry I.....	4
ENG 303 — Writing the Research Paper.....	3
HIS 110 — The Ancient World.....	3
P S 101 — American Government.....	3
Humanities Electives.....	6

**Residence:** See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 373.

**Time Limitation:** See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 373.

**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 374. 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 507 — Genetics.....	4
BIO 340 — Principles of Physiology.....	3
BIO 563 — Histology.....	4
BIO 567 — Endocrinology.....	4
CSC 100 — 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 — Medical Technology Parasitology.....	3
M T 450 — Cytotechnology Technique I.....	4
EER 763 — Fundamentals of Statistics.....	3
P S 101 — American Government.....	4
Electives.....	3

### Fourth Year

M T 450 — Cytotechnology Technique I.....	13
M T 451 — Cytotechnology Technique II.....	16

**Academic Standing—Dismissal and Readmission:** For procedures regarding probation and dismissal, students should refer to the paragraphs immediately following the general Bachelor of Science professional program, page 376.

## 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, 222 Administrative Services Building, 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.

\* A qualifying examination in high school chemistry is a prerequisite to electing CHM 107.

# COURSES OF INSTRUCTION<sup>1</sup>

## Biochemistry (BCH)

### 101. Introductory Biochemistry. Cr. 2

Prereq: CHE 101. Fundamentals of biochemistry, especially areas of importance to students of occupational and physical therapy.

### 501. General Biochemistry Lectures. Cr. 2

Prereq: quantitative analysis. Structural biochemistry, metabolism of carbohydrates; lipids, proteins and nucleic acids. (F,W)

### 502. General Biochemistry Laboratory. Cr. 2

Prereq: quantitative analysis. Material fee as indicated in *Schedule of Classes*. Laboratory experience in quantitative techniques of biochemical importance. (F)

### 503. General Biochemistry Lecture. Cr. 2

Prereq: BCH 501. Clinical enzymology; metabolism of steroids; hormones; biochemistry of tissues and body fluids. (W)

## Immunology and Microbiology (I M)

### 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)

### 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. Immunoematology. 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. Clinical Techniques. Cr. 2

Prereq: junior in medical technology or consent of instructor. Material fee as indicated in *Schedule of Classes*. Theoretical and practical information on specimen collection, laboratory math calculations, and quality control in clinical laboratory testing; serology theory and methods. (F)

### 307. Urinalysis/Hemostasis. (PSL 307). Cr. 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 I. Cr. 3

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 and the theoretical basis of instrument design. Application of instrumental methods to clinical laboratory. Spectrophotometric methods; fluometric methods. (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. Immunoematology 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. Principles of Clinical Laboratory Instrumental Methods II. Cr. 3

Prereq: M T 308. Material fee as indicated in *Schedule of Classes*. Continuation of M T 308. Application of instrumental methods to clinical laboratory. Absorbtion and emission methods; colligative properties methods; chromatographic methods; laboratory automation: computer applications. (S)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**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)

**450. Cytotechnology Technique I. Cr. 4-17**

Prereq: senior standing in medical technology program, cytotechnology concentration. The study of cells. Analysis of cells that are spontaneously exfoliated, mechanically dislodged by irritation, brushing or scraping, or forcibly removed by needle aspiration. Cytologic methods as applied to the detection and diagnosis of cancer. (F,S)

**451. Cytotechnology Technique II. Cr. 16**

Prereq: M T 450. Continuation of M T 450. (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. Clinical Pathology Correlation. Cr. 1-2**

Prereq: senior standing in medical technology program. Correlation of laboratory data and clinical history through the analysis of case studies. (W,S)

# MORTUARY SCIENCE

*Chairman:* Gordon W. Rose

*Professor*

Gordon W. Rose

*Assistant Professor*

Mary Louise M. Williams

*Lecturer*

Gerald P. Cavellier

*Adjunct Associate Professor*

Edward J. Kerfoot

## Certificate and Degree Programs

*Three-Year Certificate in Mortuary Science*

*Bachelor of Science in Mortuary Science*

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 thirty 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 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 North Central Association of Colleges and Schools;
- (2) The American Board of Funeral Service Education; and
- (3) 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 late August to early May. 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 13.

### PRE-PROFESSIONAL PROGRAM

To be considered for admission to the professional year, applicants must have completed (as part of the required fifty-two credits) the courses listed below (or their equivalents, for transfer students). *These courses are included in the certification requirement of the Michigan State Board of Examiners in Mortuary Science as of July 13, 1962.* All transferred courses must have been passed with an overall grade average of 'C' or better if completed at an accredited college or university.

#### First Semester

	<i>Credits</i>
BIO 101—Basic Biology I .....	4
MAT 180—Elementary Functions .....	4
ECO 101—Principles of Macroeconomics.....	4
ENG 102—Freshman Composition.....	4
	Total: 16

#### Second Semester

BIO 102—Basic Biology II.....	4
PSY 101 or PSY 102	
Introductory Psychology.....	4
Elements of Psychology .....	3
ENG 270—Introduction to Contemporary English.....	3
ECO 102—Principles of Microeconomics.....	4
UGE 100 — The University and Its Libraries.....	1
	Total: 15-16

#### Third Semester

CHM 105 or CHM 107	
Introductory Principles of Chemistry.....	6
Principles of Chemistry.....	4
SPB 200—Effective Speech.....	3
CSC 100 or CSC 102	
Introduction to Computer Science.....	3
Computer Science I.....	4
ACC 301—Elementary Accounting Theory I.....	4
	Total: 14

#### Fourth Semester

PSY 260—Psychology of Social Behavior.....	4
CHM 108—Principles of Chemistry II.....	5
PHI 105 or PHI 232	
Critical Thinking.....	3
Introduction to Ethics.....	4
P S 101—American Government.....	4
	Total: 16

**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 at least fifty-two semester (seventy-eight quarter) credits at an accredited collegiate institution with an overall grade average of 'C' or better.
2. Completion of at least fifty-two semester (seventy-eight quarter) credits at a recognized but unaccredited collegiate institution with a cumulative average of 'B' or better, or
3. Completion of at least fifty-two semester (seventy-eight quarter) credits and demonstration of competencies through a testing program as prescribed by the Office of Admissions of Wayne State University.

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.

## 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 thirty-eight 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 four semesters. The registrant/enrollee is expected to complete the requirements for certification within two academic years, or four semesters. Any exception to this policy must have prior written approval of the

departmental director or his designee.

**PROFESSIONAL PROGRAM**

**Third Year**

<i>Fifth Semester</i>	<i>Credits</i>
M S 310—Chemistry.....	4
M S 350—Embaling I.....	3
M S 360—Restorative Art and Modeling I.....	2
M S 375—Mortuary Accounting.....	3
M S 380—Mortuary Management I.....	3
M S 405—Human Anatomy and Physiology.....	4
<b>Total:</b>	<b>19</b>

*Sixth Semester*

M S 340—Mortuary Law.....	3
M S 351—Embaling II.....	3
M S 361—Restorative Art and Modeling II.....	2
M S 380—Mortuary Management II.....	3
M S 390—Psychology of Funeral Service.....	2
M S 425—Microbiology.....	4
M S 430—Medical Science.....	2
<b>Total:</b>	<b>19</b>

## Bachelor of Science in Mortuary Science

**Admission:** The Bachelor of Science degree in mortuary science is based on the same two years of preprofessional coursework 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, page 380.

**DEGREE REQUIREMENTS:** The candidate for the degree of Bachelor of Science in Mortuary Science must satisfactorily complete the following 128 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)..... 38 credits
- c. Senior year (see below)..... 30 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**

<i>Seventh Semester</i>	<i>Credits</i>
ANT 211—Introduction to Physical Anthropology.....	4
BIO 187—Anatomy and Physiology.....	5
PHI 111—Ethical Issues in Health Care.....	3
One Course in Foreign Culture.....	3
<b>Total:</b>	<b>15</b>

*Eighth Semester*

ANT 611—Human Genetic Variation.....	3
HIS 120—The Medieval World.....	3
HUM 101—Introduction to Art and Music in Western Civilization.....	4
M S 596—Mortuary Science Seminar.....	2
Elective.....	3
<b>Total:</b>	<b>15</b>

## Academic Procedures

### 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** ..... \$40.00 plus \$88.50 per credit.  
**Non-Resident** ..... \$40.00 plus \$192.00 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, 222 Administrative Services Building.

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.

### 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.

### 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 the

requirement of one year of resident training if the applicant has an additional year of instruction in a program duly accredited beyond the three years prescribed. 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.

## COURSES OF INSTRUCTION<sup>1</sup> (M S)

### 310. Chemistry. Cr. 4

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. 3

Legal methods of disposition of human remains; legal responsibilities of the funeral service practitioner; common and statutory laws, state laws regulating funeral service practices and establishments; interment and disinterment; probate law; cemetery regulations; transporting of human remains. (W)

### 350. Embalming I. Cr. 3

Material fee as indicated in *Schedule of Classes*. Theories, practices, and techniques of biologic preservation and disinfection of human remains; case analyses; methods of application of embalming chemicals; use of special instruments and equipment; special case embalming. Laboratory teaching of all practical aspects of embalming. (F)

### 351. Embalming II. Cr. 3

Prereq: M S 350. Material fee as indicated in *Schedule of Classes*. Continuation of M S 350. (W)

### 360. Restorative Art and Modeling I. Cr. 2

Material fee as indicated in *Schedule of Classes*. Theories, methods, and techniques used in the restoration of superficial tissues and features; color theory, cosmetology, facial proportions, skin tones correlated with reconstruction; clay and wax modeling; actual restorations performed on human remains. (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. (F)

### 380. Mortuary Management I. Cr. 3

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)

### 390. Psychology of Funeral Service. Cr. 2

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. (W)

### 405. Human Anatomy and Physiology. Cr. 4

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)

### 425. Microbiology. Cr. 4

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. 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. (W)

### 596. Mortuary Science Senior Seminar. Cr. 2

Prereq: mortuary science degree applicant. (W)



<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

# OCCUPATIONAL THERAPY

Office: 309 Shapero Hall

Chairperson: Miriam C. Freeling

## Professor

H. Barbara Jewett (Emerita)

## Associate Professors

Elizabeth A. Boles, Suesetta McCree

## Assistant Professors

Karmen Brown, Miriam Freeling, Sydelle Morrison, Nancy J. Powell

## Part-Time Instructors

Joan Berry, Kathleen Reynolds-Lynch

## Adjunct Instructor

Linda Leggs

## Cooperating Faculty

Fred Attebury, Merlin Ekstrom, Leslie Isler, Eberhard Mammen, Lowell McCoy, Robert Pohl, Martha Rodin, Thomas Sullivan, Edward Tracy

## Field Work Supervisors

Mary Adams, Mary Audia, Marian Baker, Mary Barclay, Royanne Baril, Angie Baycie, Johanna Brady, Gary Bykowsky, Pearl Ciaramitara, Gerry Conti, Valerie Cuschieri, Pat Davion, Mary Delamora, Margo Dexter, Virginia Dickie, Marguerite Dosetelle, Joanne Douglas, Rosalie Drake, Kathy Dufault, Donna Dykstra, Carrie Edwards-Welch, Paula Ellias, Kathy Fedon, Karen Flora, Ruth Fried, Kathy Gabe, Kathie Gonyeau, Joyce Gordon-Raiford, Donna Gravelly, Patricia Griswald, Deborah Groth, Gloria Grubin, Ruth Grummon, Colleen Harding, Carroll Hass, Geraldine Howard, Beverld Jacober, Sherrie Jaarsma, Joan Johnson, Jan Kitzmore, Kathy Kaufman, Rosalie King, Linda Knudson-Lind, Toni Kowamoto, Susan Koziatek, Jane Lingo, Patricia Lowenstein, Donna Lucke, Sue Maddux, Patty Mahoney, Melanie Melaas, Margo Mansfield, Dawn McDuffy, Katherine McGuire, Terry Meller, Kathy Miller, Laura Miller, Judy Mortenson, Cheryl Constance Rance, Cynthia Ricco, Susan Robson, Gretchen Rose, Lelly Sargant, Elizabeth Scheld, Nancy Schildgen, Mary Slingerland, Donna Sokoly, Judy Stern, Rebecca Taylor, Toni Thompkins, Kim Vasko-Hafer, Mary Waldschmidt, Patricia Warnecke, Judith Wayne, Kay Wizenski, Kim Wolfe, Marilyn Zasuwa

## Degree Programs

### *Bachelor of Science in Occupational Therapy*

### *Post-Bachelor Certificate in Occupational Therapy*

### *\* Master of Science in Occupational Therapy*

Occupational therapy is the art and science of directing man's participation in selected tasks of self-care, work and play in order to restore, reinforce and enhance performance, to diminish or correct

pathology, and to promote and maintain health. Such therapy provides service to those individuals whose abilities to cope with tasks of living are threatened or impaired by developmental deficits, physical injury or illness, psychological and social problems, the aging process, and the effects of economic and cultural barriers.

**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 13.

The following curriculum is required of all degree candidates for subsequent admission to professional study in the Department of Occupational Therapy.

PREPROFESSIONAL PROGRAM	Credits
* UGE 100 — Introduction to the University and Its Libraries .....	1
BIO 101 — Basic Biology I .....	4
BIO 102 — Basic Biology II .....	4
CHM 102 — General Chemistry I .....	4
* CSC 100 — Introduction to Computer Science .....	3
ECO 101 — Principles of Macroeconomics .....	4
* ENG 102 — Freshman Composition .....	4
* ENG 301 — Techniques of Expository Writing .....	3
* MAT 180 — Elementary Functions .....	4
* P S 101 — American Government .....	4
* PHI 105 — Critical Thinking .....	3
PSY 102 — Elements of Psychology .....	3
PSY 331 — Abnormal Psychology .....	4
* SOC 200 — Understanding Human Society .....	3
* SPB 200 — Effective Speech .....	3
SPC 520 — Group Communication and Human Interaction .....	3
Electives (see below) .....	6

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

\* Students may satisfy these requirements by transfer credit or examination; however, no credits are earned by such placement.

Total: 60

**Electives:** The following courses are required for graduation and may be taken either in the preprofessional or the professional program. It is strongly recommended that these be taken as elective courses in the preprofessional years.

	<i>Credits</i>
O T 205 – Therapeutic Activities .....	2
O T 320 – Life Tasks .....	2
AED 526 – Methods and Materials: Wood, Metal, and Plastic .....	2

**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 101, 102, and Chemistry 102.
3. hold a combined honor point average of 2.5 for the following behavioral courses: Psychology 102, 331, and Speech 520.
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 too great a distance from the Detroit area and cannot attend the interview session.)

## Degree Requirements

The Bachelor of Science degree requires 143 credits in course work including sixty credits in preprofessional study (see above), seventy-one credits in professional courses (see below), and twelve credits satisfying the University General Education Requirements (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 Association.

### PROFESSIONAL PROGRAM

	<i>Credits</i>
FAC 180 – Individual Development through Family Interaction .....	3
ANA 303 – Anatomy .....	3
ANA 304 – Human Neuroanatomy/Neurophysiology .....	2
IHS 310 – Basic Mechanisms of Human Disease I .....	5
IHS 320 – Basic Mechanisms of Human Disease II .....	5
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 .....	4
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 .....	4
O T 426 – Level I Field Work Experience .....	1
O T 430 – Client Issues in Occupational Therapy .....	1
O T 435 – Occupational Therapy Seminar .....	3
O T 450 – Social and Organizational Aspects of Health Care .....	2

O T 460 – Group Process as an O.T. Modality .....	1
O T 498 – Field Work I (see below) .....	5
O T 499 – Field Work II (see below) .....	5
Total:	71

*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:	77

**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.

**General Education Requirements:** Candidates for the bachelor's degree must complete twelve credits in the following subject areas to satisfy the University requirements in general education. While requirements in English composition, mathematics, and American government are fulfilled by courses cited in the preprofessional program, the following areas are not:

	<i>Credits</i>
Historical Studies .....	3
Foreign Culture .....	3
Humanities	
Visual and Performing Arts .....	3
Philosophy and Letters .....	3

## Post Bachelor's 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 101 – Basic Biology I .....	4
BIO 102 – Basic Biology II .....	4
CHM 102 – General Chemistry I .....	4
PSY 102 – Elements of Psychology .....	3
PSY 331 – Abnormal Psychology .....	4
SPC 520 – Group Communication and Human Interaction .....	3

**CERTIFICATE REQUIREMENTS:** Candidates for the certificate must complete seventy-seven 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 Certificate in Occupational Therapy from Wayne State University. The graduate is then eligible for the examination and certification procedures of the American Occupational Therapy Association.

## 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, 222 Administrative Services Building, 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 Sister Elizabeth Kenny Honor Award* is presented to a senior student who, throughout his/her professional program, demonstrated outstanding scholarship, leadership and professional interest.

*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 Award* is presented to the senior who has made outstanding contributions to the department while demonstrating initiative, cooperation and responsibility.

*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.

## COURSES OF INSTRUCTION<sup>1</sup>

### Occupational Therapy (O T)

#### 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

Leadership techniques employed in the use of recreational activities as therapy. (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: PSY 331 and 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

Prereq: consent of adviser. 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. 4

Prereq: 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. Survey of pathology, symptomatology, treatment of diseases or injuries in the following fields of medicine: general medicine, surgery, pediatrics, geriatrics, neurology, ophthalmology, orthopedics, otorhinolaryngology, physical medicine and rehabilitation, and neurology. (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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**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. 4**

Prereq: O T 340 and consent of adviser. Material fee as indicated in *Schedule of Classes*. Developmental approach to sensory-motor dysfunction. Lecture, demonstration and field experience. (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)

**430. Client Issues in Occupational Therapy. Cr. 1**

Prereq: senior standing in occupational therapy. Workshop presentation of role of the occupational therapist in the psychological and sexual adjustment of the physically disabled. (Y)

**435. 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 learning laboratory in groups on development of self-awareness and knowledge of group dynamics. (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)

# PHYSICAL THERAPY

*Office:* 439 Shapero Hall

*Chairperson:* Mable B. Sharp

## *Assistant Professors*

Roberta F. Cottman, Akinniran Oladehin, Mable B. Sharp, Susan Ann Talley

## *Part-Time Instructors*

Kathleen Agrusa, Barbara G. Rubenstein

## *Adjunct Assistant Professors*

Heather Hamilton, Peter Kovacek, James Pipp, Kathleen Vielhaber

## *Adjunct Instructors*

Ronald Clinton, Michele Denes, Judith Hissong, Donna LaFata, Suzanne Portner

## *Cooperating Faculty*

Jon Banning, Leonard Bender, Maurice Castle, Jerome Cuillo, Joseph Dunbar, Merlin Ekstrom, Adel Elmagrabi, Voigt Hodgson, Felix Hong, Melissa Kaplan, Robert Louis-Ferdinand, Lowell McCoy, Berton Moed, Joseph Nachman, Salvador Pancorbo, Joseph Posch, Martha Rodin, Thomas Sullivan, Edward Tracy, Kathryn Urberg, John Wirth

## *Course Participants*

Patricia Debear, Paula Denison, Loren DeVinney, Angelo DiMaggio, Faith Durgin, Wendy Early, Nancy Felcyn, Karen Johnstone, Sharon Roy, Kristine Thompson, Kenneth Woodward

## *Center Coordinators of Clinical Education*

Hazel Adkins, Susan Allaben, Michelle Allen, Rose-Mary Atkinson, Sandy Baker, Bonnie Bethell, Robert Boesiger, Susan Bourque, Gita Burg, Kathy Burke, Jennifer Cantrell, Carol Capell, Paulette Cebulski, Caryn Chiesa, Allan Colestock, Mary DeAngelo, Cheryl Dix, Mary Dove, A.J. Duffy, Bryan Durham, John Eggart, Irma Ferguson, Sue Ferguson, Sandra Flack, Natalie Finegold, David Fultz, Elizabeth Garrad, Kristine Gasper, Janet Gray-Moore, Jessie Gross, Mary Hall, Carol Hall-Campbell, Judith Harris, Mary M. Helms, Diann Inch, Kathleen Kovacek, Jackie Johnson, Doug Julius, Sandra Jung, Ann Marie Kamman, Diane Kapelanski, Yvonne Katharopoulos, Paul Kerasiotis, Casey Kern, Laura Knick, Dawn Knoerl, Dennis Knoff, Vicki Kozemchak, Phil Krause, Dorinda Kroymann, Laura Dale Laubhan, Christine Lorimer, James MacDonald, Jerome Malone, Deanne Mennenga, Diana Mapes, Nancy Mason, Laura McBey, Diane McKinney, Patricia McLaughlin, Donna McMasters, Sue McPherson, Gloria Miller, Cathy Minter-Liehr, Karen Mitchell, Lynn Moran, Karen Movsesian, Merodie Mullis, Toni Murphy, Valerie Mussleman, Sandy Nelson, Margaret Nonnemacher, Marge Novak, Sharon Ortwein, Georgianne Palmer, Nancy Pennington, Pamela Perkins, Michael Peters, Marianne Reinhardt, George Rowley, Tony Schneider, March Schulman, Chris Sepper, Virginia Shaw, Linda Simonsen, Dolly Smith, Johnny Smith, Karen Solie-McDonnell, Janice Stanislaw, Stephen Stewart, Ann Strehle, Craig Strong, Penny Suwinsky, Ralph Sweithelm, Mary Jo Swidersky, Glenn Temesan, Linda Tomalia, Allan Trumbull, John Vargo, Nancy Ward, Vicky Weatherell, Wally Witkowski, Jan Wohlgemuth

## Degree Program

### Bachelor of Science in Physical Therapy

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 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 American Physical Therapy Association. 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 13. 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 101 — Basic Biology I.....	4
BIO 102 — Basic Biology II.....	4
Advanced Biology (BIO 271 or BIO 561).....	4-5
CHM 107 or CHM 105	
Principles of Chemistry I.....	4
Introductory Principles of Chemistry.....	6
BCH 101 or CHM 103	
Introductory Biochemistry (strongly recommended).....	2

General Chemistry II.....	4
ENG 102 — Freshman Composition.....	4
ENG 301 or ENG 303	
— Techniques of Expository Writing.....	3
— Writing the Research Paper.....	3
Humanities Elective (PHI 111 highly recommended).....	3
MAT 180 — Elementary Functions.....	4
Introductory statistics (STA 102 or PSY 410 or EER 763 or PSL 767 suggested).....	4
PHY 213 — General Physics.....	4
PHY 214 — General Physics.....	4
PSY 101 — 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: 62-72	

**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, 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. 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 examinations 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 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
IHS 310 — Basic Mechanisms of Human Disease I.....	5
IHS 320 — Basic Mechanisms of Human Disease II.....	5
IHS 321 — Basic Mechanisms of Human Disease: Laboratory.....	1

IHS 330 — Pharmacology for Allied Health Professions.....	1
PSY 243 <i>or</i> PSY 244	
— Applied Human Development: Infancy.....	2 or 4
— Applied Human Development: Childhood.....	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 370 — Principles of Investigation.....	2
P T 380 — Clinical Education I.....	1
Total: 47-49	

#### Fourth Year

P T 410 — Psycho-Social Aspects of Health Care.....	2
P T 411 — Organization & 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 — 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: 45-47	

#### Electives

	<i>Credits</i>
P T 414 — Introduction: Pediatric Physical Therapy.....	3
P T 428 — Special Topics in Orthopedics.....	2-4
P T 472 — Independent Research.....	3-8
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 next 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' during the professional program.

**University General Education Requirements:** In addition to the professional course requirements, students must also complete the University General Education Requirements 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.

<i>Recommended Courses and Topic Areas</i>		<i>Credits</i>
SPB 200.....	Oral Communication.....	2-3
UGE 100.....	University & its Libraries.....	1
Elective.....	Historical Studies.....	3
CSC 101.....	Computer Literacy.....	3
PHI 105.....	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, 222 Administrative Services Building, 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.

## COURSES OF INSTRUCTION<sup>1</sup>

### 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.

**302. Human Anatomy. Cr. 4**  
Prereq: BIO 102. Material fee as indicated in *Schedule of Classes*. Survey course in gross human anatomy with basic histology and embryology.

**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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**312. Human Growth and Development. Cr. 3**

Coreq: PSY 245 or PSY 243 and consent of adviser. 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. Survey of pathology, symptomatology, treatment of diseases or injuries in the following fields of medicine: general medicine, surgery, pediatrics, geriatrics, neurology, ophthalmology, orthopedics, otorhinolaryngology, physical medicine and rehabilitation, and neurology. (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. Fundamental to 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. 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 to 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 or consent of adviser. 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. 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. 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. 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. Research Practicum. Cr. 2**

Prereq: P T 370 or consent of adviser. Student computer account required. Application of basic principles of investigation to design and implement a research project. Oral and written presentation required. (W)

**472. Independent Research. Cr. 3-8**

Prereq: consent of adviser. Design and implementation of original investigative study related to health care or physical therapy profession. (S)

**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)

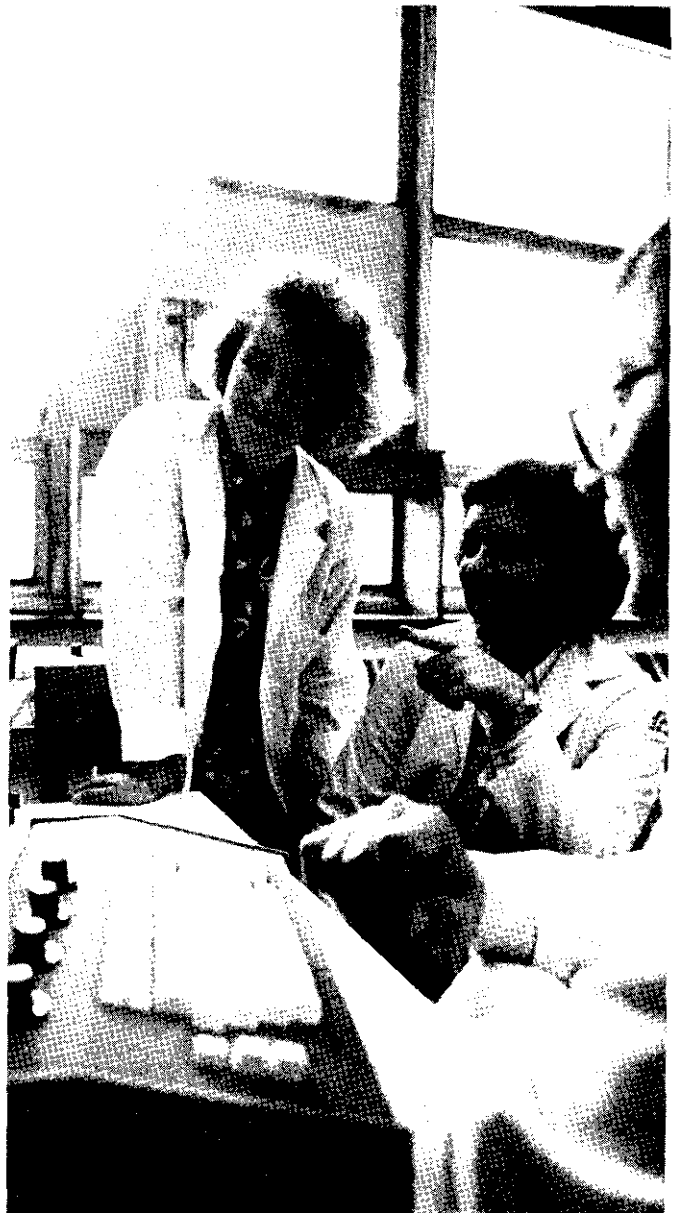
**500. Perspectives in Geriatrics. Cr. 3-4**

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)

**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

Chairperson: Diane K. Chadwell

## Assistant Professor

Diane K. Chadwell

## Lecturer

Adam F. Kempa

## Medical Adviser

Joel M. Nass

## Adjunct Assistant Professors

Terrence J. Dillon, Joel M. Nass, Barbara G. Orton, James T. Spicka

## Adjunct Instructors

Sheryl A. Janiec, John C. Merrill

## Cooperating Faculty

Merlin E. Ekstrom, Gary A. Ezzell, Colin G. Orton, Richard L. Maughan

## Clinical Education Coordinator

John C. Merrill

## Clinical Education Supervisors

Mary B. Campbell, Jeffrey J. Forget, Cynthia L. Gold, Kay L. Nantau, Bridget M. Reilly

## 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 therapy technologist has the unique opportunity to blend knowledge and skills of mathematics, medical science and psychology in his or her everyday work. The technologist 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 therapy technologists are typically employed in hospitals, clinics, and educational institutions as staff technologists, clinical supervisors, administrators, and educators. A radiation therapy technologist may:

- Operate sophisticated radiation equipment to outline the extent of tumors and deliver treatment according to physician's orders;
- Assist in designing the patient treatment plan through the use of hand- or computer-produced computations;

- Recognize when a patient is having additional medical problems which require the physician's attention;
- 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 133 credits: 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 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 13. Application forms are available from the Office of Admissions, 116 Administrative Services Building. Students should consult with Academic Advising, Undergraduate Office, College of Liberal Arts, 242 Mackenzie Hall, regarding course selection. Additional career advisement is available from the Department of Radiation Technology.

**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 372.

### 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 101 — Basic Biology I.....	4
BIO 102 — Basic Biology II.....	4
BIO 271 — Comparative Vertebrate Zoology.....	5
CHM 102 — General Chemistry I.....	4
CHM 103 — General Chemistry II.....	4
CSC 100 or CSC 101	
— Introduction to Computer Science.....	3
— Introduction to Computing.....	3
ENG 102 — Freshman Composition.....	4
ENG 301 — Techniques of Expository Writing.....	3
MAT 180 — Elementary Functions.....	4
PHY 213 — General Physics.....	4
PHY 214 — General Physics.....	4
P S 101 — American Government.....	4
PSY 101 — Introductory Psychology.....	4
PSY 230 — Psychology of Adjustment.....	4

SPB 200 – Effective Speech .....	3
PHI 105 – Critical Thinking .....	3
UGE 100 – University and its Libraries.....	1
* Foreign Culture Elective.....	3
* Historical Studies Elective.....	3
* Humanities Electives.....	6
Total: 71	

**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, 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 a clinical visit to one of the affiliate institutions for the program. Appointments are made by calling 577-1137.
7. Completion of a confidential Career Planning Interview at University Counseling Services, 334 Mackenzie Hall, 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 Academic Advising, 242 Mackenzie Hall, or from Testing and Evaluation Services, 343 Mackenzie Hall. 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 requirement 4, and in requirements 8 through 10, above, should be submitted to the Chairperson, Department of Radiation Technology, 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 Academic 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 133 credits 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). Students take didactic and clinical courses, with approximately twenty hours per week of clinical education. The clinical education program includes experience at approximately four affiliate institutions in the greater metropolitan Detroit area. Such institutions include urban and suburban hospitals, as well as 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 one of the University General Education Requirements (see Department recommendations listed below).

While almost all the required courses are scheduled during usual daytime hours, students are required to attend occasional 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 entry into 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

	<i>credits</i>
IHS 310 – Basic Mechanisms of Human Disease I .....	5
IHS 320 – Basic Mechanisms of Human Disease II .....	5
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 & 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: 37	

#### Fourth Year

	<i>credits</i>
R T 411 – Clinical Radiation Oncology.....	4
R T 412 – Basic Clinical Dosimetry.....	3
R T 414 – Radiation Pathology.....	2

\* A list of recommended electives is available from Academic Advising or the Department of Radiation Technology.



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.....	1
R T 435 — Clinical Practicum IV.....	4
R T 436 — Clinical Practicum V.....	4
R T 437 — Clinical Practicum VI.....	4
Elective.....	3
Total: 34	

**Scholarship:** Students in the professional program are subject to high academic and professional standards. A grade of 'C' or above is required in each professional course, and the student must maintain a term honor point average of 2.50 throughout the program. A grade of 'D' must be repeated; an 'E' grade or a second 'D' grade will result in review by the Academic Committee for possible dismissal. Current academic standards and program probation policies are published annually and are available upon request from the Department of Radiation 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.

The requirement categories which are *not* met by Department-required courses cited above are listed below with the Department's course recommendations. Electives in the preprofessional or professional program may be used to complete these additional course requirements.

*Recommended Courses and Topic Areas*

	<i>Credits</i>
PHI 105..... Analytical Thinking.....	3
CSC 100 or 101..... Computer Literacy.....	3
ANT 310..... Foreign Culture.....	3
Elective..... Historical Studies.....	3
Elective..... Humanities: Visual & Performing Arts.....	3
Elective..... Library Science.....	1
PHI 111..... Philosophy and Letters.....	3
SOC 536, 540, or 576..... Social Sciences.....	3

## COURSES OF INSTRUCTION<sup>1</sup> (R T)

- 300. Clinical Care Procedures. Cr. 2**  
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 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. Literature review of a selected oncology topic. (S)

**411. Clinical Radiation Oncology. Cr. 4**  
General presentation of malignant conditions, their etiology and methods of treatment; specific radiation treatment methodology including technical parameters of field size and direction, dosage, blocking, and patient positioning. (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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

**430. Quality Assurance. Cr. 1**

Open only to radiation technology students. Principles and application of a comprehensive quality assurance program, addressing general clinical and physics factors. Contents include: tasks to be performed, with their frequency and acceptable limits; model implementation program; and legal implications. Lecture and laboratory settings. (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. 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. Continued clinical practice under minimal supervision. Practice of procedures related to the development of various treatment plans and methods of treatment planning. Review of preventive maintenance and equipment safety. (S)



# **School of Social Work**

*DEAN: LEON W. CHESTANG*

# Foreword

## The Social Work Profession

Modern social work is concerned with persons and with organizations in their attempts to cope with life situations and societal problems. The social work profession is composed of people who help deal with some of the social problems of an industrial urban society. Its aim is to prevent societal and personal dysfunction; to help people use and participate in social institutions; to help social institutions respond to people; and to plan, implement and improve a wide range of social service programs that enhance the functioning of society and its members.

Professional social workers use the same basic principles in working with an individual, a group or a community. They are educated to assess the problem, to help plan and implement a solution and to evaluate the results. The social worker must be knowledgeable about the goals, policies, functions and activities of the service system in its efforts to meet the needs of individuals, families, groups and communities. The social worker must be knowledgeable about the resources available, both those within the client and those provided by society in social institutions and in the service system. Liking people, believing in the worth of human beings and wanting to help them are additional personal qualities essential to the practice of social work.

Enhancement of human functioning requires that normal developmental needs be met by properly functioning social institutions and by those universally used services which comprise the 'social utilities'. More effective treatment and control of 'social pathologies' also require changes in social institutions and in the service system. For example, the major problem of racism has long been ignored by society and the profession. Its impact on the lives and development of both non-white and white individuals, families and communities has been underestimated. Knowledge about racism and ways to combat it are essential to the profession of social work. The social work profession is actively engaged in helping to create and maintain public social policies that will assure appropriate distribution of services, and will change social institutions in accordance with changing social conditions.

Social work has long been familiar with the fact that social change, even change which represents advance, can be injurious to many people when it occurs as a consequence of uncontrolled social forces. Today the profession is seeking to harness the energy of social change in a deliberate, humane way. Plans must be designed which articulate societal goals as well as the policies and programs required to achieve them. The urgent tasks of social change present an exciting challenge to the social work profession.

## Urban University Setting

The metropolitan area of Detroit provides an exceptional opportunity for the teaching, learning and practice of social work. Highly industrialized urban areas are close enough to suburban, semi-rural and rural areas to enable the student to be aware of the total fabric of American community life. Social agencies and organizations operating in the Detroit area deal with the usual kinds of social problems but must inevitably deal also with social problems affected by nationality, by racial and minority groups, by management-labor relationships and by other social forces inherent in this kind of community. These agencies provide opportunities for an almost unlimited variety of experiences for the social work student.

Individual attention to each student is emphasized by the School and by its faculty. Through this individualization the complexities of the

community and of the University become an asset to learning and professional growth.

The School of Social Work, as an integral part of a large university, is able to draw upon the total offerings of the University for the enrichment of its own curriculum. The variety of resources makes it possible for the School of Social Work to offer a wide range of emphases in professional education for social work.

## 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 level, 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. 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 School Bulletin.

# BACHELOR OF SOCIAL WORK

The program of study which leads to the Bachelor of Social Work degree and which prepares for entry level practice in social work consists of four semesters of study in the junior and senior years. During each year about one-half of the curriculum is in professional courses in social work and about one-half is in corequisite courses and electives. One part of the professional component of the program is field work which 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 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 may be 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. This is an elapsed time of sixteen months as compared to twenty months for the regular program of two academic years. January admission leads to graduation in May of the following year. The admission of a class in January is determined on a year-to-year basis.

## Admission

Each application for admission to the program leading to the Bachelor of Social Work degree is given careful review in order to select those students best able to fulfill the requirements for professional education in this field. The responsibility for deciding whether a student shall or shall not be admitted rests with the School. 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) arrange to have submitted 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, and any other evidence that the student will, at the time of his/her admission to the program, have successfully completed a minimum of sixty semester credits of work or its equivalent distributed as outlined below; (3) complete and forward to the School of Social Work, Office of Admissions, the form *Application for Admission, Bachelor of Social Work Degree Program*; (4) have earned a minimum overall honor point average of 2.6; (5) show evidence to the Director of Admissions of the School of Social Work of suitability and fitness for the profession of social work and the ability to pursue successfully undergraduate professional education in social work.

**NOTE:** Students who have already attended Wayne State University should omit steps one and two above.

Applications are reviewed only when all supporting materials have been received. Priority deadlines for submission of initial and all supporting materials for September and January admission are March 31 and August 31, respectively. Applications received after the closing date cannot be guaranteed processing. If students have not completed sixty credits at the freshman and sophomore levels at the time of application, they must submit a statement listing the courses they are in the process of completing to comply with the sixty-credit requirement, and a new transcript on completion of the work. The applicant may be required to attend an individual or group interview as part of the application process.

**Community College Transfer 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.

**Admission:** Former students who had been enrolled in a planned program leading to the Bachelor of Social Work degree, who wish to be considered for re-admission to complete degree requirements, must follow regular procedures for admission to the School.

## Pre-Social Work Preparation

The sixty semester credits of work or its equivalent at the freshman and sophomore levels must be distributed according to one of the following patterns as an admission requirement to the professional program in the junior and senior years. These patterns are exemplified by the College of Liberal Arts and the Weekend College Program of the College of Lifelong Learning, and are designated Pattern A and Pattern B respectively. General elective credit earned at the freshman and sophomore level may consist of courses from any discipline in the College of Liberal Arts, the College of Lifelong Learning, Weekend College Program, and from such professional schools as the College of Education, the School of Business Administration, the College of Nursing, and the School of Social Work.

### Pattern A (College of Liberal Arts)

**A. Social Sciences:** The following distribution of courses is required.

1. Anthropology—3-4 credits\*
2. Economics—3 credits (Principles of Macroeconomics, ECO 101, recommended)
3. History—3 credits\*
4. Political Science—3-4 credits
5. Sociology—two courses (generally 6 credits)\*

**B. Natural Science:** The following distribution of courses is required, including a laboratory course in one of the subject areas designated below.

1. Biology—3-4 credits
2. Psychology—three courses (generally 12 credits). Field practicum courses do not meet this requirement.
3. One course (3-4 credits) to be selected from the following: Physical Science, Chemistry, Geology, Astronomy, Mathematics 180 or above, Philosophy (logic courses: PHI 185, 186, 520, 535, 539), Computer Science.

**C. Humanities:** The following distribution of courses is required.

1. Philosophy—3 credits (excluding logic)
2. One course (3 credits) to be selected from the following: Classics (excluding CLA 120, 124), Humanities, Music History, Art History, literature in a foreign language department, American Studies, English literature, Black Studies 201, Chicano-Boricua Studies 210, 211, selected courses in Speech Communication and in Theatre (consult an adviser before registering to be certain the course will earn Humanities credit).

**D. English:** The following distribution of courses is required.

1. Freshman Composition—4 credits
2. English Elective (200 level or above)—3 credits

**E. Basic Speech—2-3 credits\***

\* See pages 22,23 of this Bulletin for a list of approved courses which will fulfill University General Education Requirements.

\* See page 23 of this Bulletin for a list of approved courses which will fulfill University General Education Requirements.

## Pattern B (College of Lifelong Learning)

A. *Social Sciences*: The following distribution of courses is required.

	<i>credits</i>
1. 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

B. *Natural Science*: The following distribution of courses is required.

1. GST 201 — Life and the Environment .....	4
2. GST 202 — Changing Life on Earth .....	3
3. GST 231 — Energy Needs and Modern Society .....	4
4. GST 232 — The Living Environment .....	3
5. Two courses in Psychology (generally 6 credits)	

C. *Humanities*: The following distribution of courses is required.

1. GUH 231 — Modes of Perception .....	4
2. GUH 233 — Critical Perspectives of Everyday Life .....	3
3. GUH 242 — Paper Tiger .....	3

D. *English*: The following distribution of courses is required.

1. GIS 151 — Communication Skills .....	4
2. English elective, 200 level or above .....	3

## 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 thirty-five credits in field work and related courses and a minimum of twenty-five 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.

**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, as well as the requirements applicable to registrants at the University prior to Fall 1983, see pages 20-23. Although the English and mathematics proficiency examinations are not required for admission to the program leading to the Bachelor of Social Work degree, they are requirements for the degree. It is recommended, therefore, that students take the English and mathematics examinations prior to making application for the B.S.W. degree program.

Each student must satisfy these proficiency requirements by the end of the junior year as a requirement for going into the senior year, and, subsequently, for graduation.

**University Requirement in American Government:** All undergraduate students, as a prerequisite to graduation from Wayne State University, are required to complete successfully a course in the principles of American government. The courses and course sequences which are applicable to this requirement are listed on page 23.

**University General Education Requirements:** All undergraduate students who register for the first time at Wayne State University in Fall Semester 1987 or thereafter are required to meet the University General Education Requirements. See page 20 for a list of General Education Requirements.

## Curricula

The curriculum leading to the Bachelor of Social Work degree includes two major elements: professional subjects in social work and general education in related academic and professional disciplines.

The professional component of the curriculum is designed to interrelate social work knowledge, skills and values with knowledge of human behavior and the social environment, and concepts of social welfare organization and policy. Social work practice methods include conceptual, theoretical and methodological content relative to the helping, change and problem-solving processes. Field education placements are provided in a wide variety of agencies covering many of the major areas of social work concern. In the field practice course the student may interact with individuals, families, groups, organizations and communities under stress. In other professional courses the student learns about the nature of human behavior in varying environments and of stress and its effect upon individuals in the social environment. Various approaches to reduction of stress and ways to help people enhance their skills in problem-solving are also examined. Some of these courses deal with social welfare policies and programs to prevent breakdown and to deal with dysfunction. In research courses the student takes a critical look at the methodology and results of research and their application to practice.

Concurrent with the professional component, students enroll in corequisite courses and electives to enhance their general education and knowledge of related professional disciplines.

### REQUIRED PROFESSIONAL CONTENT

	<b>Junior Year</b>	
<i>First Semester</i>		
S W 301 — Social Work Practice Method I .....	2	<i>credits</i>
S W 351 — Human Development and Dysfunction .....	3	
<i>Second Semester</i>		
S W 302 — Social Work Practice Method II .....	2	
S W 371 — Social Welfare and the Social Work Profession: History, Trends and Basic Concepts .....	2	
S W 498 — Field Practice in Social Work .....	5	

## Senior Year

### First Semester

S W 401 — Social Work Practice Method III .....	2
S W 471 — Social Welfare in the United States: Current Programs.....	2
S W 481 — Research Methods for Social Workers.....	3
S W 498 — Field Practice in Social Work.....	5

### Second Semester

S W 352 — Social Functioning and the Effect of Stress.....	2
S W 402 — Social Work Practice Method IV.....	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, to be taken no later than the first semester, senior year.

History 287—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.

# ACADEMIC PROCEDURES 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 adviser. 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.

## 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 engaged in part-time work should limit registration in proportion to the amount of outside work after consultation with the student's 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.

## Degree Application

Application for the degree must be filed no later than the last day of the registration period 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. 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.

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.

When financial aid is necessary, the School of Social Work will cooperate with the University Office of Scholarships and Financial Aids 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.

## Scholarships and Awards

*Fred and Freda Gentsch Scholarship.* Awarded on the basis of merit and financial need.

*David McAllister Memorial Scholarships.* Awarded by the Detroit Chapter of the Association of Black Social Workers.

*Harold and Carolyn Robinson Scholarships.* Awarded on the basis of academic achievement and financial need.

*School of Social Work Alumni Association Scholarships.* Awarded on the basis of merit 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 factor in the programs of the School of Social Work. Having been in existence since 1949, it is the student's voice in matters regarding School and profession. It is involved with issues within the School 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. The Organization is primarily committed to upholding the student's right to an enriched professional education and, if necessary, serving as a vehicle for redress of grievances. Through the Organization students become involved in the policy-making and curriculum planning for the School. The Organization offers opportunities for students to work toward a more responsive social work education which will enable them to better serve the needs of their clients and communities. A student newspaper, bi-weekly meetings, social and recreational activities, assistance in attendance at relevant conferences and participation in the National Federation of Student Social Workers are some of the ways the Organization puts students in touch with each other and with student activities.

## Association of Black Social Work Students

The Association of Black Social Work Students (ABSWS) 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. ABSWS assists black students in making the adjustment to the School of Social Work and provides students with supportive educational services. ABSWS also works closely with the Detroit Chapter of the National Association of Black Social Workers (ABSW) 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

\*For additional information see page 19.



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.

# Faculty and Administration

*Dean:* Leon W. Chestang  
*Associate Dean:* Joseph P. Hourihan  
*Academic Services Officer:* Vickie L. Radoye  
*Administrative Assistant:* Edrene R. Teahan

## *Professors*

Leon W. Chestang, Sidney Dillick (Emeritus), Ruth L. Goldberg (Emerita), Joseph P. Hourihan, Jacob I. Hurwitz (Emeritus), Charles N. Lebeaux (Emeritus), Leon Lucas (Emeritus), Maryann Mahaffey, Betty Rusnack, Kurt Spitzer, Betty Welsh, David Wineman (Emeritus)

## *Adjunct Professor*

Louis A. Ferman

## *Associate Professors*

Ralph Abramowitz, Arthur E. Antisdell, Lester B. Brown, Eddie Davis, Alexander E. Efthim (Emeritus), Helen Francis (Emerita), Theodore Goldberg, Edna S. Harrison (Emerita), Carl Hartman, Kasumi K. Hirayama, G. Evangeline Sheibley Hyett (Emerita), Ronald L. Jirovec, Aaron Krasner (Emeritus), Alice E. Lamont, Thomas P. Melican, Edna P. Miller, Elizabeth J. Phillips (Emerita), Lois L. Quig (Emerita), Melvyn C. Raider, Marian I. Reavey (Emerita), Sandy G. Reid (Emeritus), Mary B. Shapiro (Emerita), Sue M. Smock, Mavis M. Spencer, William H. Turner, Phyllis I. Vroom

## *Adjunct Associate Professor*

Paul A. Koonter

## *Assistant Professors*

Susan W. Downs, William H. Iverson, Jr., David P. Moxley, Hartford Smith, Jr.

## *Adjunct Instructor*

Maureen O. Marcenko

## *Lecturer*

Cecille Y. Dumbrigue

## School of Social Work Directory

- Dean..... 114 Cohn; telephone: 577-4400
  - Associate Dean..... 108 Cohn; telephone: 577-4404
  - General Information..... 10 Cohn; telephone: 577-4409
  - Admissions and  
     Student Services ..... 10 Cohn; telephone: 577-4409
  - Coordinator of Field  
     Education ..... 200A Cohn; telephone: 577-4479
  - Recruitment of Minority  
     Group Students ..... 10 Cohn; telephone: 577-4409
  - Student Organizations..... 311 Cohn; telephone: 577-4435
  - Trabajadores de la Raza  
     Estudiantil (T.R.E.) ..... 311 Cohn; telephone: 577-4435
- Mailing address for all offices: School of Social Work, Wayne State University, Detroit, Michigan 48202.



# Field Education

The following agencies and persons have worked with members of the Faculty in field instruction during the academic year 1985-1986:

*Adult Service Centers, Inc.*  
LONNIE JOHNSON

*Aurora Hospital Osteopathic*  
ELLEN BROOKS

*Barat Human Services*  
DIANE BOSTIC-ROBINSON

*Beacon Day Treatment*  
VALERIE KAPLANSKI

*Beaumont Hospital Psychiatric Social Services*  
SHIRLEY LEOPOLD

*Birmingham Schools*  
SUSAN ZEIDMAN

*Blue Water Mental Health Child Guidance Center*  
JOANNE BLUM, MARY WEIMER

*Bon Secours Nursing Home*  
PEGGY MCCOY

*Boysville of Michigan*  
ED OVERSTREET, ALICE THOMPSON

*Brant Center*  
ADRIENNE JAMES

*Brightmoor Community Center*  
DENNIS MUZZI

*Camp Fire, Detroit Area Council*  
PERRY JONES

*Camp Oakland Youth Programs, Inc.*  
CASSANDRA BOWERS, CLARENCE CRAFT

*CareGivers (formerly Homemaker Service)*  
LADORA BARNETT

*Catholic Social Services of Macomb County*  
DEBORAH MCCORMACK

*Catholic Social Services of Oakland County*  
CAROL LANDRY, MARSHA MORAN-SACKETT, IRENE PANUSH, KAREN RAPPLEYE, MARYANN RYAN, SANDRA SHIFF

*Catholic Social Services of St. Clair County*  
IVELISSE AUFFANT

*Catholic Social Services of Toledo*  
REBECCA MASE

*Catholic Social Services of Wayne County*  
SANDRA FOREST, CHARLES GEIGER, AUDREY GEORGES, ANDREA HARTMAN, JOANNE JOCQUE, DELORES MCCLINIC, MARIE PETRICCA, DAVID PODULKA, SYLVIA RUEN, BARBARA SHELTON, LAURA SPITZ, NANCY STEIN, GAIL ZETTEL

*Center for Human Resources*  
GARY WOOD

*Child and Adolescent Clinic*  
NORBERT BIRNBAUM, ED KEENER, JEAN KNUDSEN

*Child and Family Services, Thumb Area Branch*  
DALE BROWN

*Children's Aid Society*  
MARCIA SAWYER, MARGO WEITZER

*Children's Center of Wayne County*  
SHIRLEY EDWARDS, TED LEWIS, BONNIE WALKER

*Citizens for Better Care*  
CELIA SAVONON

*City of Detroit, Neighborhood Services Department*  
JUANITA MCGILL

*Coalition on Temporary Shelter (COTS)*  
GLORIA HARRELL, SISTER ANNETTE ZIPPLE

*Common Ground*  
SANDRA JOHNSON

*Community Services of Oakland  
(formerly Area Services Association)*  
JOHN ERICH

*Community Health and Social Services (CHASS)*  
RICARDO GUZMAN

*Congressman George Crockett, Office of*  
TONY ROTHSCHILD

*Cottage Hospital*  
ERICH AUDRETCH

*Crossroads*  
JANE CRIMMENS-MARTEN

*Dearborn #7 Schools*  
JANICE ANSCHUETZ

*Detroit Area Agency on Aging*  
SANDRA PLUMER

*Detroit Councilmember Maryann Mahaffey, Office of*  
GERALDINE ELLINGTON

*Detroit Health Department*  
GARY COOK

*Detroit Memorial Hospital*  
FE REED

*Detroit Public Schools*  
ETHEL BURGESS, MAURITA GARDNER, WILMA LEWIS, DORIS MC CLOUD

*Detroit Receiving Hospital, University Health Center*  
SYLVIA BIENSTOCK, BARBARA GROSS, SIGRID JONES,\* CAROL KATROSCIK, PAUL KOONTER, ELLEN RISKIN, ELAINE THOMAS

*Detroit Urban League*  
DONALD WOODS

*Development Centers, Inc.*  
CAROL BARTLEY, JIM HASLETT, SANDRA JAFFA, MARSHA LABINSKI

*Development Disabilities Institute*  
*Detroit Receiving Hospital/UHC*  
DAVID MOXLEY

*Eastwood Community Clinics*  
DON HEALEY, DELORES MASSEY, ROSALIE SCHWARTZ, JOAN SILK, DOUG SNOW, PEGGY STERN, LORRAINE WAGNER

*Fairlawn Center*  
MARILYN WINKENS

\* Deceased.

*Family Counseling Center*

FRANK SEIFERT

*Family Neighborhood Resource Center*

MITZI HOFFMAN

*Family Service of Detroit and Wayne County*

LUCILE CANTONI, JODY LAMPTON, JOHNNIE MCCRAY, JIM NARAGON, NANCY SPARROW

*Family and Neighborhood Services*

MARY LEE PEARSON

*Farmington Adolescent Day Treatment Program*

JOHN HORNGREN

*Federation of Girls' Homes*

EDNA WALKER, GERI REUTENIK

*First Step*

THERESA BIZOE

*Franklin-Wright Settlements*

VERNON OLDHAM, DERRICK BROWN

*Glen Eden Hospital*

LARRY VOIGHT

*Greater Detroit Society for the Blind*

SHIRLEY DINNER

*Harper Hospital*

GREGORY IREY, TOM LAIRD, DAVID WESNER, TERRY SAHN

*Henry Ford Hospital*

WILLIAM DOWNEY, MARTHA MARTIN, LARRY SCHILHANECK

*Heritage Hospital*

MARK RUSSELL

*Hospice of Southeastern Michigan*

HAZEL MAXWELL, SARAJANE SCHAEFER

*International Institute*

HELEN CHARNEY

*Jewish Family Service*

ESTHER KRYSTAL

*Jewish Home for Aged*

KEN SHERMAN

*Judson Center*

SARI ABRAMOVICH, DOROTHY MARDEUSZ, BOBETTE SCHRANDT, ROSEMARY INSLEY

*La Casa*

BETH SINGER

*Lafayette Clinic*

DAVID FIRLIT, ARVETA GRADY-FLETCHER, ROBERT M. WILLIS

*Lakewood Clinic, P.C.*

GERALDINE SCHREIER, JACK SIMONTON

*Lamphere Adult Education/Sixma*

FRED OLDS

*Lapeer County General Hospital*

FRED KELLEY BERTOCCHI, JAMES CHICON

*Livonia Public Schools*

CAROL HILLARD

*Lula Belle Stewart Center*

RUTH BROWNSTEIN

*Lutheran Social Services*

LINDA MCQUEEN

*Macomb County Council on Aging*

ELIZABETH LEWIS, JOAN MAYER

*Macomb County Prosecutor's Office*

CATHY ANGELICA

*Macomb Family Service*

Mr. KELLIE CODY, DEATLA KASSIN, PAUL ZIMMER

*Macomb Oakland Regional Center*

JEANNE BAKALE, UMA KERR

*Metro Youth Program, Inc.*

DEBORAH OVERSTREET

*Monte Vista Shelter*

VINCENT LITTLE

*Mt. Carmel Mercy Hospital*

NANCY ELKINGS, ROBIN SPRAGUE

*National Association for the Advancement of Colored People*

WINSTON LANG

*National Council on Alcoholism*

BERNICE GADON

*Neighborhood Service Organization*

YOLISWA AKPAN, LOUISE BEUTELL, MELVIN GEORGE, SHARON JAMAL, MARY LEONHARDI

*New Center Community Mental Health Program*

MARGARET EVANS, SEVILLA HARRIS

*North Detroit General Hospital*

CARLENE RAWLINGS

*North Oakland Community Center*

LORI SHAPIRO

*Oak Park Children's Day Treatment Program*

RAY BUSH, NANCY URBAN

*Oakland County Children's Village*

PAUL DUBE

*Oakland County Council for Children at Risk, Inc.*

JAMES MICKELSON

*Oakland County Department of Social Services*

JANE DIKEMAN

*Oakland County Juvenile Court*

PATRICIA HINZY, SALLY KAPLAN, JENNIFER POOLE

*Oakland Family Service*

DEBORAH FRISCH, STEPHANIE KORTZ, DONNA LACKIE, SALLY SCHOTTENFELS, LAURA SLAUGHTER

*The Orchards Children's Services*

DAN UTCHENIK, SUSAN WAINSTOCK, SUE WOTRING

*Oxford Community Schools*

FERN FOSGATE

*Oxford Institute*

BARRY MCINTOSH

*Pontiac 50th District Court*

JIM BUTLER, THOMAS QUINN

*Pontiac General Hospital*

AUDLEY BAILEY, LEE CAVANAUGH, JUNE CLAPHAM, MR. JAN GETZ, ED WEST

*Pontiac Public Schools*

SIVIA EILENDER, REGINA KUPER

*Port Huron Area School District*

DENNIS BILINA, DANA GREY

*Port Huron Hospital*  
DAVID MULHOLLAND

*Psychiatric Center of Michigan*  
RICHARD BOSSCHER, DONNA BULAK

*Rape Counseling Center*  
ALTHEA GRANT

*Residential Care Alternatives*  
BRENDA SCOGGINS, ANN SHELLEY, JOSEPH TARDELLA,  
PAT VULPE

*Romulus Help Center*  
DICK WELLSBACHER

*Royal Nursing Center*  
BYRON PETRAS

*Rubicon Odyssey*  
NANCY GRAHAM

*Sacred Heart Women's Day Treatment Program*  
SONIA ARCHER

*Salvation Army Harbor Lights*  
WES SHEA

*Sarah Fisher Center*  
CAY LAMB

*Sinai Hospital*  
MARY BAROFF, JEAN ERVASTI, ROSE HIRSCH

*South Macomb Hospital*  
MARIAN COREY

*Southeast Oakland Community Mental Health Program*  
LYNNDA EBRIGHT, ELLIOTT ROSS

*Southfield Lathrup Counseling Services*  
V. GAIL SIMPSON

*Southfield Rehabilitation Center*  
CONNIE DABNEY

*Southwest Oakland Community Mental Health Clinic*  
NANCY GAYDOS, ANNE OSTROTH

*Spaulding for Children*  
JUDITH MCKENZIE

*Square Lake Counseling Center, P.C.*  
ROBERT BAILEY

*St. Clair County Community Mental Health*  
WALTER BADKE, MARTHA BARENBRUGGE, LOIS  
GARRIOTT, MARINUS THEON, RON NEFF

*St. Clair County Department of Social Services*  
IVAN BENEDICT

*St. Francis Home for Boys*  
PEGGY INNIS, SISTER MARY ELLEN WALENTA

*St. Joseph Mercy Hospital— Fox Center*  
DIANE WITTL

*Todd Phillips Children's Home*  
CHERYL SEAY

*United Community Services*  
PERRY JONES, MICHELLE VENTOUR

*Van Dyke Schools— Carlson Elementary School*  
MARY PETERSON

*Veterans' Administration Hospital— Allen Park*  
FRANCES MCGIVERN, AARON RUBIN

*Veterans' Administration Hospital— Ann Arbor*

LAWRENCE OBRIST

*Virginia Park Citizen Service Corporation*  
BARBARA STARLING

*Washtenaw County Mental Health Child Guidance Clinic*  
PAULA BURDELSKI

*Wayne County Department of Social Services*  
BRENDA PETTY, SANDRA WHITTAKER

*Wayne County Juvenile Court*  
WYLINE JONES

*Wayne State University Psychology Clinic*  
SHIRLEY BERMAN

*Webb House*  
SISTER CATHERINE MARY

*Western Y.M.C.A.*  
BETH SINGER

*Whole Life Program*  
LINDA SHRIVER, DIANE SURMA

*Willow Run Schools*  
LAURIE KATZ

*Windsor Group Therapy Project*  
DALE SWAISGOOD

*Wyandotte General Hospital*  
WENDY LYON



# COURSES OF INSTRUCTION<sup>1</sup> (S W)

**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. 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. 2**  
Prereq: S W 301; coreq: 498. Continuation of four-course sequence. Introduction to a problem-solving guide for effecting situational change; emphasizes 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. (Y)

**351. Human Development and Dysfunction. Cr. 3**  
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)

**352. 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)

**371. Social Welfare and the Social Work Profession: History, Trends and Basic Concepts. Cr. 2**  
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. 2**  
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. (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)

**471. Social Welfare in the United States: Current Programs. Cr. 2**  
Prereq: S W 371; coreq: 498. Description and analysis of major social welfare programs in the United States. (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)

**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 4 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. 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)

**575. (ECO 544) Economics of Social Welfare. Cr. 4**  
Prereq: ECO 102 or consent of instructor. The economics of social welfare. Economics of education, unemployment, poverty and discrimination. Emphasizes analysis of interests of both taxpayers and beneficiaries on government programs to deal with these economic problems. (I)

**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. (T)

**673. Seminar in School Social Work. Cr. 2**  
(I)

**691. Special Topics in Social Work. Cr. 2-4**  
Topics of current interest to be announced in *Schedule of Classes*. (I)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations



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

*DEAN: VIJAI P. SINGH*

# Foreword

A new College of Urban, Labor, and Metropolitan Affairs was approved by the Board of Governors, to be implemented 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 Black Studies; the Center for Chicano-Boricua Studies; the Center for Labor Studies; the Center for Urban Studies; 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.

Initially the College shall be responsible for the administration of the Bachelor of Arts in Labor Studies, and the Co-Majors in Urban Studies, Black Studies, and Chicano Studies. However, additional programs may be approved in the future. For further information, contact the Office of the Dean, College of Urban, Labor, and Metropolitan Affairs.

## Archives of Labor and Urban Affairs

Walter P. Reuther Library; 577-4024

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 and related social, economic and political reform groups. The Archives has since become the official depository for the inactive files of the Congress of Industrial Organizations, the United Auto Workers, the American Federation of Teachers, the Newspaper Guild, the United Farm Workers, the American Federation of State, County and Municipal Employees, the Airline Pilots Association, the Association of Flight Attendants, the Industrial Workers of the World and many state and local labor organizations. Files have also been gathered from such groups as the Citizens' Crusade Against Poverty, the American Civil Liberties Union, the National Association for the Advancement of Colored People, the United Community Services of Detroit, and New Detroit, Inc. Many individuals who played leading roles in labor and urban affairs have also placed their papers in the Archives. Correspondence, minutes, clippings, notes, newspapers and other written records, as well as films, tapes and photographs, are available for research. The Archives Newsletter is published periodically to describe recent acquisitions, research in progress and other topics.

## Degree Program

*Bachelor of Arts — with a major in labor studies*

## Co-Major Programs

Degrees with co-majors in the following areas are granted in the College of Liberal Arts and the College of Fine and Performing Arts in conjunction with the College of Urban, Labor, and Metropolitan Affairs:

*Black Studies*

*Chicano-Boricua Studies*

*Urban Studies*





# 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 20) and the College of Liberal Arts Group Requirements (see page 191). 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

See General University Information, page 23.

## 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 21, 24.

## 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:

<i>Areas</i>	<i>maximum degree credit</i>
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 University Information section of this Bulletin, page 32.

## Residence

To qualify for a baccalaureate degree in the College of Urban, Labor, and Metropolitan Affairs, 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 approval of the Dean; however, when the candidate has fewer than the minimum thirty credits of residence in the College of Urban, Labor, and Metropolitan Affairs or in the College of Liberal Arts, no such exceptions are permitted.



# ACADEMIC PROCEDURES

*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 13.

## 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. 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 offices at 401 or 471 Manoogian, or phone 577-4605.

The Wayne at Gordes 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 367 Manoogian, or telephone 577-3019. 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 577-3219.

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, 5165 Gullen Mall, 577-3545.

Regarding other opportunities for study abroad, students should 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.*

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

### *Office of the Dean*

*Interim Dean:* Sue Marx Smock  
433 Science Library ..... 577-5071

### *Archives of Labor and Urban Affairs*

*Director:* Philip P. Mason  
231 Reuther Library ..... 577-4003

### *Center for Black Studies*

*Acting Director:* Perry Hall  
586 Student Center Building ..... 577-2321

### *Center for Chicano-Boricua Studies*

*Interim Director:* Jorge Tapia-Videla  
311 Justice ..... 577-4378

### *Center for Urban Studies*

*Interim Director:* Harold Wolman  
5229 Cass Avenue ..... 577-2208

### *Labor Studies Center*

*Director:* Harold Stack  
300 Justice Building ..... 577-2191

### *University Professors of Labor Studies*

*University Professor:* Irving Bluestone  
*University Professor:* Douglas Fraser

# BLACK STUDIES

Office: 586 Student Center Building

Acting Director: Perry A. Hall

## Lecturers

Schavi M. Ali, Patricia W. Coleman-Burns, L. Todd Duncan

## Part-Time Faculty

Ella Davis, Gerald Smith

## Adjunct Faculty

Alida Quick

The Center for Black Studies addresses the need recognized by the University to include Black people and their cultural heritage in the conceptualization and execution of its academic and social functions. Through instructional programs, the Center offers knowledge of the Black experience as a cognate or co-major relevant to a wide variety of academic programs. Black studies course work provides preparation for several fields in contemporary society, including communications, teaching, counseling, human resource development, public and community service, urban planning and public relations. This curriculum also constitutes useful preparation for graduate work in any of the social sciences and humanities where focus on issues and problems of the Black community is particularly relevant.

## Co-Major Program

The Black Studies Co-Major is a degree designation which students earn by completing black studies-related 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 Black 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 Black Studies core courses during their first two years.

**CO-MAJOR REQUIREMENTS:** The co-major requires thirty credits of core and elective courses including those sponsored by the Center for Black Studies, as well as courses offered 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 page 28) and those of the college sponsoring the major program taken as a cognate to the black studies curriculum.

## CORE REQUIREMENTS

	Credits
BKS 101 — Dimensions of the Black Experience: An Introduction .....	3
BKS 201 — Afro-American Historical and Aesthetic Roots .....	4
BKS 221 — Contemporary Black Social and Political Thought .....	4
BKS 501 — 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:

BKS 301 — Afro-American Development and Transformation .....	4
ENG 239 — Afro-American Literature .....	3
SPC 504 — Communication Dynamics in the Black Community .....	3

## COURSES OF INSTRUCTION<sup>1</sup> (BKS)

### 101. Dimensions of the Black Experience: An Introduction. (I D 101). Cr. 3

An interdisciplinary approach to black studies, exploring several broad issues, topics, theories, concepts and perspectives which describe and explain the black experience in America. (T)

### 201. Afro-American Culture: Historical and Aesthetic Roots. (I D 201). Cr. 4

Core requirement for black studies co-majors. Examination of the historical and aesthetic bases of a variety of forms of cultural reflection - language, literature, music - of the black experience in America. (T)

### 221. Contemporary Black Social and Political Thought. (I D 221). Cr. 4

Prereq: BKS 101 or consent of instructor. Core requirement for black studies co-majors. Survey of major social and political themes in the black experience with emphasis on the Black Movement of 1950s-1970s from a dialectical and social movements model. (T)

### 291. (SPA 291) Spanish American Literature and Culture. (CBS 291). Cr. 3(Max. 9)

Genres, writers, themes, trends. Topics to be announced in *Schedule of Classes*. (Y)

### 301. Afro-American Culture: Development and Transformation. (I D 301). Cr. 4

Theoretical perspectives on development of Afro-American creative culture and expression; emphasis on modern transformations and contemporary forms. (T)

### 321. The Black Community and Public Policy. (I D 321). Cr. 3

Core requirement for black studies co-majors. Identification and exploration of questions of black community interest, as related to issues of public policy - education, employment, equal opportunity, development of political and social institutions - which have significant impact on the black community. (T)

### 511. Black Women in America. (I D 511). Cr. 3

Prereq: BKS 201 or 221 or consent of instructor. Historical, social, political and economic oppression of black women in America: racism, sexism, marriage, motherhood, feminism, the welfare system; implications for advancement in the black community. (F)

### 513. The Black Family. (I D 513). Cr. 3

Prereq: one 200-level Black Studies course, or consent of instructor. Survey and analysis of historical and social issues relative to the study

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

of the black family.

(Y)

**531. Special Topics in Black Studies. (1D 531). Cr. 3**

Prereq: BKS 201 or 221 or consent of instructor. Seminar for investigating special topic areas related to the black experience - such as the black family, the black woman, and and male-female relationships among black people - which emerge from contemporary or historical issues and conditions. (Y)

**591. Field Work in the Black Community. (1D 591). Cr. 4-12**

Prereq: two black studies courses and written consent of instructor. Offered for undergraduate credit only. Field placement in a variety of possible settings within community-based organizations and institutions which deal substantially with the concerns of the black community. (T)

**690. Directed Study in Black Studies. (1D 690). Cr. 3-12**

Prereq: BKS 201 or 221 and written consent of instructor. Reading and research projects. (T)



# CHICANO-BORICUA STUDIES

Office: Room 311, Criminal Justice Building, 6001 Cass

Interim Director: Jorge Tapia-Videla

## Lecturers

Enid Valle

The Center for Chicano-Boricua Studies (CBS) is a multi-service unit which plays an important role 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 Cuban populations 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, multidisciplinary 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 409 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. 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.

### Required Core Courses (18 credits)

	<i>credits</i>
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 – History of Mexico .....	3
CBS 242 – History of Puerto Rico and Cuba.....	3
CBS 243 – History of Latinos in the U.S. ....	3

### Elective Courses (18 credits)

ANT 651 – Latin American Prehistory .....	3
CBS 311 – Urbanization and the Latino .....	3
CBS 312 – Politics in the Latino Community .....	3
CBS 351 – Precolumbian Mesoamerican Cultures .....	3
CBS 361 – Seminar in Latino Urban Problems I.....	2-6
CBS 362 – Seminar in Latino Urban Problems II .....	2-6
HIS 260 – Latin America to 1810 .....	3

HIS 261 — Latin America since 1810 .....	3
SPA 541 — Chicano, Cuban and Puerto Rican Spanish .....	3

## 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.

## COURSES OF INSTRUCTION<sup>1</sup> (CBS)

### 141. Chicano-Boricua Practicum. Cr. 1(Max. 2)

Prereq: consent of instructor. Open only to students in Chicano-Boricua program. Developing academic skills. (F,W)

### 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. (W)

### 211. Puerto Rican Literature and Culture. (SPA 250). Cr. 3

Examination of Puerto Rican literature. Themes and figures in a social and historical context. (F)

### 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)

### 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. (W)

### 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)

### 291. (SPA 291) Spanish American Literature and Culture. Cr. 3(Max. 9)

Genres, writers, themes, trends. Topics to be announced in *Schedule of Classes*. (Y)

### 311. Urbanization and the Latino. Cr. 3

Migration, employment and urbanization of different Latino groups in the United States. (I)

### 312. Politics and the Latino Community. Cr. 3

Political participation of the Spanish-speaking people from 1848 to the present; critical evaluation of political ideologies and issues. (I)

### 351. (ANT 551) Precolombian Mesoamerican Cultures. Cr. 3

Prereq: ANT 210 or consent of instructor, or CBS 201. Survey of the history and characteristics of culture in Mesoamerica prior to colonization, from the Maya and Olmec to the Aztec. (Y)

### 361. Seminar in Latino Urban Problems I. Cr. 2-6

Prereq: consent of instructor. Contemporary urban problems of the Spanish-speaking people in the United States. Emphasis on research

and field activities. (I)

### 362. Seminar in Latino Urban Problems II. Cr. 2-6

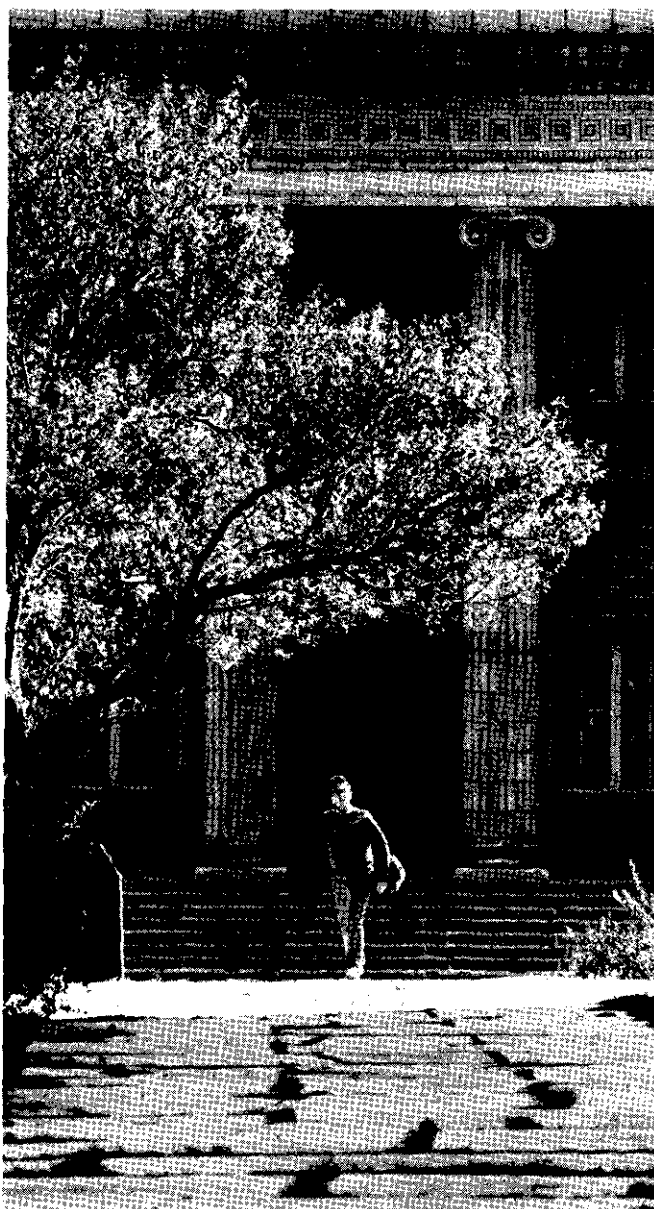
Prereq: consent of instructor. Continuation of research projects and field work activities on contemporary urban problems of Spanish-speaking people. (I)

### 541. (SPA 541) Chicano, Cuban, and Puerto Rican Spanish. Cr. 3

Prereq: SPA 202. Practical linguistic description of the Chicano, Cuban, and Puerto Rican varieties of Latin-American Spanish. (Y)

### 556. (SPA 556) Society, Institutions, and Culture of Spanish America. Cr. 3

Prereq: SPA 461 or SPA 462 or consent of instructor. Panorama of Latin American civilization and culture from the pre-Columbian period to the present. (Y)



<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

# LABOR STUDIES

Office: 337 Justice Institute  
 Director: Hal Stack

## Administrative Committee

Edward Cushman, Political Science; Philip P. Mason, History; Cary M. Lichtman, Psychology

## 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 13.

**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 191) and the University General Education Requirements (see page 20), 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 20-31 and 409-412, respectively.

### REQUIRED CORE COURSES (Twenty-one Credits)

	<i>Credits</i>
LBS 250 — Introduction to Labor Studies.....	4
LBS 470 — Senior Seminar.....	3
ECO 441 — Labor Institutions.....	4
HIS 529 — American Labor History.....	3
PSY 350 — Industrial-Organizational Psychology.....	3
SOC 563 — American Labor: Blue Collar, White Collar.....	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
P S 504 — American Political Reform Movements.....	4
P S 634 — Employee Relations in the Public Sector.....	3
PSY 656 — Psychology of Union-Management Relations.....	3
PSY 554 — Motivation in the World of Work.....	3
SOC 562 — Social Aspects in Industry.....	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:

	<i>credits</i>
Collective Bargaining.....	3
Labor Education.....	3
Labor Law.....	3
Labor Problems.....	3
Industrial Health and Safety.....	3
Quality of Work Life.....	3
Technological Development 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.

### SUGGESTED ELECTIVES

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 — Man and the Environment.....	3
ENG 301 — Techniques of Expository Writing.....	3
ECO 101 — Principles of Macroeconomics.....	4
ECO 102 — Principles of Microeconomics.....	4
HIS 562 — The Rise of the European Working Class.....	3
MGT 574 — Collective Bargaining.....	3
MGT 674 — Administering the Labor Agreement.....	3
P S 231 — Introduction to Public Administration.....	4
P S 302 — Political Parties and Elections.....	4
P S 303 — Interest Groups in the Political Process.....	4
P S 304 — Legislative Process.....	4
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
- Industrial America* — Significant events and people in the U.S.
- American Society Today* — Power and politics in society and the workplace.
- Science and Technology* — Ideas/technologies effecting daily life.

**SECOND YEAR**

- Economics for Workers* — Function and benefits of American economy.
- Effective Writing* — Writing, library skills, and analysis of news reporting and fiction.
- Labor Problems Seminar* — Each student researches a labor problem of personal interest and makes two oral reports and a brief written report.

**COURSES OF INSTRUCTION<sup>1</sup> (LBS)**

- 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. 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**

*Offices:* 848 Mackenzie Hall and 225 State Hall  
*Co-Directors:* Corinne L. Gilb and 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 13) 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 28-31) and those of this college and the college sponsoring the major program taken as a cognate to the urban studies curriculum.

*Core Requirements (10 credits)*

	<i>credits</i>
U S 200 — Introduction to Urban Studies.....	4
U S 401 — Interdisciplinary Pro-Seminar.....	3
<i>One of the following:</i>	
U S 600 — Field Studies.....	3
U S 601 — Supervised Field Experience.....	3
U S 602 — Political Science Internship.....	4
U S 603 — Field Geography.....	3-7
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;

ANT 506 — Urban Anthropology.....	3
ANT 570 — Applied Anthropology.....	3
BIO 100 — Introduction to Life.....	4
BIO 103 — Man and the Environment.....	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 552 — State and Local Finance.....	3
ECO 580 — Urban and Regional Economics I.....	3
ENG 239 — Introduction to Afro-American Literature.....	3
ENG 542 — American Realism: 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

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

FAC 186 -- Survey of Early Child Care.....	3
FAC 355 -- The Consumer and the Market.....	3
FAC 356 -- Introduction to Consumer Housing.....	3
FAC 555 -- Trends in Consumer Affairs.....	3
GEG 313 -- Introductory Urban Geography.....	4
GEG 565 -- Regions of Detroit.....	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 635 -- Ethnic Groups in the United States.....	4
HIS 579 -- Cities and Empires.....	3
N E 503 -- Great Cities of the Near East.....	3
P S 224 -- Introduction to Urban Politics and Policy.....	4
P S 311 -- Politics and Local Justice.....	4
PSY 260 -- Psychology of Social Behavior.....	4
PSY 350 -- Industrial-Organizational Psychology.....	3
PSY 461 -- Laboratory in Personality and Social Psychology.....	3
PSY 467 -- Environmental Psychology.....	3
PSY 563 -- Group Dynamics.....	3
PSY 564 -- Attitudes and Interpersonal Attraction.....	3
PSY 565 -- Psychological Aspects of Leadership.....	3
SOC 202 -- Social Problems.....	3
SOC 351 -- The Nature and Impact of Population on Society.....	3
SOC 382 -- Criminology: Society, Crime & the Criminal.....	3
SOC 550 -- Urban and Metropolitan Living.....	3
SOC 555 -- Social Movements and Collective Behavior.....	3
SOC 557 -- Race Relations in Urban Society.....	3
SOC 562 -- Social Aspects in Industry.....	3
SOC 563 -- American Labor: Blue Collar, White Collar.....	3
SOC 581 -- Law in Human Society.....	3
SOC 655 -- Dynamics of Urban Social Action.....	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.....	2-3

Upon the approval of an Urban Studies adviser, the student may also elect courses in philosophy, computer science, statistics, architectural drafting, journalism, or speech pertaining to mass media, or in colleges outside Urban, Labor, and Metropolitan Affairs—depending on the student's overall plan of study. Some urban-related careers require special training in natural sciences and/or advanced mathematics.

## COURSES OF INSTRUCTION<sup>1</sup> (U S)

### 200. (SS) Introduction to Urban Studies. (GEG 200) (HIS 200) (P S 200) (SOC 250). 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)

### 401. Interdisciplinary Pro-Seminar. Cr. 3

Prereq: U S 200. Undergraduate credit only. Topics to be announced in *Schedule of Classes*. (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)

### 602. (P S 591) 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)

### 603. (GEG 650) Field Geography. Cr. 3-7

Prereq: U S 401 and two courses in geography or consent of instructor. Geographic field training, including mapping, interviewing, field observation, data gathering, problem analysis, and report preparation. Work undertaken in a variety of situations, including urban and rural land use, industrial and commercial locations, urban social change, agriculture, soils and landforms. Normally held in summer. (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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

## **Additional Academic Programs**

# UNIVERSITY COUNSELING SERVICES

Office: 334 Mackenzie Hall; 577-3398

Director: John E. Hechlik

Assistant Director: Robert D. King

Assistant Director

for Testing and Evaluation: Eric R. Sayenga

Assistant Director

for Reading and Study Skills: Marie E. Byrnes

Assistant Director

for Women's and Re-Entry Programs: Kay A. Hartley

## Counseling Psychologists

Wayne H. Chubb, Marisa G. Keeney

## Clinical Social Workers

George T. Hunter, Kathryn B. O'Brien

## Coordinator, Life/Career Development Laboratory

Ruth B. Panagos

## Coordinator, Women's Resource Center

Antasha L. Griffiths

## Academic Services Officer

Thomas J. Wilhelm

## Psychometric Services Officers

Frederick A. Cole, Nada Sesum, Anne E. Walters

In addition to the various services available to the individual student (described on page 35), University Counseling Services offer a number of non-credit courses designed to help students: (1) ensure successful outcomes from their University experience; (2) develop capacities useful in both University and later career life; and (3) avoid difficulties commonly encountered by students.

## COURSES OF INSTRUCTION<sup>1</sup>

### Reading Efficiency (R E)

#### 90. Learning Theory and Study Skills. Cr. 0

Offered for S and U grades only. No degree credit. Time-budgeting, comprehension skills, general study habits. For freshmen and other students needing reading improvement. (T)

#### 91. Individualized Study Skills Laboratory Cr. 0

Offered for S and U grades only. No degree credit. Individualized reading for specific difficulties in reading. Open at any time during a term for any student. (T)

#### 94. Vocabulary Enrichment. Cr. 0

Offered for S and U grades only. No degree credit. Review of the pronunciation key of language, lexical skills, derivation of words, terms proper to various academic disciplines. For freshmen, foreign students, and other students needing vocabulary improvement. (T)

#### 95. Analytical Reading for Textbook Study Cr. 0

Offered for S and U grades only. No degree credit. Logical, developmental method of speed reading based on patterning. Reading rate is doubled or tripled with excellent comprehension. (T)

#### 96. Speed Reading. Cr. 0

Offered for S and U grades only. No degree credit. Develops ability to read ratiocinatively for author's meaning. Course is based on four component techniques: questioning, inference, relating and evaluating. (T)

#### 98. 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. (Y)

## University Counseling Services (UCS)

#### 91. 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. (T)



<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

# ROTC PROGRAMS

## Military Science

The Department of Military Science provides Wayne State University students with an Officer Education Program through cross-enrollment agreements with the University of Detroit. The Officer Education Program allows qualified applicants to receive commissions as Second Lieutenants in the United States Army. Other interested students may select military science courses for elective credit without participating in leadership training or incurring any military obligation.

The Reserve Officers Training Corps (ROTC) offers both a four-year and a two-year program. The four-year program consists of a two-year basic course, a two-year advanced course, and a six week summer camp normally attended between the junior and senior years. Students having prior ROTC including Junior ROTC or prior military service may be given placement credit for part or all of the basic course. The two-year program is by application only and consists of a six week basic course and the advanced summer camp. All students with two years of school remaining (graduate or undergraduate) are eligible; however, applications are only accepted during the second term for enrollment in the following fall semester.

ROTC cadets are eligible for three, two and one year scholarships which pay tuition, textbooks, laboratory fees and other educational expenses. In addition, the advanced course students and all scholarship students receive a tax free subsistence allowance of \$100 per month during the school year. Books and uniforms are furnished at no cost to students. Cadets who maintain high academic and leadership standards and who are selected as Distinguished Military Students are eligible to apply for Regular Army Commissions. Interested students can contact the Professor of Military Science, University of Detroit; telephone 927-1303.

## COURSES OF INSTRUCTION<sup>1</sup> (MSC)

### 100. Military Profession. Cr. 1

Prereq: admission to ROTC and consent of instructor. Introduction to the Reserve Officers' Training Corps at the University of Detroit. The functioning and purpose of the corps, its obligations, benefits and curriculum. Topics such as: the role of the Army, national defense structure, scholarships, customs and courtesies of the Army, development of leadership responsibilities. (F,W)

### 102. Basic Weapons Marksmanship. Cr. 1

Prereq: admission to ROTC and consent of instructor. Introduction to marksmanship fundamentals and care of weapons. Conferences and practical exercises, the integrated act of shooting, firing positions and maintenance of the .22 caliber rifle. (F,W)

### 200. First Aid and Lifesaving. Cr. 2

Prereq: admission to ROTC and consent of instructor. Basic knowledge of emergency treatment of fractures, external bleeding, shock, burns, choking, asphyxiation, and chemical injury. Training in cardiopulmonary resuscitation. (F,W)

### 203. Effective Oral and Written Military Communications. Cr. 1

Prereq: admission to ROTC and consent of instructor. Development

of the ability to speak and write in a clear, logical and effective manner. Familiarization with common military formats for written and oral presentation. Conference and practical exercise.

### 205. Applied Leadership and Management. Cr. 2

Prereq: admission to ROTC and consent of instructor. Working knowledge of military leadership and management. Basic background material on military organizations and functions, explanations of the unique and dynamic nature of military leadership. Practical exercises and casework. (F,W)

### 207. ROTC Basic Camp. Cr. 6

Prereq: consent of the Professor of Military Science. Six weeks of full-time training in military skills and leadership conducted at Fort Knox, Kentucky. Provides students who have not taken the basic course a means of qualifying for the advanced courses through intensive study. (S)

### 255. Military History. Cr. 3

Prereq: admission to ROTC and consent of instructor. Historical basis and principles of war, American military policies and military organization from the colonial period to the twentieth century. (F,W)

### 300. Advanced Leadership and Management. Cr. 3

Prereq: admission to ROTC and consent of instructor. Development in the ROTC cadet, through conference and practical exercise, of leadership potential by concentrating on traits, principles, behavior and problem solving. Emphasis on developing instructional and speaking ability. Further development of leadership skills is pursued during practical exercise. (F)

### 302. Advanced Camp Seminar. Cr. 3

Prereq: admission to ROTC and consent of instructor. Preparation of ROTC cadet for six-week advance camp at Fort Riley, Kansas. Emphasis on drill and ceremonies, orienteering, offensive and defensive tactics, physical training evaluation and field training exercises. Pre-camp qualifications and administration. (W)

### 400. Advanced Management. Cr. 3

Prereq: admission to ROTC and consent of instructor. Study of staff organization, functions, types and duties in relation to the commander. Practical exercise of cadet staffing procedures and missions. Military justice also briefly discussed. (F)

### 402. Advanced Leadership Seminar. Cr. 3

Prereq: admission to ROTC and consent of instructor. Service obligation, pay, medical processes and basic administration. Basic concepts and roles of the officer/leader in management and logistics. Cadets play major role in corps administration and functioning as a prelude to active duty. (W)

## 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 and successfully complete the program and receive a university degree are commissioned as second lieutenants in the United States Air Force.

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

*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, five years for navigators, and eight years for pilots. Obligations for aircrew members begins 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.

## COURSES OF INSTRUCTION<sup>1</sup> (ASC)

### 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)

<sup>1</sup> See page 429 for interpretation of numbering system, signs and abbreviations

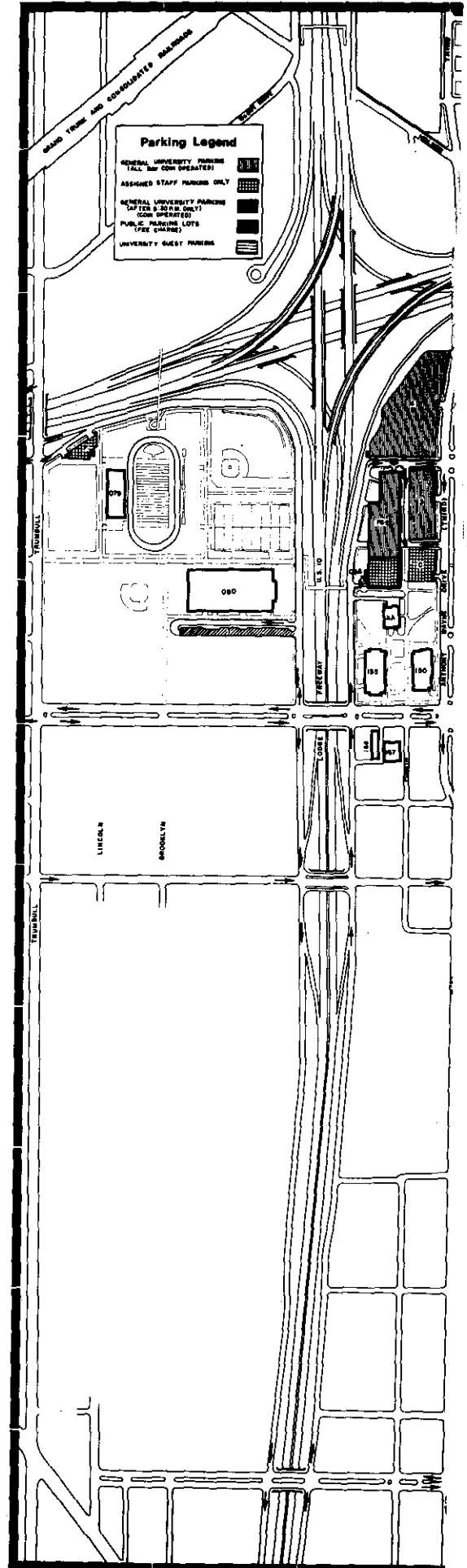
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## MAIN CAMPUS

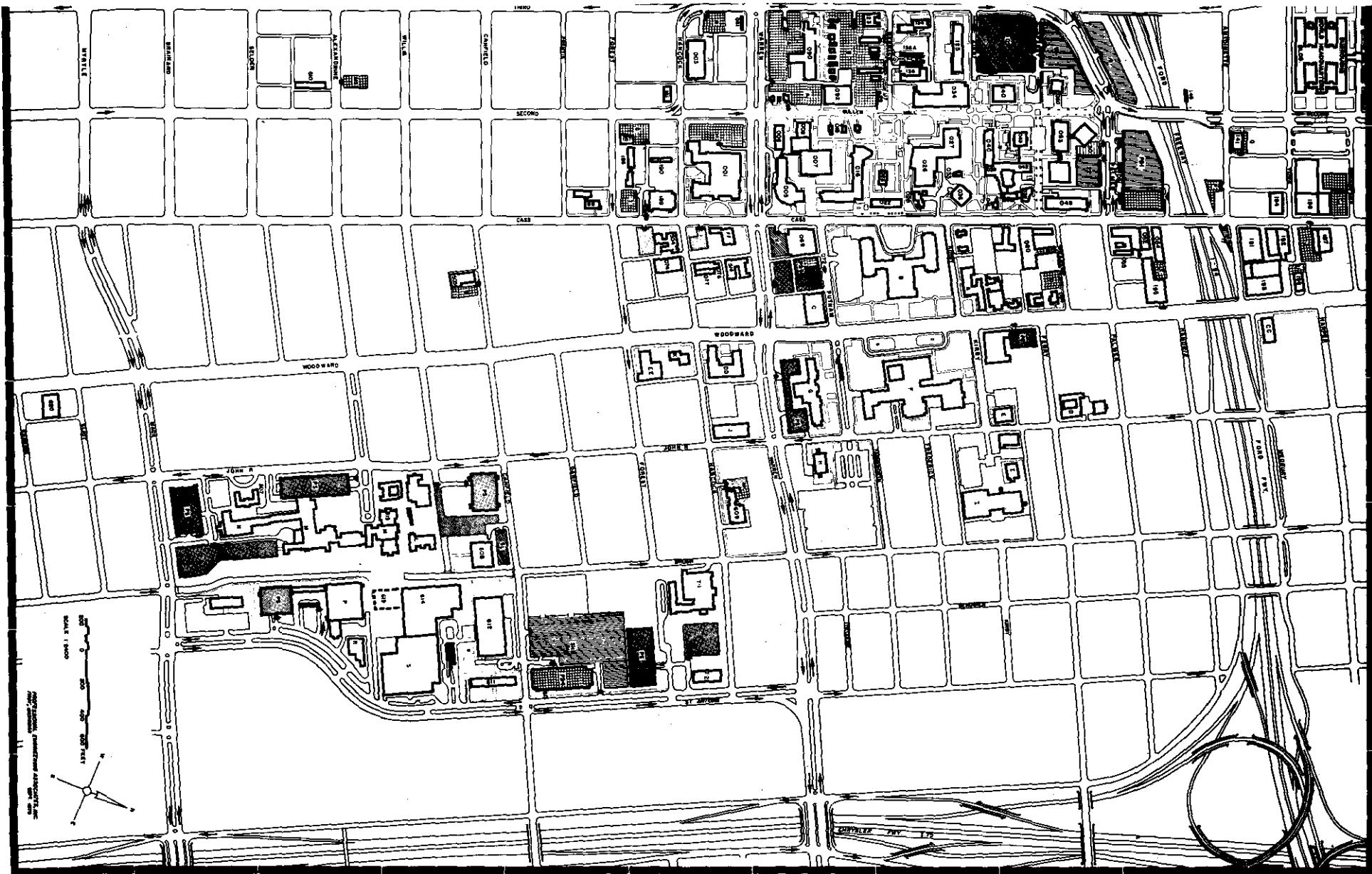
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- 192 Administrative Services Building No. 3
- 042 Alumni House — Community Arts Center
- 033 Art and Art History Building
- 040 Art Wing — Community Arts Center
- 092 Bookstore, University
- 007 Chemistry
- 048 Richard Cohn Hall
- 039 Community Arts Auditorium
- 193 Computing and Data Processing Center
- 134 Helen L. DeRoy Apartments
- 023 Helen L. DeRoy Lecture Hall
- A Detroit Historical Museum
- F Detroit Institute of Arts
- B Detroit Public Library
- 140 College of Education Building
- 090 College of Engineering Building
- 167 Engineering Technology Building
- 150 General Lectures Hall
- 189 Hilberry Classic Theatre
- 125 Helen Newberry Joy Residence
- 196 Metropolitan Detroit Justice Center
- 008 Kresge Science Library
- 064 Institute of Labor; University Development Offices
- 053 Law School
- 006 Life Sciences Building
- 069 David Mackenzie Hall
- 080 Frederick C. Matthaei Physical Education Center
- 043 McGregor Conference Center
- D Merrill-Palmer Institute
- 038 Music Wing — Community Arts Center
- 001 Old Main
- 051 Parking Structure No. 1
- 056 Parking Structure No. 2
- 072 Parking Structure No. 3
- 003 Physics Building
- 022 Meyer and Anna Prentis Hall
- 077 Public Safety Department
- 026 G. Flint Purdy Library
- G Rackham Educational Memorial Building
- 190 Reading and Study Skills; English Composition Clinic
- 036 Walter P. Reuther Library of Labor and Urban Affairs
- 005 Science Hall
- 050 Shapero Hall of Pharmacy
- 141 Speech and Hearing Center
- 016 State Hall
- 060 University Services Building
- 028 Urban Studies, Center for

## DETROIT MEDICAL CENTER

- P Children's Hospital of Michigan
- L Grace Hospital Division
- K Hannan House
- M Harper Hospital
- T1 Hutzel Hospital
- 615 Kresge Research Building
- 611 Medical Research Building
- 609 C.S.Mott Center for Human Growth and Development
- 613 Parking Structure No. 4
- J Prentis Cancer Center
- N Rehabilitation Institute
- 612 Gordon H. Scott Hall of Basic Medical Sciences
- 608 Vera Shiffman Medical Library

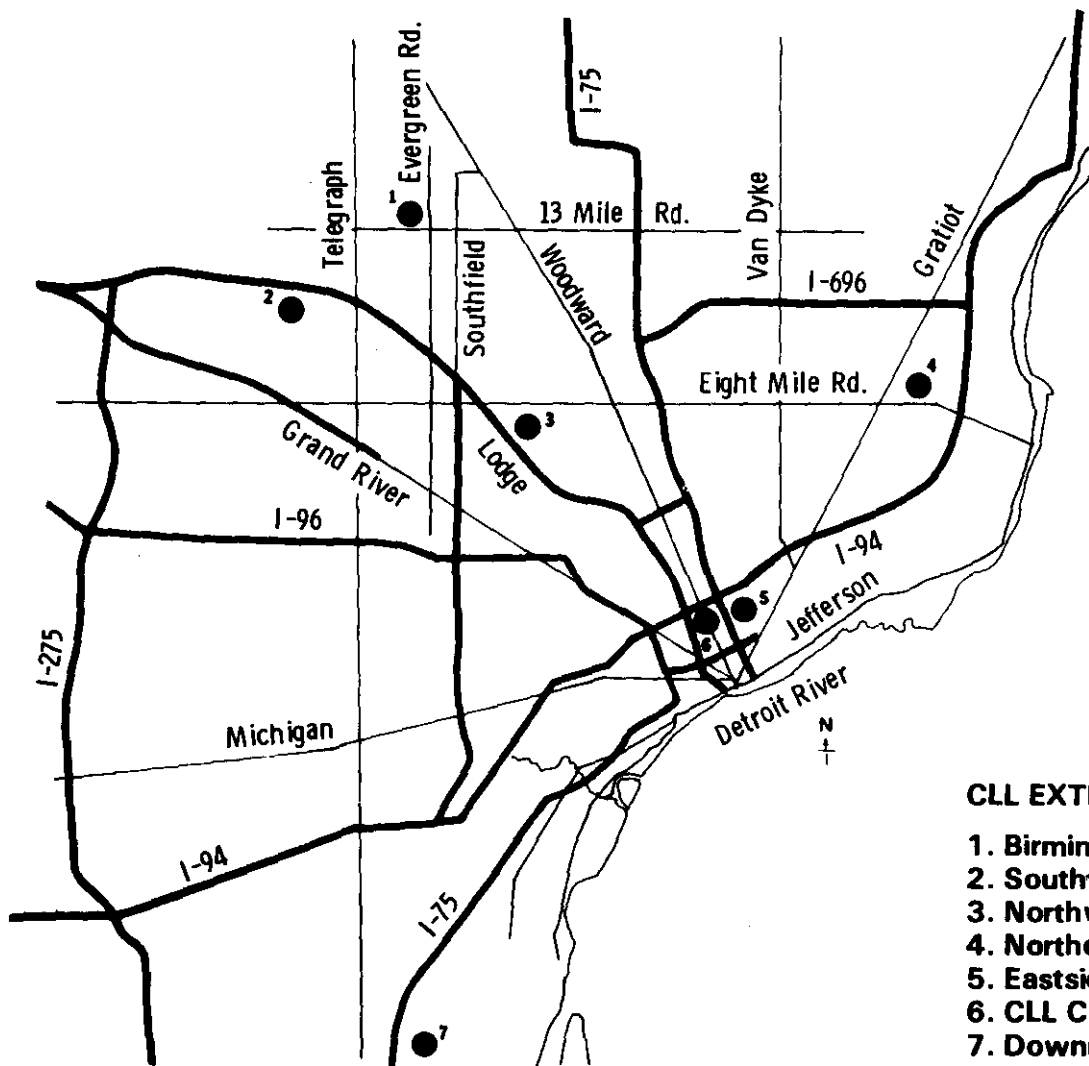
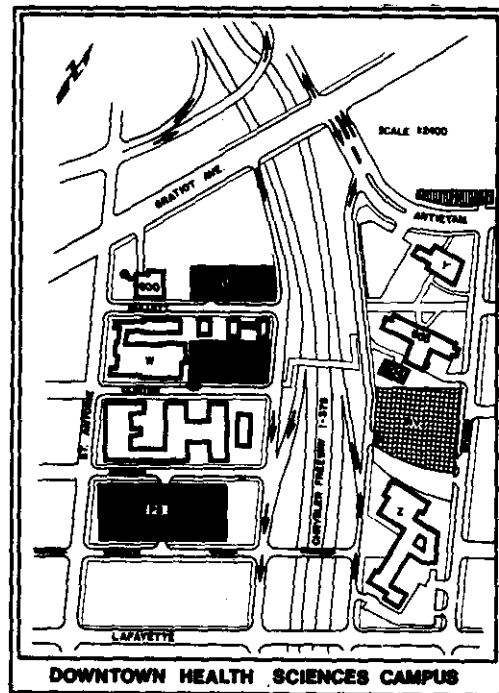






## DOWNTOWN MEDICAL CENTER

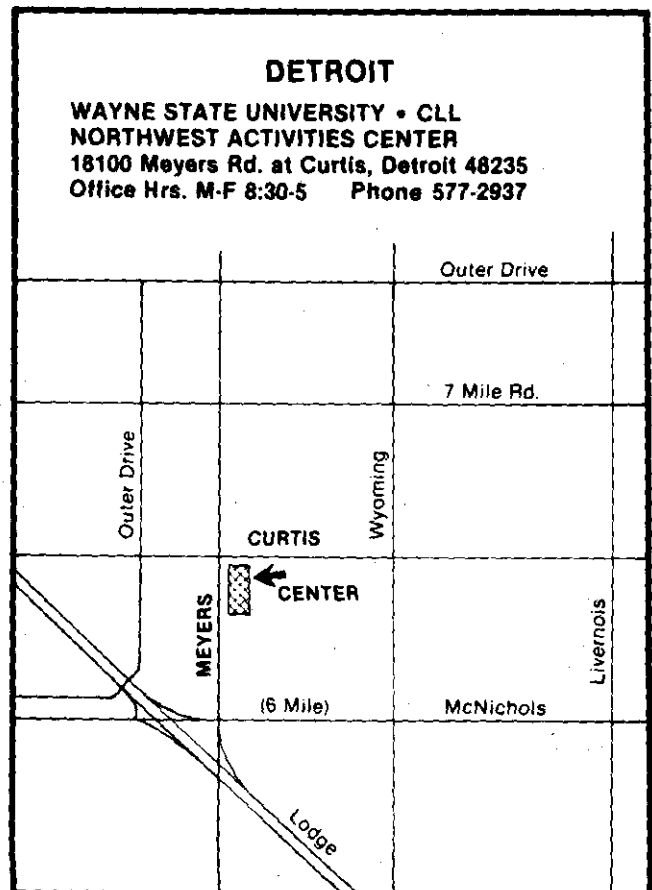
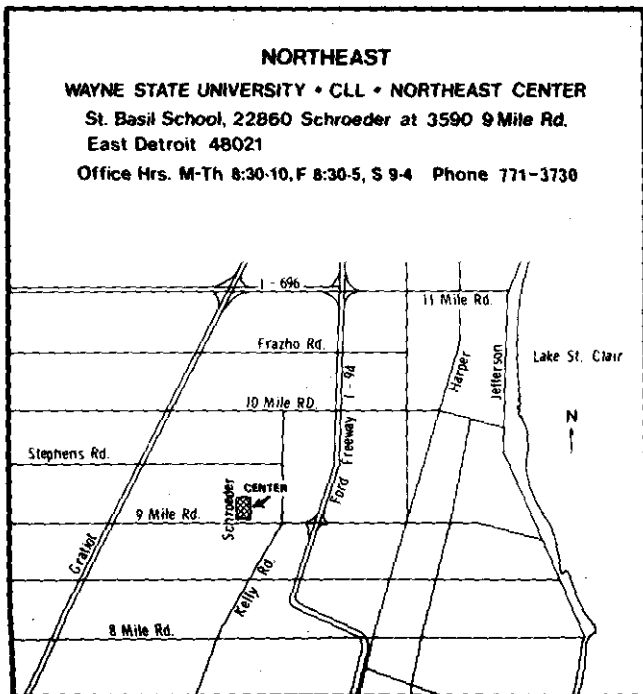
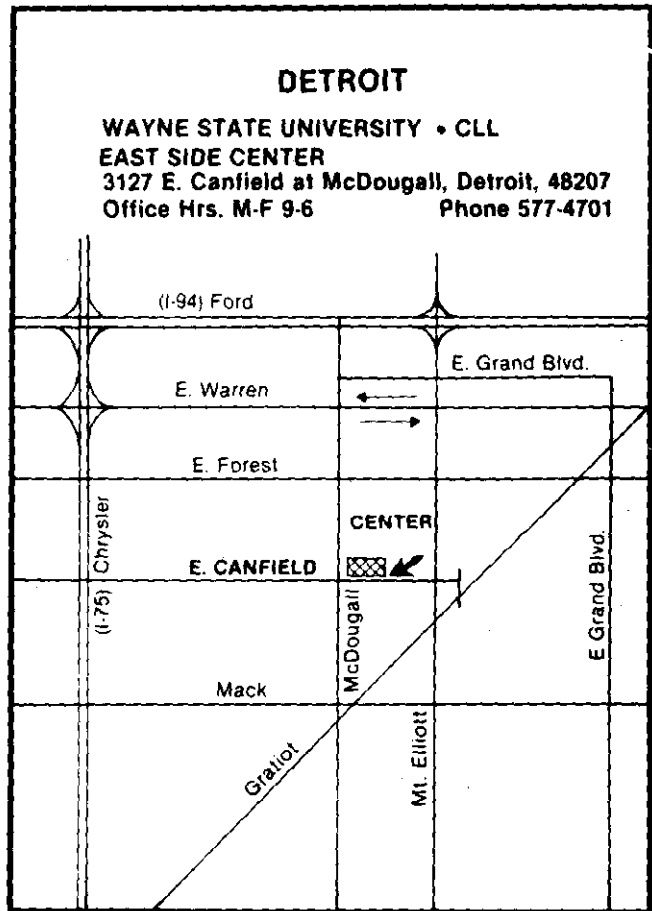
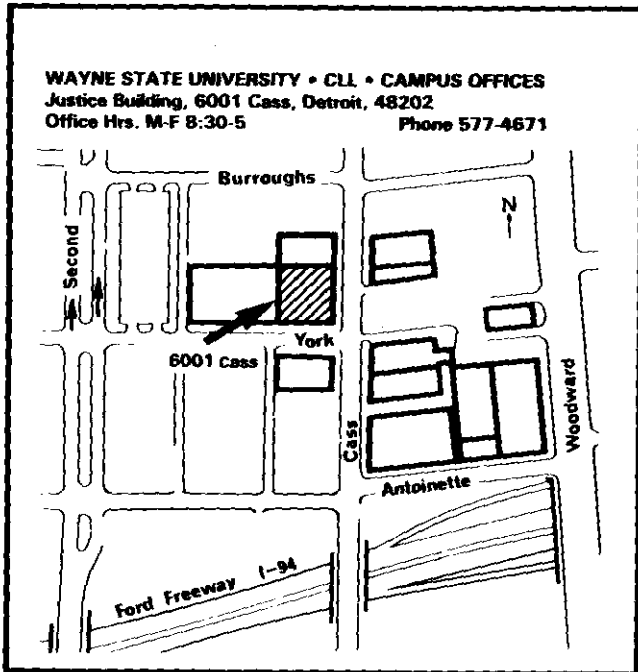
- 600 Clinical Laboratory Building
- X Detroit General Hospital
- W Detroit Memorial Hospital
- 604 Health Sciences Annex
- 605 Health Sciences
- Z Lafayette Clinic
- Y Wayne County Medical Society

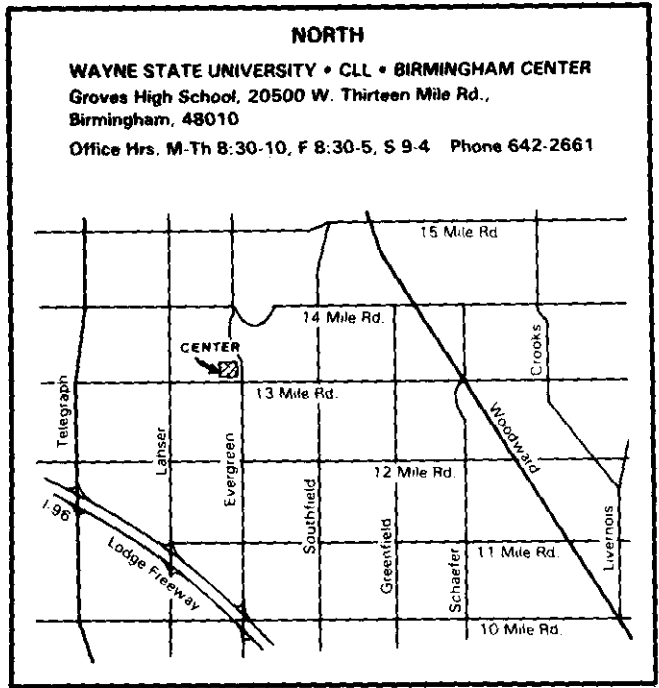
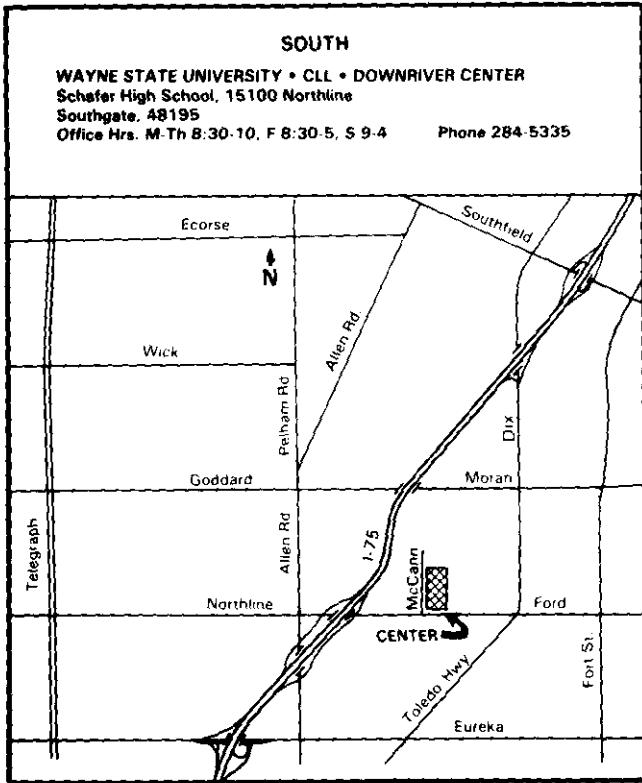


## CLL EXTENSION CENTERS

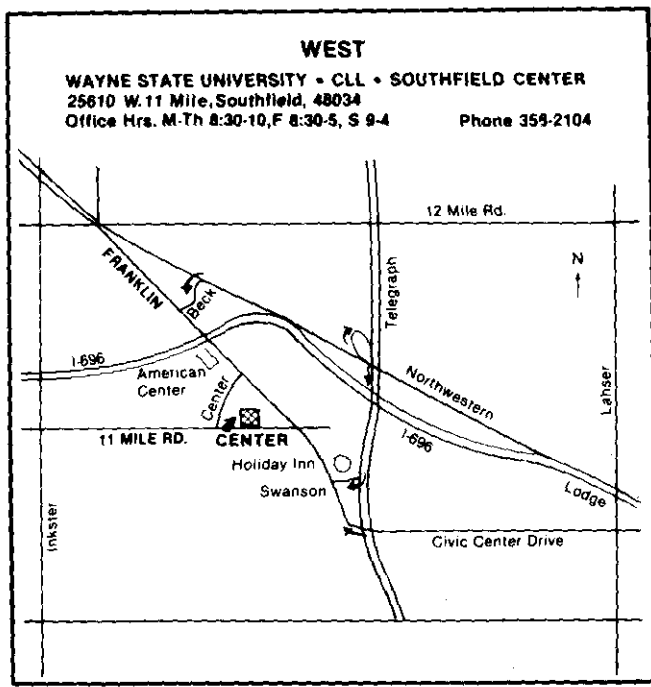
1. Birmingham Center
2. Southfield Center
3. Northwest Center
4. Northeast Center
5. Eastside Center
6. CLL Campus Office
7. Downriver Center

**College of Lifelong Learning  
EXTENSION CENTERS**

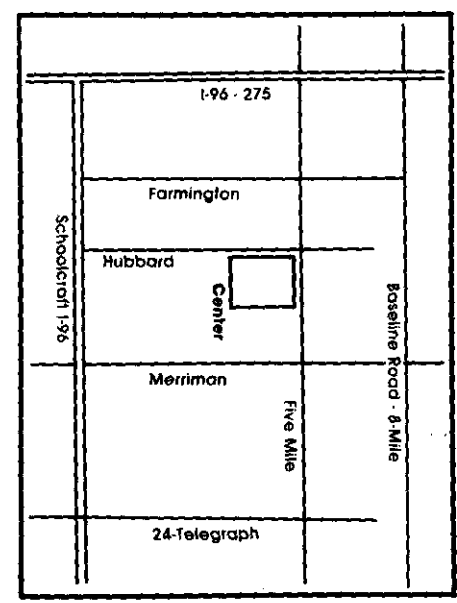




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Livonia Center  
 Bentley Center  
 15100 Hubbard  
 Livonia, MI 48154  
 Phone: 425-6633  
 Office Hours: M-Th 5:00 - 10:00 p.m.



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