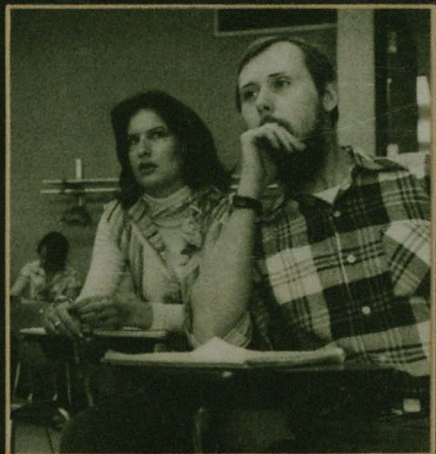


EASTERN MICHIGAN



Eastern Michigan University Bulletin
Graduate Catalog 1979

EASTERN MICHIGAN
UNIVERSITY
BULLETIN

1979

GRADUATE CATALOG

Ypsilanti, Michigan 48197

Statement of Mailing Privileges

**Published four times a year by Eastern Michigan University and entered as
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DIRECTIONS FOR CORRESPONDENCE

Please address specific inquiries to the following offices:

Dean of Academic Records and Teacher Certification: Certification requirements and transcripts	5 Pierce Hall	487-4111
Dean of the College of Arts and Sciences	411 Pray-Harrold	487-4344
Dean of the College of Business	508 Pray-Harrold	487-4140
Dean of the College of Education	117 Boone	487-1414
Dean of the College of Human Services	220 King Hall	487-0077
Dean, Division of Continuing Education Off-campus and in-service courses; speakers for special occasions; adult education; consultation services to schools	323 Goodison	487-0407
Student Accounting: University fees and financial aids	Briggs Hall	487-3335
Director of Admissions (undergraduate)	214 Pierce Hall	487-3060
Director of Financial Aids: Loans and grants-in-aid	212 Pierce Hall	487-0455
Director of Registration: Registration of students for on/off campus classes	Briggs Hall	487-2300
Director of On and Off-Campus Housing Basement-Dining Commons #1		487-1300
Center of Educational Resources (Library)		487-0020
Director of Career Planning & Placement Center Teaching vacancies; registration of applicants for teaching, business and industrial positions; opportunities for earning a portion of University expenses	420 W. Forest	487-0400
International Studies	330 Goodison	487-2424
Graduate School Office Omer Robbins, Jr., Interim Dean Neal F. Hoover, Assistant Dean Graduate Admissions Graduate Records	116 Pierce Hall	487-0042 487-0048 487-3400 487-0093

Graduate Advising. See pages 19–21 for Coordinators of Advising listed by program area.

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List of Catalog Abbreviations

The following is a list of abbreviations which appear in the Graduate Catalog:

ACC	Accounting
ADS	Administrative Services
AMU	Applied Music
ANT	Anthropology
AST	Astronomy
ATGSB	Admission Test for Graduate Study in Business
BED	Business Education
BIO	Biology
BOT	Botany
CHM	Chemistry
CLEP	College Level Examination Program
CUR	Curriculum
CWS	College Work Study
ECO	Economics
EDL	Educational Leadership
EDM	Educational Media
EDP	Educational Psychology
ELI	English Language Institute
EMU	Eastern Michigan University
ENG	English
FA	Fine Art
FIN	Finance
FRN	French
G&C	Guidance & Counseling
GEO	Geography
GMAT	Graduate Management Admission Test
GPA	Grade Point Average
GRE	Graduate Record Examination
HEC	Home Economics
HIS	History
HPER&D	Health, Physical Education, Recreation and Dance
I	Incomplete
IED	Industrial Technology and Industrial Education
LIT	Literature
MA	Master of Arts
MAT	Miller Analogies Test
MBA	Master of Business Administration
MBE	Master of Business Education
MFA	Master of Fine Arts
MGT	Management
MKT	Marketing
MS	Master of Science
MSA	Master of Science in Accounting
MSIS	Master of Science in Computer-Based Information Systems
MSOD	Master of Science in Organizational Behavior and Development
MTH	Mathematics
MUS	Music

NDSL	National Direct Student Loan
ORI	Operations Research and Information Systems
PEE	Physical Education
PHI	Philosophy
PHY	Physics
PLS	Political Science
Prereq	Prerequisite
PSY	Psychology
RDC	Reading
SEI	Special Education-Emotionally Impaired
Sem	Semester
SFD	Social Foundations
SGN	Special Education-General Courses
SHI	Special Education-Hearing Impaired
SLD	Special Education-Learning Disabilities
SLI	Special Education-Speech & Language Impaired
SMI	Special Education-Mentally Impaired
SPA	Specialist in Arts
SPH	Speech
SPI	Special Education-Physically and Otherwise Health Impaired
SPN	Spanish
SOC	Sociology
TOEFL	Test of English as a Foreign Language
TV	Television
W	Withdrawal
ZOO	Zoology

THE INSTRUCTIONAL YEAR

The instructional year is divided into two semesters of fifteen weeks each, a spring session of seven and one-half weeks and a summer session which offers six and seven and one-half week courses. In addition, workshops of one to three weeks duration are offered. Students who have satisfied admission requirements may enroll at the beginning of any semester or session.

GRADUATE SCHOOL CALENDAR

Winter Semester, 1979

Classes begin	January 5
Winter recess	February 17, 18, 19, 20
Easter recess	April 13, 14, 15
Commencement	April 21
Winter semester closes	April 24

Spring Session, 1979

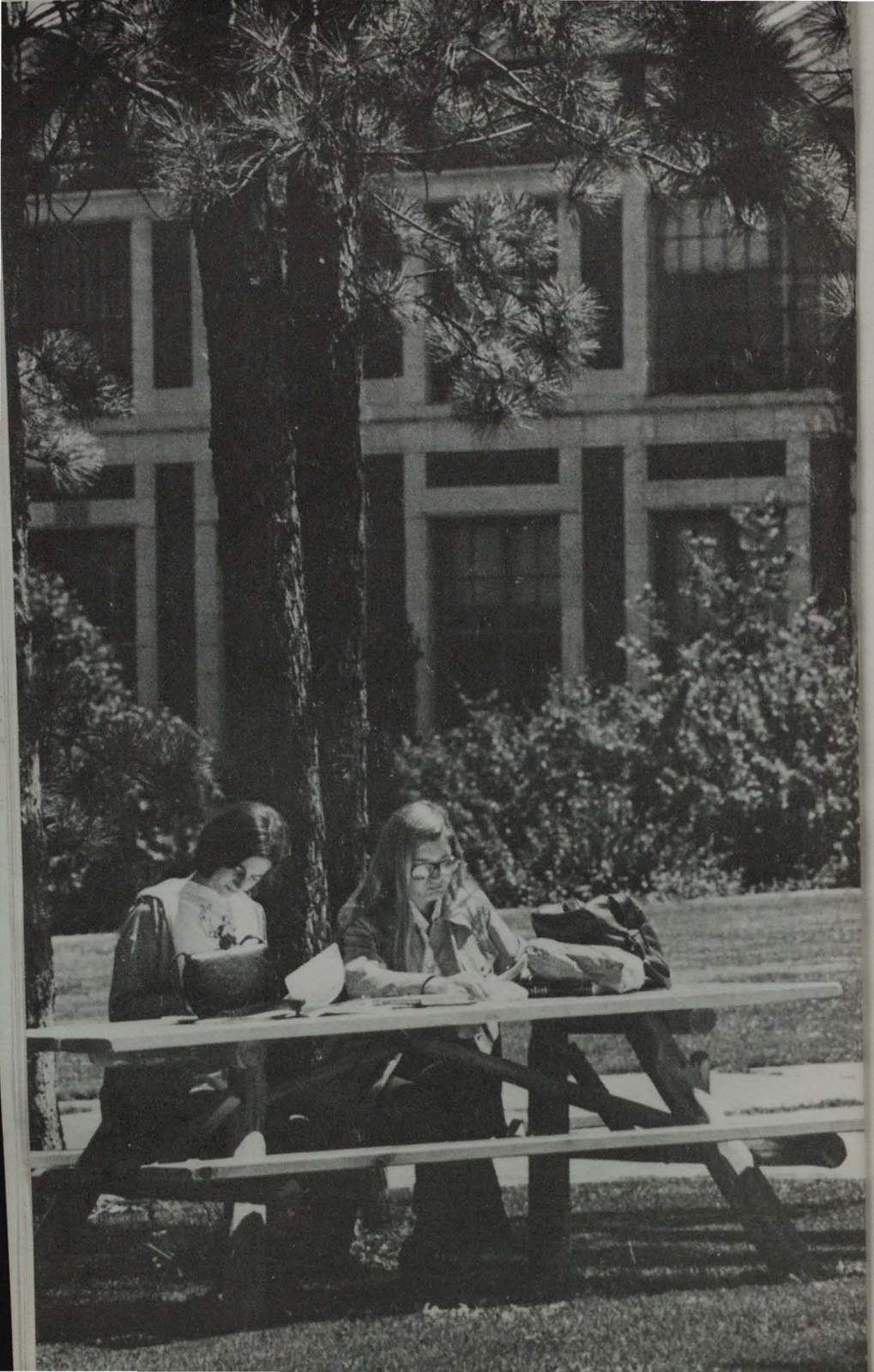
Classes begin	April 30
Memorial Day (no classes)	May 28
Spring session closes	June 20
Graduation date (no commencement exercises)	June 20

Summer Session, 1979

Classes begin	June 25
Independence Day recess	July 4
Six week session closes	August 3
Summer session closes	August 17
Graduation date (no commencement exercises)	August 17

Fall Semester, 1979

Calendar in progress	(Consult class schedule for dates)
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EASTERN MICHIGAN UNIVERSITY

Ypsilanti, Michigan 48197

ACCREDITATION

Eastern Michigan University is accredited by the North Central Association of Colleges and Secondary Schools and the National Council for Accreditation of Teacher Education. The Specialist's Degree is the highest degree approved.

GOVERNMENT OF THE UNIVERSITY

The 1963 constitution of the State of Michigan places Eastern Michigan University under a separate board consisting of eight members appointed by the Governor. It is known as the Board of Regents of Eastern Michigan University. Financial support for the University comes from tax monies paid by the people of Michigan and student tuition and fees.

BOARD OF REGENTS

	Residence
Richard N. Robb, Chairman and Presiding Officer	Ypsilanti
Beth Wharton Milford, Vice-Chairperson	Ypsilanti
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Dolores A. Kinzel	Lansing
Edward J. McCormick	Monroe
Carleton K. Rush	Romulus
John Ullrich	Dearborn

Gary D. Hawks, Secretary
Robert J. Romkema, Treasurer

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Donald F. Drummond	Interim Vice-President for Academic Affairs
Robert J. Romkema	Vice-President for Business and Finance
Laurence N. Smith	Vice-President for Student Affairs
Gary D. Hawks	Vice-President for University Relations

ADMINISTRATIVE OFFICERS

Raymond A. LaBounty	Assistant Vice-President for Academic Affairs
Omer Robbins, Jr.	Interim Dean, Graduate School
Clark G. Spike	Interim Dean, College of Arts and Science
Claude I. Shell, Jr.	Acting Dean, College of Business

John D. Mulhern Dean, College of Education
 José R. Llanes Associate Dean, College of Education
 Robert Boissoneau Dean, College of Human Services
 Everett L. Marshall Dean, Academic Records and
 Teacher Certification
 George Melican Dean, Division of Continuing Education
 Bette White Dean of Students

DEPARTMENT HEADS

College of Arts and Sciences

Art Kingsley M. Calkins
 Biology Herbert H. Caswell, Jr.
 Chemistry Interim Ronald W. Collins
 Economics Young-iob Chung
 English Language and Literature Milton P. Foster
 Foreign Languages and Literature Jean Bidwell
 Geography and Geology Elwood J. C. Kureth
 History and Philosophy Ira M. Wheatley
 Mathematics James H. Northey
 Music James B. Hause
 Physics and Astronomy Robert Silver
 Political Science Leonas Sabaliunas
 Psychology (Acting) Monroe P. Friedman
 Sociology Marcello Truzzi
 Speech and Dramatic Arts Thomas J. Murray

College of Business

Accounting and Finance Elton A. Devine
 Administrative Services and Business Education . (Acting Director) Rosetta Wingo
 Management (Acting) Floyd A. Patrick
 Marketing David L. Kurtz
 Operations Research and Information Systems Robert Holland

College of Education

Curriculum and Instruction W. Scott Westerman, Jr.
 Educational Leadership Jack D. Minzey
 Educational Psychology Wilbur A. Williams
 Guidance and Counseling John G. Pappas
 Health, Physical Education, Recreation and Dance Patric L. Cavanaugh
 Social Foundations Division Robert S. Robinson, Chairperson
 Special Education Norman Niesen

College of Human Services

Home Economics Billie Lou Sands

Applied Science Departments

Industrial Technology and Industrial Education H. James Rokusek

THE UNIVERSITY

Eastern Michigan University was founded by the State Legislature in 1849 to educate teachers for the public schools. Its major purpose was always broadly interpreted and gave special emphasis to instruction in the liberal arts, science and other areas vital to the background of well-qualified teachers.

The University's emphasis of the liberal arts, social and natural sciences, business and applied science was formally recognized by legislative action in 1959 when Eastern was designated to be a multi-purpose university. Accredited undergraduate and graduate degree programs are offered by the College of Arts and Sciences, the College of Business, the College of Education, the College of Human Services, and by the Applied Science Departments.

Graduate education was inaugurated in 1938 when programs were conducted in cooperation with the University of Michigan. In 1953 Eastern gained approval to offer its own graduate programs.

Eastern Michigan University continues to establish new graduate programs whenever a demonstrated need exists. Currently the Graduate School offers more than forty graduate programs leading to a master's degree. The University has also been cognizant of its educational responsibilities beyond the master's degree. Specialist in Arts degree programs have been established in a number of areas to provide advanced graduate study for persons seeking professional careers in educational institutions.

Eastern Michigan University is located in Ypsilanti, near the Detroit metropolitan area which places it in one of the world's great industrial centers.

Detroit Metropolitan Airport is fifteen miles from campus. Major east-west and north-south expressways provide easy access to the University from any point within Michigan and the midwest.

Students wishing to extend their social, cultural and recreational experiences beyond the campus will find extensive opportunities for doing so in Detroit—a forty-five minute drive from campus. The resources of the University of Michigan are only fifteen minutes away. Scenic lakes are also within easy driving distance.

The University provides all of the resources of a growing multi-purpose university. Faculty, staff, physical plant and related facilities are available to accommodate an enrollment of approximately 18,000 students. A highly professional faculty provides excellent classroom instruction. On-campus housing for almost 5,200 persons is provided in residence halls and both single and married student apartments.

The central campus of the University is located adjacent to the Huron River. The west campus, a tract of 182 acres, provides modern facilities for athletics and physical education, physical plant and other service functions and fine living accommodations for married students.

GRADUATE SCHOOL POLICIES AND INFORMATION

ORGANIZATION

The Graduate School administers all graduate education at Eastern Michigan University. The dean serves as the chief executive officer, assisted by an associate dean and an assistant dean. These administrators are charged with providing leadership for development of graduate education, the responsibility for adherence to educational policies and standards and for the effective operation of the Graduate School.

The Graduate School reserves the right to make modifications or changes in the curriculum pattern, admission standards, course content, degree requirements, tuition or fees at any time without prior notice. The information contained in this catalog is not to be considered as a binding contract between the Graduate School and the student.

The Graduate Council, with a membership of twenty-four persons, serves as a policy recommending body and engages in planning for the orderly development of graduate education. It consists largely of faculty, both elected and appointed, and four graduate students. A current roster may be obtained from the Graduate Dean's Office.

OBJECTIVES

The Graduate School at Eastern Michigan University desires to encourage graduate education that upgrades professional competence by providing programs designed to train students for careers in areas such as teaching, school administration, counseling, business, etc.; that prepares individuals for more advanced academic work, particularly in the academic disciplines; that provides research opportunities such that the student becomes knowledgeable regarding research techniques, as well as participating actively; and that serves the unique needs of students by providing post-baccalaureate educational opportunities for individuals and groups at convenient geographic locations and providing opportunities for those with special needs.

Faculties within all colleges and departments continually strive to meet the educational needs of graduate students. A variety of programs has been authorized and accredited, others are in the process of development while some await formal approval. Although formal graduate study programs have been established in many academic areas, there is sufficient flexibility in each program to enhance the professional goal of each individual student.

DEGREE PROGRAMS

The University offers graduate work leading to several types of degrees, i.e. Master of Arts, Master of Science and Specialist in Arts. Programs leading to these degrees are administered by the departments in the respective colleges. These programs are:

I. MASTER'S DEGREE

A. College of Arts and Sciences

Art Education
 Biology
 Chemistry
 Chemistry Education
 Criminology and Criminal Justice
 Economics
 English
 Fine Arts
 General Science
 Geography

Language and International Trade
 Mathematics
 Music
 Physics
 Physics Education
 Psychology
 Social Science
 Sociology
 Spanish (Bilingual-
 Bicultural Education)

History Speech and Dramatic Arts

B. College of Business

Accounting
 Business Administration
 Business Education
 Computer-Based Information Systems
 Organizational Behavior and Development

C. College of Education

Educational Leadership
 Educational Psychology
 Elementary Education
 Guidance and Counseling
 K-12 Curriculum
 Middle School Education

Physical Education
 Reading
 Secondary School Teaching
 Social Foundations
 Special Education

D. College of Human Services

Home Economics

E. Applied Science Departments

Industrial Teacher Education
 Industrial Technology

F. Individualized Studies

See below.

II. SPECIALIST'S DEGREE

Educational Leadership
 Guidance and Counseling

School Psychology
 Special Education

Master's Degree Program in Individualized Studies

The master's degree program in Individualized Studies is designed to serve the needs and interests of students whose occupational, vocational or educational goals are not met by other graduate degree programs offered at Eastern

Michigan University. This program is structured so as to assure a quality graduate level experience, while making provision for flexibility and innovation in graduate study.

Each applicant is expected to develop a set of specific goals and objectives for the proposed program of study with the assistance of two faculty members. The applicant and advisers develop a structured sequence of courses that has academic integrity and which meets the goals and objectives of the program. The resulting proposal and program of study are submitted to a Supervising Committee composed of members of the graduate faculty for review and recommendation. Applicants interested in this program must apply at least six months prior to the enrollment period in which they wish to begin their studies.

For additional information regarding the master's degree program in Individualized Studies, see Assistant Dean Hoover, Room 116, Pierce Hall.

ADMISSION

It should be understood that the admission policies presented are minimum standards and that many departments have established criteria above these minimums. For this reason, applicants for degree admission may have to meet additional requirements established by departments. These requirements often include admission tests, valid teaching certificates, letters of recommendation and/or personal interviews and grade point averages above the minimum established by the Graduate School.

Admission

Anyone planning to enroll in graduate level courses must be admitted to the Graduate School through one of the following admission categories: Degree, Non-Degree, Teacher Certification, or Guest.

Requirements

Master's Degree

Degree admission requires that the applicant hold a bachelor's degree from an accredited college or university and possess a minimum undergraduate grade point average of 2.25 or a 2.5 in the last half of the undergraduate program. Applicants who do not meet these criteria may be considered for admission by a department after completing ten hours of selected graduate work at EMU and achieving a grade point average of 6.0 (B+). At least six of these ten hours must be taken in the department in which the admission is sought and must be approved by the departmental coordinator of advising. Applicants who do not possess a 2.25 minimum and wish to pursue degree admission through this alternate route should contact the Graduate School Office. The Graduate School will provide application forms for this purpose as well as a list of those departments having alternate admission.

Specialist Degree

A minimum grade point average of 6.0 (B+) in the master's degree program is

required for admission to the specialist degree. For those departments admitting students into the specialist degree directly from the bachelor's degree, a minimum undergraduate grade point average of 2.75 is required. Departments may establish standards higher than this minimum.

Non-Degree and Teacher Certification

Non-Degree and Teacher Certification admission is open to recipients of a bachelor's degree from an accredited college or university who have attained an undergraduate grade point average of 2.0 or higher. This admission category is limited to 18 hours.

Guest

Guest admission is available to students pursuing graduate study at another institution and who wish to earn graduate credit at Eastern for transfer to the parent institution. This admission category is valid for one enrollment period only and application forms can be obtained from the Graduate School Office. A guest student can earn up to six (6) credit hours, exclusive of independent study and to exceed this limit requires that the student be admitted to Eastern Michigan University Graduate School.

Procedures for Graduate Admission

Complete the application form.

Submit official transcripts of all undergraduate and graduate credit at each institution attended.

Have official scores from national examinations submitted. (Departments requiring test scores state this in the Graduate Catalog.)

All application materials should be received by the Graduate School 30 days prior to the beginning of the semester or session in which enrollment is anticipated. All documents and supporting data required for admittance become the property of the Graduate School and will not be returned.

Applicants are not officially admitted to matriculation until they have been notified of acceptance by the Dean of the Graduate School in writing.

ADMISSION OF INTERNATIONAL STUDENTS

For admission, international students must:

meet the minimum academic requirements for admission to the Graduate School (e.g., a bachelor's degree or its equivalent from an accredited institution);

submit evidence of proficiency in the English language;

present a statement of financial responsibility;

provide two letters of recommendation from administrators or professors in the college or university from which the applicant holds a bachelor's degree; and

submit official scores in a standardized test if required for admission to the selected degree program.

The Graduate School requires that all international students applying for admission and residing in this country or abroad demonstrate proficiency in the use of the English language. This may be done in one of two ways:

Taking the Test of English as a Foreign Language (TOEFL) and achieving a score of at least 500. Further information regarding this test may be obtained from:

Test of English as a Foreign Language
Educational Testing Service
Princeton, New Jersey 08540;

Taking the English Language Institute test at the University of Michigan, Ann Arbor, Michigan, and achieving a score of at least 75 (scores between 75 and 79 also require enrollment in a course(s) in English as a Foreign Language at Eastern Michigan University). Further information regarding this test may be obtained from:

English Language Institute
University of Michigan
Ann Arbor, Michigan 48104

The scores received on the TOEFL test or the English Language Institute test must be submitted to the Graduate School Office before consideration can be given to the student's application.

NON MATRICULATED STUDENTS

Students may enroll for one semester only as a Non Matriculated student. An application for admission to the Graduate School and official transcripts must be placed on file in the Graduate Office before a Non Matriculated student may register for classes in any subsequent enrollment period.

Credits earned do not automatically apply on a degree program but are dependent upon admission to the Graduate School, the requirements of the program, recommendation by an adviser and the approval of the Graduate School.

MICHIGAN INTERCOLLEGIATE GRADUATE STUDIES PROGRAM

The Michigan Council of Graduate Deans offers a guest scholar program (M.I.G.S.) which enables graduate students of Michigan public institutions offering graduate degree programs to take advantage of unique educational opportunities such as special courses, workshops, field experience and similar experiences. The M.I.G.S. program is available at the following member institutions: Central Michigan University, Eastern Michigan University, Michigan State University, Michigan Technological University, Northern Michigan University, Oakland University, University of Michigan, Wayne State University and Western Michigan University.

Students interested in additional information should see Assistant Dean Hoover, Room 116, Pierce Hall.

GRADUATION REQUIREMENTS

Before receiving a diploma, certain requirements must be fulfilled and it is the student's responsibility to see that *all* are met.

GRADUATION FEE

A non-refundable graduation fee is to be paid when a student makes application for graduation.

APPLICATION FOR GRADUATION

Candidates for graduation must submit to the Graduate School Office, a Diploma Application at the time of registration for the semester or session in which they plan to complete requirements for a graduate degree.

Fall registration	for December graduation
Winter registration	for April graduation
Spring registration	for June graduation
Summer registration	for August and October graduation

Diploma applications may be obtained in the Graduate School Office. The completed application, together with the application fee, should be turned in at the Cashier's Office, Briggs Hall.

Failure to apply for graduation will result in a delay in receiving the degree.

A candidate for graduation who enrolls at another college or university for credit to be transferred to Eastern Michigan University and applied toward meeting degree requirements must submit an official transcript of such credit not later than one month prior to the closing date of the semester in which the degree is to be awarded. Delay of at least one enrollment period in granting the degree will result if transfer credit has not been received by that time. Grade reports and/or letters from instructors will not be accepted in lieu of official transcripts.

GRADE POINT AVERAGE REQUIREMENTS FOR GRADUATION

No student will be recommended and approved for a master's degree unless the student has achieved a grade point of 5.0 (B grade). Some specialist's degree programs require a 6.00 or B+ average for graduation.

The grade point average requirement for graduation applies to:

- (a) all graduate credit earned at Eastern Michigan University; and
- (b) all graduate credit included in the area of specialization.

Only grades received in courses taken for graduate credit at Eastern Michigan University are used in computing a student's grade point average. Grades received in courses accepted as transfer credits are not included in the grade point average.

Students who do not meet minimum graduation requirements may be permitted to enroll in additional courses in the area of specialization subject to policies governing academic probation and dismissal.

CREDIT REQUIREMENTS

The minimum credit requirement for a master's degree is thirty hours, while thirty-two hours beyond the master's is required for a specialist's degree.

COGNATE REQUIREMENT

Cognates are defined as those supportive and complimentary courses which are related to the area of concentration and are outside the department and/or college in which the degree is to be earned. Each program of study should include cognates. The number of hours associated with this component (usually six) is determined by each department.

For the cognate requirement associated with the specific degree program(s) of interest, see program description and graduation requirement.

RESIDENCY REQUIREMENT

For a master's degree, at least six hours of graduate credit used on a degree program must be earned on campus at Ypsilanti. This requirement may also be met by enrollment in travel-study tours sponsored by Eastern Michigan University and at the facilities at the Kresge Environmental Center.

For the specialist's degree, at least 16 hours of credit must be earned on the campus at Ypsilanti. It is also expected that one semester or two summer sessions will be spent in full-time work on the campus.

TIME LIMITATIONS

Graduate credit earned more than six years prior to the date on which the degree is to be granted may not be applied to meet graduation requirements. It is possible, however, that out-of-date credit may be validated by examination, subject to departmental and Graduate School approval.

GENERAL REGULATIONS

Once admission to the Graduate School has been granted, but prior to graduation, various policies and procedures regulate the pathway to the degree.

ADVISING

In an effort to provide guidance for a student granted admission to a graduate degree program, a system of advising has been established. Upon notification of admission to a degree program by the Graduate School Office, the student is given the name, office address and telephone number of the designated adviser. The advising program assists in the exploration of degree requirements, evaluation of applications for admission to a degree program, preparation of a plan of study, approval of program changes and when applying for a diploma.

Each prospective degree student is therefore encouraged to make use of this service since a program of study is valid only when properly authorized by a designated adviser and when it conforms with the minimum requirements of the Graduate School. Students who desire advising prior to making a decision on a degree program should contact the assistant dean of the Graduate School.

Students who are interested in completing a Provisional or Continuing Certificate should contact the Office of Academic Records and Teacher Certification for specific requirements. *Because credits earned to satisfy certification do not apply automatically to a degree program, students seeking certification are also urged to contact a degree adviser if the completion of a master's program is contemplated for a later date.*

COORDINATORS OF ADVISING BY PROGRAM AREA

College of Arts and Sciences

Art: Art Education	Charles Fensch 118 Sill Hall, Tele. 487-0392
MFA	David Sharp 118 Sill Hall, Tele. 487-0392
Biology	Howard D. Booth 308 Mark Jefferson, Tele. 487-0441
Chemistry	Stewart D. Work 239-C Mark Jefferson, Tele. 487-2124
Criminology and Criminal Justice	Gordon Moss 712-D Pray-Harrold, Tele. 487-0194
Economics	Raouf S. Hanna 703 Pray-Harrold, Tele. 487-0002
English	Paul D. McGlynn 613-B Pray-Harrold, Tele. 487-2075
General Science	Jean R. Moore 302 Strong Hall, Tele. 487-4144
Geography	Robert Ward 213 Strong Hall, Tele. 487-3140 Carl Ojala 235 Strong Hall, Tele. 487-0232
History and Philosophy	Louis B. Gimelli 701-H Pray-Harrold, Tele. 487-0347
Language and International Trade	John R. Hubbard 205 Ford Hall, Tele. 487-4448
Mathematics	Enoch Tse 601-T Pray-Harrold, Tele. 487-2140
Music	Mary I. Yost 204 Alexander, Tele. 487-1314
Physics	Walter Gessert 333 Strong Hall, Tele. 487-4144
Physics Education	Walter Gessert 333 Strong Hall, Tele. 487-4144

Psychology: Clinical/General	Francis Canter 537-N Mark Jefferson, Tele. 487-0044
School Psychology	Robert L. Anderson 537-P Mark Jefferson, Tele. 487-0047
Social Science	Louis B. Gimelli 701-H Pray-Harrold, Tele. 487-0347
Sociology	Gordon Moss 712-D Pray-Harrold, Tele. 487-0194
Spanish (Bilingual-Bicultural Education)	Raymond Padilla 106 Ford Hall, Tele. 487-1035
Speech and Dramatic Arts	Parker R. Zellers 102 Quirk, Tele. 487-1221

College of Business

Accounting and Finance	Elton A. Devine 516 Pray-Harrold, Tele. 487-3320
Business Administration	William R. Sampson 517 Pray-Harrold, Tele. 487-4444
Business Education	Charles Duncan 511-D Pray-Harrold, Tele. 487-0121
Computer-Based Information Systems	Robert Holland 511-A Pray-Harrold, Tele. 487-2454
Organizational Behavior and Development	W. Robert Sampson 517 Pray-Harrold, Tele. 487-4444

College of Education

Elementary Education, K-12 Curriculum, Middle School Education, Reading, Secondary School Teaching	Robert Tibbals 305 Pierce Hall, Tele. 487-4441
Educational Leadership	Bruce Nelson 101-C Boone Hall, Tele. 487-0255
Educational Psychology	N. Kishor Wahi 228 Boone Hall, Tele. 487-0219
Guidance and Counseling	Paul A. Nau 13 Boone Hall, Tele. 487-3270
Physical Education	John E. Sheard 233 Warner, Tele. 487-0090
Reading	Robert Krebs 338 Pierce Hall, Tele. 487-1160

Social Foundations	Calvin Michael 345 Pierce Hall, Tele. 487-1128
Special Education, General	Joe Coyner 230 Rackham, Tele. 487-3302
Speech and Language Impaired	Angelo Angelocci 122 Rackham, Tele. 487-0229
Hearing Impaired	Garl E. Garber 121 Rackham, Tele. 487-4412

College of Human Services

Home Economics	Ruby Meis 202-B Roosevelt, Tele. 487-2490
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Applied Sciences

Industrial Teacher Education	Delmar Larsen 122 Sill Hall, Tele. 487-4330
Industrial Technology	Clois Kicklighter 122 Sill Hall, Tele. 487-4330

REGISTRATION INFORMATION

No person may attend classes unless he/she is properly registered and has paid appropriate fees.

Permit to Register—New students who have satisfied all admission requirements, and returning students who have not been enrolled during one of the four preceding enrollment periods, must obtain a Permit to Register from the Graduate School Office before attempting to register.

Registration—Graduate students register for on- and off-campus classes in the Registration Office, Briggs Hall, at times and in such manner as provided for in the class schedules issued each semester or session.

Adviser's Signature on the Enrollment Plan—An adviser's signature is required for students in business programs, economics, geography, hearing impaired, history, industrial education, industrial technology, mathematics, music, psychology, social foundations, sociology, speech and language impaired. Other students enrolling in either business or industrial education courses also must obtain departmental adviser's signature before registering. A student on a degree program who does not obtain the adviser's signature assumes full responsibility for his/her registration. Courses that do not satisfy requirements on the student's program of study will not be applied toward the degree. Any course substitutions made in a degree program must be approved by the adviser. Written notification of course substitutions must be placed on file in the Graduate School Office.

Registration in Undergraduate Courses—Certain upper division (300–400) undergraduate courses are identified in this catalog as available for graduate credit. Graduate School authorization for graduate credit must be obtained by the student before enrolling in these courses.

Some departments make no provision for the use of upper division courses on a graduate degree program; others make only limited use. In no case, however, may that number exceed 15 semester hours.

Students should consult their department regarding its policy before seeking Graduate School authorization to enroll in upper division courses for graduate credit.

ACADEMIC LOAD

Twelve hours of graduate credit for the fall or winter semester is the usual full-time load. The usual full-time load for the spring or summer session is six hours. The coordinator of advising and the dean of the Graduate School approve programs in excess of this.

The usual academic load for a graduate student who is employed in remunerative work on a full time basis is six credit hours per semester. Special permission for a program in excess of this is obtained from his/her adviser and the dean of the Graduate School.

Since graduate assistantships are granted for the support of students making substantial academic progress, each person holding an assistantship is expected to enroll for a minimum of six credit hours per semester during the period of appointment. For the spring/summer session, two or three hours per session are required.

For National Direct Student Loans and for Veterans' Benefits purposes, the following formula is used:

Fall and Winter semesters

maximum load	12 sem hours
full-time student	8-12 sem hours
half-time student	4-6 hours
less than half-time student	less than 4 sem hours

Spring and Summer sessions (6 week)

maximum load	8 and 6 sem hours, respectively
full-time student	6 and 4 sem hours, respectively
half-time student	4 and 3 sem hours, respectively
less than half-time student	less than 4 and 3 sem hours, respectively

AUDITING COURSES

Graduate students who wish to audit a course must register for audit status and pay the same tuition and fees as for academic credit. No student may receive academic credit for audited courses.

WITHDRAWAL

Policy and procedures have been established for withdrawal from the University and from individual classes. Because of this, appropriate procedures must be followed and non-attendance and/or non-payment of tuition does not absolve one of academic and financial responsibility nor does it constitute withdrawal.

WITHDRAWAL FROM INDIVIDUAL CLASS(ES)

First Three Weeks—Students who find it necessary to reduce their academic load do so through the Registration Office as part of the registration adjustment process.

Fourth through Tenth Week—During this period a student completes a Request for Withdrawal from Class form in the Graduate School Office. The student will receive a grade of "W" in each course if officially withdrawn during this period.

Beginning with the Eleventh Week—Students may withdraw from individual classes with a grade of "W" for any reason up to one week before the end of the semester, providing the academic performance in each course(s) is a grade of "B" or better at the time of withdrawal. Poor academic performance is not recognized as a valid reason for withdrawal. Because of this, students not performing at least at "B" level will be denied permission to withdraw with a grade of "W." Exceptions may be granted when due to extended personal illness, verifiable by a physician's statement or death in the student's family.

Withdrawal forms are obtained from the Graduate School Office. Prior to considering withdrawal, a student should consult with the instructor(s). Policies governing the refund of tuition and fees are to be found in another section of this catalog.

The spring and summer class schedules should be consulted for the calendar regulating withdrawals during these enrollment periods.

See page 37 for tuition and fee information.

WITHDRAWAL FROM ALL CLASSES—Students may withdraw from all classes (withdraw from the University) for a given enrollment period for any reason up to one week before the end of the semester and receive grades of "W" for all courses in which they are enrolled.

GRADING SYSTEM

The grades used in the Graduate School of the University are listed below together with their description and grade point values.

Grade	Grade Points per semester hour
A Outstanding Performance	8
A-	7
B+	6
B Good Performance	5
B-	4
C+	3
C Inadequate Performance	2
C-	1
E Failing Performance	0

Credit/No Credit—These grades are given by some departments in specified courses such as Thesis, Practicum, and Internship.

"I"—Incomplete—An "I" grade is awarded when these conditions prevail:

illness or extenuating circumstances beyond the control of the student have prevented completion of the required components of the course;

academic performance for the completed portion of the course was equivalent to a grade of B or better.

In such cases, the instructor will provide the student and the department head with a statement of the reason or reasons for the "I" grade and will specify the amount and nature of the work required in order to remove the Incomplete.

An "I" grade must be removed within one calendar year from the end of the semester or session in which that grade was given. The time for removal of an "I" may be extended upon written recommendation of the instructor and department head, and approval of the graduate dean. Such an extension will be granted only under unusual circumstances. *The initiative for conversion of an "I" to a letter grade rests with the student.* If not converted to a letter grade by the end of the one year period, the "I" will remain as a permanent part of the student's academic record.

Incompletes received in thesis type courses are not governed by these regulations.

*"W"—Denotes Withdrawal—*The grade of "W" will be assigned only when the previously described withdrawal process has been completed. If a student stops attending a class without officially withdrawing, the grade of "E" will be assigned for the course.

ACADEMIC PROBATION AND DISMISSAL

A graduate student will be placed on academic probation when the cumulative grade point average in courses taken for graduate credit at Eastern Michigan University is less than 5.00 (B average). Grades in courses taken for undergraduate credit and in courses accepted as transfer credit from other institutions are not used in computing the grade point average.

A graduate student placed on academic probation according to the provisions of the above who is not off probation by the end of the second enrollment period will be subject to dismissal from the University. For purposes of this policy, spring and summer sessions combined are considered as one enrollment period.

A graduate student whose cumulative grade point deficiency at the end of any enrollment period is 15 points or more may be dismissed for academic reasons.

TRANSFER OF CREDITS TO DEGREE PROGRAMS

From Other Institutions

Of the total number of credits required on a master's degree program, a minimum of 18 semester hours must be taken at Eastern Michigan University; for specialist's degree programs (the 32 hours required beyond the master's) a minimum of 24 hours must be taken at this University. Any graduate credit transferred must:

be applicable to the degree program;

have associated with each course a grade of B or higher;

be on an official graduate transcript from an accredited degree granting institution;

be upon recommendation of the adviser and the approval of the Graduate School.

Such credits are recorded on the student's permanent record card only when a program of study is on file in the Graduate School office.

From Non-Degree Admission Status

Students admitted to non-degree or certification status may apply for admission to a degree program after meeting all special entrance requirements of the academic area of specialization selected. Program Transfer Request forms are available in the Graduate School office and must be submitted to that office at least two months prior to the semester or session that transfer is contemplated. A request for admission to a degree program will be approved only upon written recommendation of the coordinator of advising in the area of specialization.

Credits earned while on a non-degree or certification status do not apply automatically to the requirements of a degree program. Transfer of credits depends upon the requirements of the program, the recommendation of the adviser, and the approval of the Graduate School office. *A student transferring from non-degree admission status must complete a minimum of 10 graduate hours after admission to a degree program.*

From a Previous Master's Degree

On occasion, individuals may wish to obtain another master's degree. Appropriate credit from a previous master's degree may be applied to the second program under these conditions:

the degree be in a field (department) different from the previous master's degree;

not more than six (6) semester hours of appropriate credit may be applied.

REGARDING CERTIFICATION

Most questions regarding teacher certification should be directed to:

For Provisional Certificate:

Office of Academic Records and Teacher Certification
Room 5, Pierce Hall
Ypsilanti, Michigan 48197
Dial (313) 487-4111

For Continuing or Renewal Certificate:

Nancy L. Dahl, Associate Dean
Academic Records and Teacher Certification
Room 1, Pierce Hall
Ypsilanti, Michigan 48197
Dial (313) 487-4111

In some unusual circumstance it may be desirable to seek information from the state office. In those cases, write to:

Michigan State Department of Education
Teacher Education and Certification Section
Box 30008
Lansing, Michigan 48909

PROVISIONAL CERTIFICATE (Students who hold a bachelor's degree)

A. *Graduates of Michigan institutions:* A graduate of a Michigan institution must be recommended for certification by a Michigan teacher training institution. The certificate will usually be recommended by the institution offering the professional education program. When part of the professional education courses were completed at the degree granting institution, it may be advantageous to ask that institution to make the recommendation and approve the balance of requirements being completed at Eastern Michigan University.

B. *Graduates of approved out-of-state teacher training institution:*

1. Persons with an earned bachelor's degree who hold a currently valid teaching certificate in another state based on the completion of an approved teacher education program in that state may apply to the State Department of Education for a Michigan Provisional Certificate. Application forms are available in the Academic Records and Teacher Certification Office, Room 5, Pierce Hall.
2. Persons who have completed 13 or more hours on an education program at a regionally accredited out-of-state institution approved for teacher training may apply to the State Department of Education for an evaluation of their credentials to ascertain what courses they will need to take to qualify for a Michigan Provisional Certificate. Application forms are available in the Academic Records and Teacher Certification Office.

The student then applies for admission to the Graduate School and submits a copy of the plan of work prepared by the State Department of Education to the Graduate Office.

3. Graduates who do not fit category one or two must be recommended for certification by a Michigan teacher training institution. Although requirements vary depending upon the curriculum pursued, the basic minimum requirement for recommendation for certification is normally 30 semester hours work with EMU. Information about the specific requirements for certification may be obtained from the EMU Academic Records and Teacher Certification Office. A written plan of work will be provided on request, following admission to the Graduate School.

- C. *Converting an elementary provisional or secondary provisional certificate:* Persons seeking to qualify for an additional provisional certificate must complete a minimum of 12 semester hours of credit following the first certificate which includes the appropriate methods courses and three (3) hours of student teaching or proof of two (2) years teaching experience appropriate to the level of certification sought. A written plan of work will be provided by the Academic Records Office on request, following admission to the Graduate School. A copy of the plan of work must be placed on file in the Graduate Office.
- D. *Additional teaching majors and/or minors:* Persons who seek to broaden their teaching qualifications by the addition of majors and minors do so by completing the course work required.
 Minor—a minimum of 20 hours in courses appropriate to the pure minor or 24 hours in a group minor. Major—a minimum of 30 hours in courses appropriate to the pure major or 36 hours for a group major.
 Students should contact the Academic Records and Teacher Certification Office for information about course requirements. Departmental approval may also be required. A copy of the approved plan of study must be placed on file in the Graduate Office.
- E. *Renewal of a provisional certificate:* Persons whose provisional certificate has been permitted to expire without having acquired three (3) years of successful teaching experience may renew the certificate by completing 10 hours of credit after the issuance of the provisional certificate. Application to renew an expired certificate is made through an approved teacher training institution where a person has earned at least 10 semester hours following the provisional certificate as part of the 18 hour planned program for a Continuing Certificate.
- F. *Certification in special fields* (art education, physical education, industrial education, special education, home economics, music): Persons seeking certification in a special field should contact the Office of Academic Records and Teacher Certification for more information. A copy of the approved plan of work must be placed on file in the Academic Records Office and the Graduate School Office.

CONTINUING CERTIFICATION

Persons who received their Provisional Certificate after June 30, 1970, may apply for the Continuing Certificate upon completion of three (3) years of successful teaching and 18 semester hours of credit earned on a planned program after the date of issuance of the state provisional certificate. The recommendation must be made by the Michigan teacher training institution which approved the 18 semester hour planned program and where the majority of 18 semester hours was earned.

Students on master's degree programs may apply the first 18 hours of degree program toward this requirement. For this reason, applicants seeking continuing certification are strongly urged to seek admission to a degree program.

All other students who wish to be recommended for continuing certification by Eastern Michigan University must have a plan of work approved by the dean of academic records and teacher certification on file in the Graduate Office before classes are begun.

Use of Credit

Undergraduate credit earned to satisfy the requirements for a provisional certificate cannot apply to a graduate degree.

Graduate credit earned for a Provisional Certificate cannot apply to the requirements of a Continuing Certificate.

Graduate credit earned for a Continuing Certificate may apply to a graduate degree only if it meets the requirements of a degree program, the recommendation of the adviser and the approval of the Graduate School Office.

ENROLLMENT IN GRADUATE COURSES BY SENIORS

A student of senior standing at Eastern Michigan University may register for specified graduate courses if recommended by the adviser and approved by the dean of the Graduate School. Credit so earned may be used for only one of two purposes:

to meet the requirements of the baccalaureate degree, thus receive undergraduate credit;

to apply towards a master's degree, thus receive graduate credit.

A student may not use graduate credit for both.

To be eligible for either, a student must have undergraduate admission at Eastern, have acquired 85 hours or more of undergraduate credit and have a cumulative grade point average of 2.50 or better in all course work completed at the University. Senior students who hold guest or special admission in the undergraduate school are not eligible to enroll in graduate courses.

Permission to enroll in graduate courses as a senior should not prolong the completion of the undergraduate degree requirements.

The maximum number of graduate hours that can be taken as a senior is 10. Graduate courses which qualified seniors may take are identified by an asterisk (*) in the course description section of this catalog. Seniors are not permitted to enroll in graduate level independent study courses.

There are several restrictions on the use of credit earned in graduate courses by seniors:

Permission to take graduate courses does not represent admission to the Graduate School.

Students desiring to continue graduate study and utilize the graduate credit earned in courses taken as a senior must apply and meet all requirements for admission to the Graduate School and degree program.

Graduate courses taken for either undergraduate or graduate credit and taken prior to receipt of a Provisional Teaching Certificate cannot be used to satisfy any requirement of the Continuing Certificate.

INDEPENDENT STUDIES

Independent Study is designed to enable graduate students to pursue academic interests beyond those normally covered in conventional courses. Independent Study is structured on a tutorial basis, affording opportunity for student and faculty interaction on a project of joint interest.

Expectations Regarding Instructional Requirements

A clearly defined proposal for the study is presented by a student and approved by a professor before enrollment.

Regular student/faculty meetings to monitor progress and to provide assistance.

Evaluation established on the basis of the completed product.

THESIS

Aside from independent studies, more opportunity for the degree student to demonstrate individual initiative and creativity is provided by a number of departments where the writing of the thesis is offered either as an option or as a requirement. Taken toward the end of a student's program of study, it serves as a capstone experience affording an opportunity for the integration of one's specialized subject matter.

Guidelines and requirements governing this activity are available through the departments or the Graduate School office.

GENERAL POLICIES AND INFORMATION

MAJOR BUILDINGS

- Frederick Alexander Music Hall is adjacent to Pease Auditorium and houses Department of Music offices, faculty and practice studios, classrooms, a recital hall and large rehearsal halls.
- Richard G. Boone Building houses the College of Education and a post office substation.
- Wilbur P. Bowen Field House is one of the largest and most functional in the state. It houses a complete field house with an eight-lap-to-a-mile track, a basketball court and tennis, volleyball and badminton courts. The seating capacity is 4,350.
- Walter O. Briggs Building houses registration and the Student Accounting Office.
- Center of Educational Resources opened at the beginning of the spring semester, 1967. It has seating space for 1,800 and houses more than 400,000 volumes. Almost all books are available to students from the open stacks.
- R. Clyde Ford Hall (formerly Mark Jefferson Library) provides office and classroom space for the Educational Television and Foreign Languages and Literature Departments.
- Bertha M. Goodison Hall was renovated in 1971 and now houses Campus Life, Division of Continuing Education, Dean of Students, Student Government, Student Publications, Upward Bound, Veterans' Affairs, and the Women's Commission Office.
- Mark Jefferson Science Building, a classroom and laboratory facility opened in 1970, contains the Biology, Chemistry and Psychology Departments.
- Julia Ann King Hall was renovated in 1971 to house the Music Department, the head of the department, music practice rooms and faculty; also additional offices for the Special Education Department.
- Charles McKenny Union offers dining and recreational facilities for students, faculty, staff and guests. It provides meeting and conference rooms, food catering facilities, the bookstore and a ballroom.
- Frederic H. Pease Auditorium seats 1,700 and is the location of the Frederick Alexander Memorial Organ, a stage, practice rooms, classroom and faculty studios.
- John D. Pierce Hall houses major administrative offices.
- Pray-Harrod Classroom Building houses the Departments of English Language and Literature, History and Philosophy, Mathematics, Sociology and the College of Business.
- Daniel L. Quirk Jr. Dramatic Arts Building contains an instructional theater seating 381, radio facilities, an outdoor amphitheater, classrooms and offices housing dramatic and speech activities.
- Roosevelt Building houses the Departments of Home Economics and Military Science.
- Sherzer Hall houses the University observatory and astronomy laboratory.

- J.M.B. Sill Building houses classrooms and offices for the Departments of Fine Arts and Industrial Education, as well as art galleries and two large lecture halls.
- Glenadine C. Snow Health Center provides the clinical services of the University Health Service.
- Mary Ann Starkweather Hall houses the Campus Interact office.
- Strong Physical Science Building houses the Departments of Physics and Astronomy and Geography and Geology.
- Joseph E. Warner Physical Education Building is adjacent to Bowen Field House and contains gymnasiums, classrooms, offices, special purpose rooms and a swimming pool.

STUDENT ACADEMIC RIGHTS AND RESPONSIBILITIES

In November, 1972, the University approved a statement regarding student academic rights and responsibilities. This statement presents a set of principles regarding academic honesty and integrity that students are expected to adhere to, a listing of student rights and a procedure for resolving student and faculty differences.

The complete statement is available upon request through the Vice President for Academic Affairs office.

CIVIL RIGHTS POLICY

"Eastern Michigan University shall not discriminate against any person because of race, color, religion, creed, sex, national origin or ancestry. Further, the University shall work for the elimination of improper discrimination in the areas listed above (1) in organizations recognized by the University, and (2) from non-University sources where students and employees of the University are involved."

DIVISION OF CONTINUING EDUCATION

In response to the continuing education needs, Eastern Michigan University, through the Division of Continuing Education, offers credit courses at centers in 14 counties throughout southeastern Michigan. These classes are undergraduate and graduate courses conducted by faculty members from the University. Presently, there are classes in practically any field connected with professional education. A list of the courses offered for fall, winter, spring and summer sessions may be acquired from the Office of Continuing Education. The Division of Continuing Education also offers courses on a contract basis. These credit courses are arranged between a school system and the University. They are designed to investigate problems unique to the particular school system and they are usually held at one of the schools.

Students who hold a bachelor's degree register in off-campus classes under one of the following categories:

- A. AN EASTERN MICHIGAN UNIVERSITY GRADUATE STUDENT—a student who has been admitted to the Graduate School at EMU as a degree or non-degree student.
- B. A GUEST STUDENT—a student who (1) currently holds graduate admission to another college or university, (2) wishes to earn graduate credit at EMU to be transferred to the parent institution, (3) files an Application for Guest Admission, and (4) has had Part 2 of the Guest Student application form—Recorder Action—filled out by the dean of the graduate school at the parent institution, or by a designated agent. THE OFFICIAL SEAL OF THE PARENT INSTITUTION MUST BE AFFIXED.
- C. A NON MATRICULATED STUDENT—a student who holds a bachelor's degree but has not been admitted to the Graduate School. This status establishes eligibility to enroll for ONE enrollment period, pending completion of requirements for admission to the Graduate School.

University Housing/Food Service

University Housing and Food Service offers a variety of housing and dining accommodations to both married and single graduate students.

Married students will find that the apartment style living offered in the University's three family housing communities is convenient, low cost, and offers an environment that shares an appreciation of the basic needs of the married student. One and two bedroom apartments are available, as are a limited number of unfurnished units. Rates for 1978-79 range from \$135 to \$180 per month including basic utilities.

Unmarried graduate students are welcome in any residence hall facility which appropriately meets their life-style needs. Most, however, reside in the University Graduate Student Center. The center, planned in cooperation with student members of the Graduate Council, is located within the Hill International Residence Center. The graduate center offers exclusive residence to graduate students and is housed in one of the newest campus residential facilities.

Students may reside in the residence halls or the graduate center in single or double room accommodations to maximize either privacy or interaction. Rates for 1978-79 are \$831 per academic year for a double room. Room and board packages are available as follows: 20 meals/week—\$1643; 15 meals/week—\$1613; 13 meals/week—\$1613; 10 meals/week—\$1583. Single room premium rates are \$240 additional per term.

Graduate students desiring to purchase meals may purchase meals individually, or at a discounted non-resident board plan. Prices are available through the University Food Service Office.

The unmarried graduate student interested in apartment style living will be particularly pleased with the Brown Munson apartments. These furnished one, two, and three bedroom units, located in the heart of campus, rent from approximately \$130-\$360 a month, depending on apartment size and number of occupants. All apartments are carpeted, air-conditioned, include basic utilities, and have security monitors for the exterior doors.

Applications and information may be obtained from University Housing/Food Service (313-487-1300).

Financial Assistance

There are several sources of financial assistance available to graduate students at Eastern Michigan University.

ASSISTANTSHIPS are available through academic departments and are awarded on the basis of qualifications of the applicant. The number of available positions varies from department to department. Each appointment requires a considerable amount of time and precludes other employment. The academic year stipend ranges from \$3,000 to \$3,200. In addition, the University pays the tuition differential for all out-of-state assistants. Graduate students who desire consideration for such positions should write to the department head in their major area of study.

RESIDENCE HALL LEADERSHIP AWARDS are available to qualifying graduate students who have completed at least one semester of study at Eastern Michigan University. Awards are made by a committee which considers evidence of leadership ability. Award recipients are expected to provide leadership in the residence hall program. Recipients receive up to \$850 per academic year (fall and winter semesters) which is credited toward their residence hall charges. Applications are available from the Housing Office, Dining Commons I, Ypsilanti MI 48197.

NATIONAL DIRECT STUDENT LOANS (NDSL) are available through the Office of Financial Aid. These loans are long-term loans with deferred repayment on principal and interest until the student completes his/her studies or is no longer enrolled in at least half-time studies. The repayment period begins nine months after program completion or termination of at least half-time studies and the interest charged is three percent simple interest. The maximum loan to graduate students is \$2500 per academic year. Loans are awarded to students who demonstrate need by filing a financial statement and other required application materials. For 1979-80, all application materials must be received in the Office of Financial Aid by April 2, 1979 to receive priority consideration for available funds. The financial statement should be filed by February 1, 1979 to meet this date. After April 2, awards will be made on a funds-available basis.

GUARANTEED STUDENT LOANS (in some states, Federally Insured Loans) are available from participating banks, savings and loan associations, and credit unions. Graduate students can borrow up to \$5000 per year in most states (including Michigan). These are long-term loans on which principal payments are deferred during periods in which the student is enrolled for at least half-time study. Interest payments are deferred for students whose adjusted family income is less than \$25,000. During the repayment period, interest charged on the loan is at the rate of seven percent simple interest. Most lenders participate on a customer or family of customer basis. Students should contact their home town lenders for application materials. Students who are Michigan residents and who are denied loans because they have no customer relationship with a bank, or who are denied by their bank should see a financial aid advisor for information about the Michigan State Direct Loan Program.

COLLEGE WORK-STUDY employment is available to qualifying students approved by the Office of Financial Aid. Students must demonstrate need. Approved students are eligible to work part-time (20 hours per week maximum) at on-campus and participating off-campus agencies. Hourly pay generally ranges from \$2.65 to \$3.85 per hour. Placement assistance is available at the Student Employment Office. Application dates and processes are the same as those for the National Direct Student Loan.

Graduate School Scholarship Fund

For Full Time and Part Time Students

Full Time Students

A limited number of grants are available to full time students in the form of scholarships at \$200 each per academic year (fall and winter semesters). They are awarded on a competitive basis to scholarship applicants with the highest grade point averages. The awards are made once a year prior to the fall semester and will be given in the amount of \$100 each semester upon confirmation of enrollment. In cases where students have the same overall grade point averages, the grade point average in the discipline to which the student is admitted is computed and the grant determined on that basis. This grant is open to any full time graduate student—full time being at least eight (8) hours per semester.

Part Time Students

During the fall and winter semesters, scholarship awards in the amount of \$50 will be available to part time graduate students. These awards are available only to new EMU graduate students, and are available on a one time, non-renewable basis. To be eligible an applicant must:

- a) possess a 3.0 or higher undergraduate grade point average; and
- b) be regularly admitted to one of Eastern's graduate degree programs.

Application Procedure

To apply for one of these awards, please complete the Graduate School Scholarship Fund Application and submit it to the dean of the Graduate School.

CAREER PLANNING AND PLACEMENT CENTER

Eastern Michigan University offers a centralized service for career planning, student employment, and career placement for its students and alumni. The center, located at 420 West Forest, assists students and graduates with their career planning and employment needs from the time they are enrolled at EMU through their alumni years.

CAREER PLANNING

The Career Planning Office provides assistance in helping students to assess occupational interests, skills, and values. Individual counseling and testing,

Life/Work/Career Planning workshops, and the Career Resource Center with materials on hundreds of occupations are among the services available to those involved in making important life decisions.

The Career Planning telephone number is 487-1074.

STUDENT AND SUMMER EMPLOYMENT

Annually thousands of students obtain part-time positions through the Student Employment Office. While the majority of these positions are on campus, a large number are in the surrounding community. They range from odd jobs and baby-sitting to extended part-time, highly skilled positions. Student Employment attempts to match positions to student's interests, skills, class schedule, etc., whenever possible.

Summer employment opportunities are available with camps, resorts, recreation, businesses and industries, governmental agencies, etc. Such employment opportunities start to be listed about Christmas time. Many summer employers schedule on-campus interviews through the Student Employment Office.

All students must make application with Student Employment in order to be placed in part-time positions with the University. On-campus employment is limited to twenty hours per week. Students who are eligible for the College Work-Study Program first gain approval in the Office of Financial Aid, 212 Pierce Hall.

The Student Employment telephone number is 487-0400.

CAREER PLACEMENT

The center offers active assistance to graduates and alumni in securing employment after graduation and in obtaining professional advancement throughout their career. Career opportunities are provided in business, industry, government, health and human services, and education from pre-school through university level.

Such assistance includes 1) credential reference services, 2) "launch your job seeking campaign" seminars, 3) resume and letter of application assistance, 4) interview preparation and technique, 5) Placement Bulletin listing current vacancies, employers' addresses and method of contact, 6) on-campus interview appointments with employer representatives, and 7) employer career literature, directories and job description materials.

It is recommended that each graduate register at the Career Planning and Placement Center and develop a credential file for future reference use.

The telephone numbers for Career Placement are: Business and Industry, 487-0316; and Education Placement, 487-0400.

VETERANS INFORMATION

Veterans eligible for educational benefits under the G.I. Bill should supply the Veterans Affairs Office at the University with their Certificate of Eligibility prior to the start of classes. For information regarding payment of tuition and other matters of interest to the veteran, please contact the Veterans' Affairs Office, 217 Goodison Hall.

Normally within one week of the end of each semester, the University mails a grade report for the term just completed to the student's home address, provided that the student does not have past due obligations to the University. Graduate students' academic records are kept on their permanent record cards in the Graduate School Office, room 116, Pierce Hall. Unless there are past due financial obligations, students may get a current transcript copy of their complete record by requesting it in writing from the Office of Academic Records and Teach Certification, room 5, Pierce Hall, upon paying the transcript fee as stated on page 000.

CENTER OF EDUCATIONAL RESOURCES

The Center of Educational Resources includes the University Library, Audio-visual Center, and Television Center.

The University Library serves the graduate student by offering a wide variety of research materials and special services. A modern air-conditioned building, organized on an open-stack divisional basis, provides a pleasant environment for research. Collections and services are divided among the divisions of Education and Psychology, Science and Technology and Humanities and Social Sciences.

The collection numbers more than 400,000 volumes of books, bound periodicals and documents, and some 200,000 microforms. Special collections include a large Instructional Materials Center in the Education and Psychology Division, a Map Library in the Science and Technology Division, the University Archives and a collection of United States Government Documents in the Social Sciences Division. Special facilities are available for the use of microform materials, study in small groups and typing of papers. Interlibrary loan services are located in the Science and Technology Division.

The Audio-visual Center, located in the library, and the Television Center, in Ford Hall, comprise Media Services. All types of audio-visual, television and film equipment, materials and services are available for individual or group use. There are film, filmstrip, audio tape, record and video tape collections.

Professional librarians and media specialists are available to assist graduate students in the use of the collections.

UNIVERSITY COMPUTING SERVICES

Under an executive director of University Computing, access to a large IBM and a large DEC-machine is available. Both batch and timesharing systems are permitted by faculty, students and administrative offices.

Low to high speed printers, cathode ray tubes and graphics terminals are placed at strategic points around campus. Optical scanning equipment is also used for tests, course evaluations and research.

Students may develop proficiencies in Computer Programming or major in the area both at the undergraduate and graduate program.

TUITION AND FEES

FEES SUBJECT TO REVISION

All University fees and assessments are subject to change by action of the Board of Regents.

OFFICIAL REGISTRATION DAY

The official registration day each semester for each student for purposes of payment of the registration fee and assessment of tuition is the day the student completes the initial registration for the semester or session.

REGISTRATION FEE

A registration fee of \$20.00 for each of the fall and winter semesters, and of \$15.00 for each of the spring and summer sessions, is charged to each student.

This fee is assessed and collected at the time the student registers for the semester or session and is non-refundable.

TUITION SCHEDULE

- Tuition will be assessed for all credit hours for which the student is registered. Off-campus tuition rates are the same as on-campus tuition rates.
- Regardless of student class level, undergraduate tuition will be assessed for all 100 through 400 level courses. Graduate tuition will be assessed for all 500 and 600 level courses.

Tuition rates per credit hour for 1977-78 are:

MICHIGAN RESIDENT

Undergraduate Courses (100-400 level)	\$26.00
Graduate Courses (500-600 level)	\$39.00

NON-RESIDENT

Undergraduate Courses (100-400 level)	\$65.00
Graduate Courses (500-600 level)	\$95.00

It is the duty of any student prior to registration, if there are any questions as to his right to be registered as a student with a status of Michigan resident, to raise such questions in the Student Accounting Office in Briggs Hall.

QUALIFICATIONS FOR MICHIGAN RESIDENCE

It is the policy of the Board of Regents for Eastern Michigan University that Michigan residency for purposes of tuition shall be determined by the domicile of the student, and that such domicile shall be determined by the following criteria:

1. Length of time lived in Michigan prior to first enrollment.
2. High school attended or previous college.
3. Domicile of parents.
4. Status as an elector.
5. Status as a taxpayer.
6. Source, length and continuity of employment.
7. Marital status.
8. Ownership of real estate.
9. Source of driver's license (state).
10. Source of vehicle license (state).
11. Self-supporting or dependency on others.
12. The type of visa held if a student is from a foreign country.
13. Other factors which may be deemed relevant evidence of domicile.

Students shall have their residency status determined at the time of their initial enrollment, and this status may be reviewed at each subsequent registration.

NOTE: It shall be the duty of all students prior to registration, if there are any questions as to their right to be registered as a student with a status of Michigan resident, to raise such questions in the Student Accounting Office in Briggs Hall.

The treasurer of the Board of Regents shall be the responsible officer for developing reasonable procedures and evaluating qualifications of individual applicants.

AUDITING FEES

Tuition and registration rates for auditing classes are the same as for credit.

WORKSHOP SESSIONS

Several two and three week workshop sessions are offered during the spring and summer sessions. Tuition and registration fees apply to workshop sessions at the same rates as for regular class sessions. However, a student enrolled in other course work during a session will not be assessed an additional registration fee for enrolling in a workshop during the same session.

1. An adjustment of 100% of the tuition assessment will be made to those students who withdraw prior to the close of business (5:00 P.M.) on the first day of the session.

2. No other adjustment or refund will be granted.

FINANCIAL OBLIGATIONS

Having fulfilled all other requirements, a student is eligible for registration or graduation only if all financial obligations to the University have been met at the time of graduation or at the close of the semester or session. Credits or other statements of record will be withheld and the student will be ineligible for further registration (fall advance registration excepted) at EMU until all obligations have been fulfilled.

PAYMENT OF TUITION

The exact due date for tuition and other University fees is printed on the invoice from Student Accounting and are published in the Class Schedule Bulletin for each semester. To insure a correct billing address, it is the responsibility

of the student to inform the University of any address changes by completing a change of address form in the Registration Office.

Registration for the fall semester begins in late March and continues until the first day of classes. For this semester only, students may register at any time up to the registration verification date, which is approximately 30 business days prior to the first day of classes, by paying the \$20.00 registration fee. Payment of previously incurred University obligations will not be required for registration prior to the registration verification date. Students will, however, be required to pay all previously incurred University obligations, and to make payment of at least 50% of all fall semester costs, including housing charges, by the registration verification date or their registration will be automatically cancelled; their registration fee will be forfeited; and those classes will be made available to other students. Students whose registration has been cancelled by this process may re-register upon payment of another registration fee of \$20.00, all past-due accounts, and at least 50% of all fall semester costs.

For those students who prefer to make installment payments, the University provides an optional installment payment plan for the fall and winter semesters only. The installment payment plan applies only to tuition and room and board. It consists of a minimum initial payment of 50 percent of the room and board and tuition assessments for the semester, and payment of all remaining charges in a second installment due during the eighth (8th) week of the semester. Specific due dates are published in the Class Schedule Bulletin for each semester.

Students who register after the registration verification date for fall semester are required to pay 50 percent of assessed tuition, room and board, and all of any miscellaneous fees at the time of registration.

An installment payment service fee of \$5.00 is collected with the second installment payment.

Winter semester registration procedures require that students will pay as a minimum the \$20 registration fee, 50 percent of all assessed tuition, board and room, and all of any miscellaneous fees at the time of registration.

Spring and summer session, registration procedures require that students pay, for each session the \$15 registration fee and all assessed tuition, board, room, and miscellaneous fees at the time of registration. *There is no provision for installment payment for spring or summer sessions.*

Eastern Michigan University accepts BankAmericard/VISA and Master Charge credit cards in payment of tuition, fees, room and board and bookstore purchases.

A late payment fee of \$6.00 is assessed if the second payment is not received by the due date.

If a student's account is past due for a current semester, enrollment, University housing, and other University services (such as release of grades or certified transcript) are subject to suspension until the account is brought into current status. Payment of assessments for a current semester does not relieve the student of the obligation for payment of any balance from a prior semester. The privilege of using the installment payment plan for payment of tuition and room and board is denied to students whose University account has, in the past, been referred to a collection agency because of the students' failure to pay the University.

• PROGRAM ADJUSTMENT FEE

For three (3) to five (5) days prior to the beginning of classes, program adjustments may be made with no assessment of an adjustment fee. During this period,

each academic department will maintain a station at one central location to assist in program planning and solving scheduling conflicts. At least 50% of the increased tuition, resulting from adjustments, must be paid at the time of adjustment.

During the first five (5) class days of the semester, a program adjustment fee of \$10.00 per transaction will be assessed for each student-initiated program adjustment. For the purpose of determining the program adjustment fee, one drop accompanied simultaneously by one add will be considered as one transaction. Individual adds or individual drops will be considered as individual transactions, and will be assessed \$10.00 each. At least 50% of the increased tuition, resulting from adjustments, must be paid at the time of adjustment.

No program adjustment fees will be assessed for changes required as a result of University actions.

• LATE REGISTRATION FEE

A late registration fee of \$30.00 is charged to those students who, for any cause, do not complete registration prior to the official first day of classes each semester. Checks returned by a bank constitute late registration, and the late registration fee is charged.

CANCELLATION OF REGISTRATION

After students have registered, if they should decide before classes begin not to return to Eastern, they must initiate a cancellation of registration form in person or by letter through the Registration Office, Briggs Hall. If students have applied for University housing, they must also cancel the contract in the Housing Office. This is necessary for cancellation of tuition and room and board assessments.

WITHDRAWAL FROM THE UNIVERSITY

To be eligible for any adjustment of tuition or housing assessment after classes have begun, a withdrawal from the University must be initiated in person or by letter through the Registration Office, Briggs Hall. The date the request is made to the Registration Office or the postmark date will be used in determining the amount of any assessment adjustment.

1. A credit adjustment of 100% of the tuition assessment for the fall and winter semesters, less a late withdrawal fee of \$10.00, will be made to those students who cancel their registration or withdraw from the University prior to the sixth (6th) class day. For the spring and summer sessions, a 100% credit adjustment, less a late withdrawal fee of \$10.00, will be made during the first three (3) days of classes. Actual dates are printed in the Class Schedule for each semester and session.

2. A credit adjustment of 50% of the tuition assessment for the fall and winter semesters will be made to those students who withdraw from the University between the sixth (6th) and 15th class day. For the spring and summer sessions, a 50% credit adjustment will be made during the fourth (4th) through the seventh (7th) class days of the session. Actual dates are printed in the Class Schedule for each semester and session.

3. No credit adjustments will be made after the above stipulated dates.

Decrease in Academic Load

1. A credit adjustment of 100% of the difference in tuition assessment for the fall and winter semesters will be made to those students who decrease their academic load prior to the sixth (6th) day of classes. For the spring and summer sessions, a 100% credit adjustment will be made during the first three days of classes. Actual dates are printed in the Class Schedule for each semester and session.

2. A credit adjustment of 50% of the difference in tuition assessment for the fall and winter semesters will be made to those students who decrease their academic load between the sixth (6th) and 15th class day. For the spring and summer sessions, a 50% credit adjustment will be made during the fourth (4th) through seventh (7th) class days of the session. Actual dates are printed in the Class Schedule for each semester and session.

3. No credit adjustments will be made after the above stipulated dates.

• GRADUATION FEE

A graduation fee is charged to each student who makes application for graduation. The fee is non-refundable and is assessed only once for each degree.

Master's and Specialist's degrees

\$15.00

HEALTH SERVICE FEES

All undergraduate and graduate students registering for a total of seven (7) or more credit hours in the fall or winter semesters, and all undergraduate students registering for a total of five (5) or more credit hours in the spring or summer sessions will be charged a non-refundable health service participation fee of \$10.00 per semester for fall and winters, and \$5.00 per session for the spring and summer sessions. Payment of this fee will entitle participants to Health Center services at reduced rates.

Undergraduate students registering for less than the aforementioned number of credit hours, graduate students, student spouses, faculty and staff, and their spouses may avail themselves of the Health Center services, but at somewhat higher rates. These persons may, at their option, also pay the participation fee at Snow Health Center and thereby become eligible for the reduced rates. The complete schedule of health service fees is available at Snow Health Center.

APPLIED MUSIC FEE

All students accepted for private music lessons will be assessed an applied music fee. Applied music fee rates for 1977-78 are:

Music majors:	\$60.00 per semester for all instruction.
Other University students:	\$60.00 per semester for one-hour lesson. \$30.00 per semester for half-hour lesson.
Students from public schools, the community and EMU staff and families:	\$90.00 per semester for one-hour lesson. \$45.00 per semester for half-hour lesson.

Lessons are arranged through the Music Department.

The applied music fee is assessed to each student's account at the close of the program adjustment period. This fee is not refundable after the first lesson.

OTHER COURSE FEES

Fees are assessed at the close of the program adjustment period to cover extra costs and materials involved with certain courses. At present, these courses carry special fee assessments:

Fine Arts

Multi-media, printmaking, textiles, ceramics, jewelry, sculpture, 3-D design.

IPER&D

Snow skiing, trap and skeet shooting, recreational shooting, bowling.

Business Education

Typing courses, calculator applications.

• PLACEMENT BULLETIN

A charge of \$10.00 is made for each annual subscription to the University Placement Bulletin Service. Subscriptions are available on an annual basis only.

• TRANSCRIPT FEE

Each student or former student is furnished one official transcript either before or after graduation without charge.

A charge of \$2.00 is made for each additional transcript.

VEHICLE OPERATION AND PARKING

All students, meeting the requirements of the law, and who live in University housing or are defined as commuting students, are eligible to maintain and operate a motor vehicle on campus. Motor vehicles are required to be operated within the provisions of the Traffic, Parking and Pedestrian Ordinance of the University.

Registration of motor vehicles used by commuter students is not required. Parking for commuter vehicles is available at several locations on campus. An entry or meter charge is required at several of these locations. For student parking in the central campus area (south of the railroad) or in the parking structure, the rate is 25¢ per entry or exit.

Further details are printed in the Ordinance and in the Parking and Traffic Regulation brochure.

FEES SUBJECT TO REVISION

All University fees and charges are subject to change by action of the Board of Regents.

DEPARTMENTS OF INSTRUCTION

The courses here listed are those which have been authorized in accordance with policies approved by the Graduate Council. Class schedules must be consulted for courses to be offered during a given semester or term since the frequency of offering of each course is determined by the department as program needs dictate, with no assurance that a given course will be offered every year. The requirements as stated in the departmental summaries are designed to serve as a guide to program planning and are subject to specific determination and consultation with the department adviser.



COLLEGE OF ARTS AND SCIENCES

DEAN: Donald F. Drummond

DEPARTMENTS

Art
Biology
Chemistry
Economics
English Language and Literature
Foreign Languages and Literature
Geography and Geology
History and Philosophy
Mathematics
Music
Physics and Astronomy
Political Science
Psychology
Sociology
Speech and Dramatic Arts

ART

Kingsley M. Calkins,
Department Head
118 Sill Hall,
Tele. 487-1268

Charles Fensch,
Coordinator of Advising—
Art Education
118 Sill Hall,
Tele. 487-0392
David Sharp,
Coordinator of Advising—
Fine Arts
118 Sill Hall,
Tele. 487-0392

The Art Department offers two programs leading to the master's degree; the Master of Fine Arts and the Master of Arts (Art Education).

I. ADMISSION REQUIREMENTS

Master of Fine Arts

As a prerequisite for admission, the Master of Fine Arts Degree applicant must have an undergraduate degree, with a major in art, from an accredited institution and must meet degree admission standards of the Graduate School. Application for entering the M.F.A. program involves the following two steps:

1. Send an application for admission to graduate status, supported by transcripts of all undergraduate and graduate credit at each institution attended to Graduate School Admissions, Eastern Michigan University, Ypsilanti, Michigan 48197.
2. Send an application for admission to the M.F.A. program to: Coordinator, M.F.A. Program, Art Department.

Arrange to have three letters of reference sent to coordinator, and send a portfolio of 10 color slides and/or photographs of representative examples of recent work. (Applicants in three-dimensional disciplines may submit multiple views of 10 examples).

The deadline for admission for fall term is March 15 of each year. The deadline for admission for winter term is November 1 of each year.

Master of Arts (Art Education)

Application for graduate work in art education should be made to the Graduate School, 116 Pierce Hall, Eastern Michigan University. The requirements are a minimum of 34 semester hours of art education and studio art with a 2.8 grade point average in these classes. In addition each student will be evaluated on the basis of a portfolio submitted to the Art Department. The portfolio will be in the form of at least 12 slides, presented in a clear plastic holder. All slides should be individually labeled and identified. Applicants should also submit a letter of

purpose outlining their aspirations in graduate work. Each applicant is expected to hold a teaching certificate for the teaching of art.

The deadline for admission for summer session and fall semester is April 15 of each year. The deadline for admission for winter semester is November 15 of each year.

II. DEGREE REQUIREMENTS

The graduate adviser will meet with each student to construct a program of study. The Master of Fine Arts program will contain a minimum of 48 semester hours beyond the bachelor's degree and the Master of Arts (Art Education) program will contain a minimum of 30 semester hours beyond the bachelor's degree. The Art Department offers concentrations in drawing, painting, printmaking, photography, sculpture, ceramics, jewelry, textiles, and multimedia.

A. Master of Fine Arts

1. Two years of residence is required.
2. At the end of the first year the work of each M.F.A. student will be reviewed by the M.F.A. Committee. The student is either allowed to continue or is formally asked to withdraw from the program.

3. Course requirements:	Sem Hours
FA 630 Graduate Studio	8
FA 631 Graduate Studio	8
FA 632 Graduate Studio	8
FA 633 M.F.A. Exhibition	9
FA 634 Seminar in Contemporary Ideas in Art	3
FA 635 Seminar in Contemporary Ideas in Art	3
	<u>39</u>
Electives in Art	3
Cognate courses (chosen in consultation with the adviser)	
Maximum of 6 credit hours transferable	<u>6</u>
	Total 48

B. Master of Arts (Art Education)

Course Requirements:	
FA 504 Elementary Studio (This course is required for the elementary art teacher and elective for others)	2
FA 505 Workshop in 2-D Media	4
FA 507 Crafts Workshop	4
FA 596 Art Education	<u>2</u>
	12
Electives:	
Fine Arts	12
Cognate Courses (chosen in consultation with the adviser)	<u>6</u>
	Total 30

III. COMPLETION OF THE DEGREE

The student should follow closely the Graduate School requirements for "Application for Diploma."

If the degree program includes a final exhibition of work, it is necessary to apply for gallery space one semester prior to the proposed exhibition.

Further information about these programs may be obtained from the Art Department.

*** FA 501 Art Education Workshop. Two sem hours**

This course is primarily designed for the classroom teacher. A variety of media, applicable to classroom utilization, will be employed with an emphasis in innovative selections such as filmmaking, batik, weaving and other three dimensional activities. Special problems and independent research may be arranged within the format of the class. *Not open to students who have a major in art.*

FA 504 Elementary Art Studio. Two sem hours

Elective course specifically designed for candidates for the Master of Arts degree who are interested in elementary art. Project-oriented. New materials stressed. The problems will be tailored to individual student's needs and related to public school teaching. *Art majors only.*

FA 505 Two-D Media Workshop. Four sem hours

Required course in two dimensional art work for candidates for the Master of Arts degree. Project-oriented. New media and materials stressed. The problems will be tailored to individual student's needs and related to public school teaching. *Art majors only.*

FA 507 Crafts Workshop. Four sem hours

Crafts Workshop will afford the student an opportunity to explore a variety of media in the crafts. The problems will be tailored to the individual student's needs and related to public school teaching. *Art majors only.*

FA 510 Ceramics. Two sem hours

Studio course in ceramics. *Art majors only.*

FA 520 Drawing. Two sem hours

Advanced studio course in drawing. *Art majors only.*

FA 530 Art History. Two sem hours

Advanced course in art history. *Art majors only.*

FA 540 Jewelry. Two sem hours

Advanced studio course in jewelry. *Art majors only.*

FA 550 Printmaking. Two sem hours

Advanced studio course in graphics. *Art majors only.*

FA 555 Textiles. Two sem hours

Advanced studio course in textiles.

Prereq: Art majors only.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

FA 560 Watercolor. Two sem hours

Advanced studio course in watercolor. Art majors only.

FA 570 Sculpture. Two sem hours

Advanced studio course in sculpture. Art majors only.

FA 580 Painting. Two sem hours

Advanced studio course in oil painting. Art majors only.

FA 595 Workshop in Art. Three sem hours

A workshop in art history focusing on personal observation of the visual arts of a particular area.

Prereq: Department permission.

FA 596 Seminar in Art Education. Two sem hours

Art Education Seminar will be concerned with the literature and research in art education.

Prereq: Department permission.

FA 597, 598, 599 Independent Studies. One, two and three sem hours

Prereq: Written permission.

FA 608 Exhibition in Art Education. Two sem hours

The requirements of this course may be satisfied by completing one of the following: A project, thesis, or an exhibition of the degree candidate's work. These guidelines may be obtained from the Graduate Coordinator. To be elected in the last semester before receiving a master's degree.

Prereq: Department permission.

FA 610, 611, 612 Ceramics. One, two and three sem hours

Advanced studio courses in ceramics. Based on background and need of the student. Open only to graduate majors.

FA 620, 621, 622 Drawing. One, two and three sem hours

Advanced studio courses in drawing. Based on background and need of the student. Open only to graduate majors.

FA 630 Graduate Studio. Eight sem hours

The first of the four graduate studio courses leading to the MFA degree. Course is conducted on a one to one basis. Instructor is selected for the student for this first course upon his acceptance into the program by the Graduate Acceptance Committee.

Prereq: Department permission.

FA 631 Graduate Studio. Eight sem hours

The second of the four graduate studio courses leading to the MFA degree. Instructor to be selected by the student from the MFA faculty.

Prereq: Department permission.

FA 632 Graduate Studio. Eight sem hours

The third of the four graduate studio courses leading to the MFA degree. Instructor to be selected by the student from the MFA faculty.

Prereq: Department permission.

FA 633 Graduate Thesis and Exhibition. Nine sem hours

A culmination of the three sequential Graduate Studio courses. The ideas developed in these courses result in a body of work which comprises the graduate exhibition. A written thesis is optional. An oral defense of the ideas presented in the exhibition is required. The University reserves the right to retain work from the graduate exhibition to be added to the EMU collection. A set of 35 mm. slides of all the works in the exhibition will be taken by the MFA candidate and will become part of the Art Department files.

Prereq: Departmental permission.

FA 634, 635 Seminar in Contemporary Ideas. Three sem hours each

A two semester seminar sequence for all Master of Fine Arts degree candidates dealing with in-depth questions and problems in twentieth-century art. Discussions will be supplemented with slides, films and the presentation of papers. Limited to MFA students only.

Prereq: Department permission.

FA 640, 641, 642 Jewelry. One, two and three sem hours

Advanced studio courses in jewelry. Based on background and need of the student. Open only to graduate majors.

FA 650, 651, 652 Printmaking. One, two and three sem hours

Advanced studio courses in graphics. Based on background and need of the student. Open only to graduate majors.

FA 655, 656, 657 Textiles. One, two, and three sem hours

Advanced studio course in textiles. Based on background and need of students. Prereq: Open only to graduate majors.

FA 660, 661, 662 Watercolor. One, two, and three sem hours

Advanced studio courses in watercolor. Based on background and need of the student. Open only to graduate majors.

FA 670, 671, 672 Sculpture. One, two and three sem hours

Advanced studio courses in sculpture. Based on background and need of student. Open only to graduate majors.

FA 680, 681, 682 Painting. One, two and three sem hours

Advanced studio courses in oil painting. Based on background and need of the student. Open only to graduate majors.

OTHER COURSES

These upper division courses may also be taken for graduate credit and applied on the department's degree program. See the Undergraduate Catalog for course descriptions.

334 Women in Art. (3)

335 American Painting and Sculpture from
Colonial Period to World War II. (3)

406 Printmaking. (3)

- 408 Ceramics. (3)
 409 Seminar: Issues in Photography. (3)
 412 Sculpture. (3)
 413 Painting. (3)
 414 Painting-Watercolor. (2)
 419 Life Drawing. (3)
 420 History of Primitive Art. (3)
 421 History of Oriental Art. (3)
 423 Painting-Watercolor II. (2)
 424 Painting-Watercolor III. (2)
 425 Painting. (3)
 426 Medieval Art History. (3)
 427 Baroque Art. (3)
 428 Seminar Modern Art. (2)
 429 History of American Architecture. (3)
 431 Multi-Media Workshop. (3)
 432 Drawing II. (3)
 441 Studies in Clays and Glazes. (3)

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
FA 630	X			X
FA 631	X			X
FA 632	X			X
FA 633	X			X
FA 634				X
FA 635	X			

BIOLOGY

Herbert H. Caswell,
 Department Head
 316 Mark Jefferson,
 Tele. 487-4242

Howard D. Booth,
 Coordinator of Advising
 308 Mark Jefferson,
 Tele. 487-0441

DEGREE PROGRAMS OFFERED

The Biology Department offers programs leading to the Master of Science degree with concentrations in general biology, aquatic biology, physiology, and community college biology teaching.

ADMISSION REQUIREMENTS

(1) Bachelor's degree. (2) 20 semester hours in biology including seven hours in botany and seven hours in zoology. (3) one year of college chemistry. (4) an academic record of B (3.0) or better during the junior and senior years, and (5) meet Graduate School degree admission requirements. Students deficient in one or more of the above admission requirements may be granted conditional admission subject to removing deficiencies while beginning a graduate program.

Hours earned in deficiency courses may not apply toward degree requirements. Special admission requirements in some areas of concentration are included under the objectives of that area of concentration.

DEGREE PROGRAM DESCRIPTION

The Master of Science in biology program is designed to provide all students with a broad background of knowledge, scientific skills and attitudes. At the same time, the Department of Biology recognizes an obligation to provide for the needs of different career orientations and different student objectives in taking our graduate program. To accommodate such diverse needs as research experience, internships and specialized course work, each student is required, by the end of the first semester after admission to the degree program, to develop a personalized program of studies in consultation with the student's own faculty Guidance Committee.

A minimum of 30 credit hours of graduate work is required on this program. The program must specify at least 24 hours of course work in the Biology Department and at least 6 hours of cognate credits to be taken outside the department. Courses on the program must be so distributed as to ensure that the combined undergraduate and graduate experiences of the student will include a minimum of 12 hours in biology, 10 hours in zoology and 10 hours in botany. At least two credit hours in independent study courses, including a written report, and at least two credit hours in biology department seminar courses are required on all programs. The program has to be approved by the Guidance Committee and be filed with the graduate coordinator of the Biology Department. Requests for changes to the approved program must be submitted to the graduate coordinator with the written approval of the student's Guidance Committee.

Two alternative plans are available for completion of Graduation Requirements, Plan A, with thesis, or Plan B, by comprehensive examination.

Plan A: In addition to the requirements common to both plans, as described above, candidates must successfully complete an original investigation with approval of, and supervision by, their Guidance Committee. They must submit a report on this research, written in a manner suitable for publication and approved in detail by their Guidance Committee, and must successfully defend this thesis in an oral final examination. A maximum of four credit hours may be earned for thesis research.

The Guidance Committee for Plan A students will include three faculty members of the biology department. The chairperson is usually selected by the student. The other two members are then chosen by the chairperson in consultation with the student. Additional members may be added from inside or outside the department by agreement between the chairperson and the student.

Plan B: In addition to the requirements common to both plans, candidates after completion of the required courses on their approved programs (those required in the area of concentration), and at least 80% of the total course work in the Biology Department, must successfully pass a comprehensive written examination over all the fields of biology included in their graduate programs and the principles covered in general biology.

The Guidance Committee for all Plan B students will consist of the principal graduate adviser for the student's chosen area of concentration as chairperson and two other faculty members named by the Departmental Graduate Committee as a Plan B advising committee.

Initial advising: Students, at the time of their admission to the Biology Program, will be given temporary advising by the principal adviser in their selected area of concentration, or in the General Biology Concentration if they do not specify otherwise, and the Plan B advisory committee. Courses approved for the first semester by this temporary committee must be accepted as part of the student's program by the permanent Guidance Committee. Beyond the first semester, the temporary approval is not binding on the Guidance Committee. Students are responsible for forming a permanent committee and developing a permanent program approved by that committee before registering for their second semester.

AREAS OF CONCENTRATION, OBJECTIVES AND GRADUATION REQUIREMENTS

General Biology: This program is designed to provide the additional background in biology appropriate for secondary teachers, for students entering a variety of doctoral programs in biology, and for those wishing further training in microbiology. Principal adviser: **Dr. Howard D. Booth.**

Graduation Requirements: see Degree Program Description above. In addition to the general requirements, the combined undergraduate and graduate coursework must include: genetics, physiology, ecology or limnology and one taxonomic field course.

Aquatic Biology: The graduate program in aquatic biology at Eastern Michigan University is designed to provide broadly trained research personnel to industries, private consulting firms and governmental institutions. Emphasis is placed on the development of taxonomic expertise, field and laboratory methods, skill in organizing and analyzing data and writing skills. Additional admission requirements: 1 course in physiology.

Graduation Requirements: In addition to the general requirements, the combined undergraduate and graduate course work must include general biology, botany, zoology, physiology, biometry, aquatic tracheophyta or freshwater algae, an aquatic zoology taxonomic field course, limnology, limnological methods, graduate practicum in aquatic biology and accompanying one hour Independent Study. (others to be approved by adviser). In addition Seminars I and II must be in aquatic biology. For those selecting Plan B, three hours of Independent Study will be required. Principal adviser: **Dr. Dale C. Wallace.**

Community College Biology Teaching: This program is designed to prepare students specifically for the professional teaching of biology at the community college level.

Graduation Requirements: In addition to the general requirements the undergraduate and graduate course work must include general biology, botany, zoology, plant anatomy, comparative anatomy, botany field course, zoology field course, biometry, limnology, ecology, invert zoology or morphology of algae and fungi, general, plant or vertebrate physiology, embryology, microbiology or morphology of vascular plants, internship (in place of Independent Study program), orientation seminar (in place of Seminar I and II). (Cognate: EDL 563 Philosophy and Purposes of the Community College.) Principal Adviser: **Dr. Dale C. Wallace.**

Physiology: This program is designed to prepare students for technical, teaching, clinical or research careers in physiology. Individually prepared programs of study are designed to provide, in conjunction with the undergraduate back-

ground, a balance of physiological concepts and analytical methods at both the cellular and organismal levels as demonstrated in at least two of the following areas: vertebrate physiology, invertebrate physiology, plant physiology, and microbial physiology.

Additional admission requirements: One course in physiology and one year of college physics.

Graduation Requirements: In addition to the general requirements, combined undergraduate and graduate course work must include: 1 year physics; general biology; botany; zoology; general physiology; two of the following, vertebrate physiology, plant physiology, microbial physiology, invertebrate physiology; (others approved by physiology adviser). Total must include a minimum of 12 hours of 500 and 600 level physiology courses. Principal adviser: **Dr. Merlyn C. Minick.**

FACILITIES

The Biology Department shares the Mark Jefferson Science Complex with the Departments of Chemistry and Psychology. In addition to laboratories and preparation rooms for the conventional subspecies of biology, botany and zoology, the department has such facilities as an electron microscope; a sound isolation room; photo-micrographic equipment; photographic darkrooms, radiation rooms; a counting room; walk-in cold and constant-temperature rooms equipped with environmental chambers; a herbarium, with collections of higher and lower plants (including the G.W. Prescott algal collection); museum rooms with invertebrate and vertebrate collections; aquarium rooms for plants and animals; field and project rooms; animal rooms and a greenhouse.

For field work, the department has the Loessel Field-Laboratory, a few miles from campus, the adjacent Huron River and the Kresge Environmental Education Center at Fish Lake, near Lapeer, Michigan, to mention but a few of the available sites. Vans and boats are available for class and research use.

For information regarding the Master of Science in general science, see page 128.

COURSES FOR THE BIOLOGY DEGREE PROGRAM

Intended primarily for students on the biology degree program, these courses usually presuppose the equivalent of an undergraduate major or minor in some field of biology.

BIOLOGY

* **BIO 509 Biometry. Three sem hours**

A general course designed to study statistical methodology and the practical application of such statistics in biology.

Prereq: A course in college algebra, 15 hours in biology.

* **BIO 518 History of Biology. Two sem hours**

Development of major concepts in biology from the Greek natural philosophers

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

to the present. Not open to students who have had credit in 485 *History of Biology*.

Prereq: At least two courses in biology.

BIO 522 (410) Limnology. Three sem hours

A lecture, laboratory and field course dealing with physicochemical and biological interrelationships in lakes and streams. Field course.

Prereq: 221 *General Botany*, 222 *General Zoology* and one taxonomic field course or consent of the department.

BIO 523 (411) Limnological methods. Two sem hours

Field and laboratory techniques in limnology.

Prereq or Coreq: *Biology 522 (410) Limnology*.

BIO 524 (420) Ecology. Three sem hours

Interrelationships of plant and animal populations and their physical environment; biological principles in terrestrial adaptations. Individual student field problems will be required. Field course.

Prereq: 221 *General Botany*, 222 *General Zoology* and one taxonomic field course or permission of the department.

*** BIO 525 Conservation. Two sem hours**

A survey of the natural resources of Michigan; its land, water, minerals, forests, grasslands, wildlife and human powers. Some of the current problems in conservation peculiar to Michigan on the basis of its history, its present resource utilization and its future possibilities. Not open to students with credit in *BIO 224*.

*** BIO 526 Immunobiology. Two sem hours**

The properties and behavior of antisera to foreign antigenic substances such as bacteria, viruses and toxins; the rationales and procedures of antigen-antibody reaction *in vitro*; and the mechanism of immunity to infectious diseases. Application of such reactions in identification and classification of microbes in clinical work and in biological research. Lecture, but provision of time should be made for laboratory experimental work.

Prereq: *BOT 331 General Microbiology*; *biochemistry desirable*.

BIO 528 (428) Tropical Ecology. Three sem hours

Important biotic communities of the tropics. Investigation in both marine and terrestrial environments; lectures, laboratory and field work. Field course.

Prereq: *Botany*, *zoology*, some concept of *ecological principles* and some familiarity with use of *taxonomic keys*.

*** BIO 537, 538, 539 Special Topics in Biology. One, two and three sem hours**

An experimental course for subject matter not provided in other department offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied.

Prereq: *Approval by the department*.

BIO 590, 591, 592 Practicum in Biology. One, two and three sem hours

Practical experience in a particular field study, with each student responsible for

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

the experimental design and the collection, analysis and interpretation of field data for a specific area within a broader problem under group investigation. Prereq: Departmental permission, based on appropriate qualification.

*** BIO 593, 594, 595 Workshop in Biology. One, two and three sem hours**

*** BIO 596 Seminar in Biology. One sem hour**

Presentation of special reports and group discussions of selected topics. Offered on Credit/No Credit basis.

Prereq: Twenty hours of credit in biology, including botany and zoology.

BIO 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

Prereq: Departmental permission.

BIO 610 Cytogenetics. Four sem hours

The structure and behavior of cells with emphasis on their nuclear components. Implications for genetics and evolution; some opportunity in the laboratory for individual investigation and for demonstration of techniques in cytological study.

Prereq: Fifteen hours of biology, including at least one course in genetics.

BIO 621 Electron Microscopy Laboratory. Three sem hours

A specialized course in techniques of electron microscopy including preparation of various tissues, use of electron microscope and its application to the study of biological problems. Darkroom technique is also covered. Potential candidates for electron microscopy should sign up and interview with the instructor early in the preceding semester.

Prereq: Twenty hours of biology and consent of the department.

BIO 690, 691, 692 Thesis. One, two and three sem hours

BIO 695 Workshop in Advanced Biology. Two sem hours

BIO 696 Seminar in Biology; Laboratory Instruction. One sem hour

Analysis and discussion of the special problems of laboratory instruction in biology in college. Offered on Credit/No Credit basis.

Prereq: Appointment to a graduate assistantship.

BIO 697 Internship in Community College Biology Teaching. Six sem hours

An intensive internship experience consisting of supervised participation in teaching biology at the community college level. The intern will participate in all department and professional activities at a community college and will conduct specific courses.

Prereq: Departmental permission.

BOTANY

*** BOT 530 Plant Products in Industry. Two sem hours**

The various ways in which plants and plant products are utilized in modern

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

industry; plants as the source technical raw materials; the dependence of man upon the plant kingdom. Not open to students who have credit in 215 Economic Botany.

*** BOT 537, 538, 539 Special Topics in Botany. One, two and three sem hours**

An experimental course for subject matter not provided in other departmental offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied.

Prereq: Approval by the department.

*** BOT 543 Plant Pathology. Three sem hours**

A study of plant disease caused by fungi, bacteria, viruses, nematodes, phanerogams and environmental stress, with emphasis on the biology of the causal organisms, principles of pathogenesis, practical techniques of applied plant pathology and disease control.

Prereq: 310 Plant Physiology desirable; no credit in 311 Plant Pathology.

BOT 550 (302) Systematic Botany. Three sem hours

Collection, identification and classification of flowering plants. Familiarity with the major plant groups through lecture and herbarium study and field experience in varied habitats. Counts as a taxonomic field course.

Prereq: 221 General Botany.

BOT 551 (451) Freshwater Algae. Three sem hours

A survey of the freshwater algae divisions; their morphology, taxonomy, ecology and economic importances. Lectures will emphasize an evolutionary approach. Laboratory work will stress the identification of representative algal taxa. A class field study will be required. Counts as a taxonomic field course.

Prereq: 221 General Botany or equivalent.

BOT 552 (450) Aquatic Tracheophyta. Three sem hours

Identification in the laboratory and field of herbaceous and shrubby vascular plants growing in aquatic habitats and in both vegetative and reproductive phases. Counts as a taxonomic field course.

Prereq: 221 General Botany or equivalent.

BOT 553 (453) Taxonomy and Ecology of Diatoms. Three sem hours

A taxonomic field course on the collection, preservation and identification of freshwater diatoms, includes familiarity with the more significant world literature. Collection required.

Prereq: 451/551 Freshwater Algae or permission of department.

BOT 554 (354) Trees and Shrubs. Three sem hours

A taxonomic field course on identification of native trees and shrubs in winter and spring condition.

Prereq: 221 General Botany or 205 Field Biology.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

* **BOT 593, 594, 595 Workshop in Botany. One, two and three sem hours**

* **BOT 596 Seminar in Botany. One sem hour**

Presentation of special reports and group discussions on selected topics. Offered on *Credit/No Credit* basis.

Prereq: Twenty hours of credit in biology, including botany and zoology.

BOT 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

BOT 620 Virology. Two sem hours

The biological, physical and chemical nature and pathological activities of virions as found in bacteria, insects, plants and animals. Laboratory methods for propagation of virion and identification; selective inhibition of viral reproduction by chemicals *in vitro*; and immunity to viral diseases.

Prereq: Fifteen hours of credit in biology, including microbiology and biochemistry.

BOT 640 Plant Cell Physiology. Two sem hours

Selected topics on recent advances in molecular botany.

Prereq: 221 General Botany, laboratory physiology (general, plant or animal) and organic chemistry.

BOT 651 Advanced Plant Taxonomy. Three sem hours

Comparison of modern systems of classification of angiosperms. Newer techniques of characterization of plants, including morphometry, leaf architecture, biochemical systematics, cytogenetics and numerical analyses. *The student will apply one or more of these in a field or herbarium problem.*

Prereq: General botany, systematic botany; biometry and organic chemistry desirable.

ZOOLOGY

* **ZOO 537, 538, 539 Special Topics in Zoology. One, two and three sem hours**

An experimental course for subject matter not provided in other departmental offerings. The content will change from semester to semester. *Students may elect this course several times as long as different topics are studied.*

Prereq: Approval by the department.

ZOO 570 (300) Natural History of Invertebrates. Three sem hours

A field course in the recognition, collection, identification and preservation of common invertebrates of Michigan, exclusive of the insects; natural history, ecology and economic importance. Counts as a taxonomic field course.

Prereq: 222 General Zoology.

ZOO 571 (310) Natural History of Vertebrates. Three sem hours

Vertebrates, their adaptations and natural history; the taxonomic classification.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

identification and distribution of local and other forms. Field work, sometimes under adverse weather conditions and at night; accurate observation and permanent recording of original data on local species. Counts as a taxonomic field course.

Prereq: 222 General Zoology.

ZOO 572 (422) Ichthyology. Three sem hours

A study of some aspects of the biology, classification, distribution and evolution of fishes. Attention is given to the morphology, physiology, behavior, natural history and ecology of fishes through work in lecture, laboratory and in the field. Specific experience in the identification of the freshwater fishes of the Great Lakes region is provided in addition to a general survey of some marine fish families. Counts as a taxonomic field course.

Prereq: 222 General Zoology or equivalent.

ZOO 575 (425) Ornithology. Three sem hours

Bird biology for the secondary teacher and for students with an advanced interest in biology; field identification and census methods of summer and fall bird populations, behavior, and ecology. A survey in the laboratory of major North American bird families. A student field project is required. Counts as a taxonomic field course.

Prereq: 222 General Zoology or consent of the department.

*** ZOO 580 Advanced Field Ornithology. Two sem hours**

Field study and identification of all migratory birds and the spring migration as a biological phenomenon.

Prereq: 575 (425) Ornithology, or some experience in field identification of birds and approval of department.

ZOO 582 (482) Aquatic Entomology. Three sem hours

Aquatic insect families and some common genera; ecology, including adaptations to the aquatic environment, life histories and taxonomy. A collection of the common insect families of this area is required. Counts as a taxonomic field course.

Prereq: 585 (421) Entomology recommended.

*** ZOO 583 Field Parasitology. Three sem hours**

The helminth, protozoan and arthropod parasites of animals, both vertebrate and invertebrate; collection, preparation and identification of parasites of local animals. A collection and a project is required.

Prereq: 222 General Zoology; 360 Parasitology; 430 Invertebrate Zoology or 300 (570) Natural History of Invertebrates; and 310 (571) Natural History of Vertebrates or 324 Comparative Anatomy. Department permission required.

ZOO 584 (480) Protozoology. Three sem hours

Survey of the protozoa, both free living and parasitic; their life cycles, morphology and ecology. Techniques of collecting, culturing and preserving protozoans and their identification. Counts as a taxonomic field course.

Prereq: 222 General Zoology.

* Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

ZOO 585 (421) Entomology. Three sem hours

A survey of the world of insects, their structure, function, behavior and ecology; identification and classification of local insects. A *field project* is required. Counts as a taxonomic field course.

Prereq: 222 General Zoology or consent of department.

ZOO 586 (485) Mammalogy. Three sem hours

Some aspects of the biology of mammals; origin and evolution; anatomy; classification; adaptations and zoogeography. Natural history and ecology are studied in the field, including behavior and population dynamics. A collection of five or more museum study specimens of different species is required of each student. Counts as a taxonomic field course.

Prereq: 222 General Zoology and 310 (571) Natural History of Vertebrates or 420 (524) Ecology or 324 Comparative Anatomy of Vertebrates.

*** ZOO 593, 594, 595 Workshop in Zoology. One, two and three sem hours**

*** ZOO 596 Seminar in Zoology. One sem hour**

Presentation of special reports and group discussions on selected topics. Offered on Credit/No Credit basis.

Prereq: Twenty hours of credit in biology, including botany and zoology.

ZOO 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

ZOO 660 Experimental Animal Embryology. Two sem hours

Demonstration and laboratory experiences utilizing the experimental method. An individual research project is a major part of the course.

Prereq: 323 Animal Embryology or equivalent.

ZOO 670 Animal Behavior. Two sem hours

The behavior of both vertebrates and invertebrates; instinct, learning, sociality, communication and breeding behavior, with emphasis on the ontogenic and adaptive significance of behavior patterns.

Prereq: Two courses in zoology.

ZOO 671 Comparative Physiology. Four sem hours

A study of systems used to maintain endogenous homeostasis in a phylogenic series of animals.

Prereq: Organic chemistry, vertebrate physiology, or permission of department.

ZOO 672 Endocrinology. Four sem hours

A biological and non-clinical survey of the invertebrate and vertebrate endocrine systems; the histology and function of each of the major endocrine organs, their specific hormones and integrative mechanisms.

Prereq: Organic chemistry and vertebrate physiology, or permission of department.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

ZOO 673 Animal Cell Physiology. Two sem hours

A lecture course on animal cell physiology. A study of the physiochemical relationships which are responsible for the properties of cell irritability, conductivity, metabolism, respiration, excretion, growth and reproduction. *Lab course is available but not required.*

Prereq: 222 General Zoology, laboratory physiology (general, plant or animal) and organic chemistry. Chemistry, biochemistry, elementary physics desirable.

ZOO 674 Animal Cell Physiology Laboratory. One sem hour

A lab course on animal cell physiology. Laboratory study of the physiochemical relationships which are responsible for the properties of cell irritability, conductivity, contractility, metabolism, respiration, excretion, growth and reproduction.

Prereq or coreq: 673 Animal Cell Physiology.

COURSES FOR NON-SPECIALIZING STUDENTS

The following courses are made available for graduate students who have had little or no previous training in biology or, more specifically, have not had equivalent courses as undergraduates. These courses may be applicable as cognates for other departments within the University. Unless also listed in the preceding section, they are not open to students with an undergraduate major in biology and cannot be applied to the graduate degree program in biology. Since most require no prerequisites, they are especially suited to the general student who would like to become better informed about biology, either for general interest or for better preparation for science teaching in the elementary grades.

*** BOT 500 Survey of the Plant Kingdom. Two sem hours**

The major types of plants from algae to seed plants; emphasis on development of structure. *Not open to students who have credit in 205 Field Biology or 221 General Botany.*

*** ZOO 501 Survey of the Animal Kingdom. Two sem hours**

A survey of the major animal groups from protozoans to mammals. Structure function; the basis for classification and the evolutionary relationships of the several groups. *Not open to students who have credit in 205 Field Biology or 222 General Zoology.*

*** BIO 502 Biology of Man. Two sem hours**

Man as a living organism in the world of living organisms, emphasizing his place among, and relationships with, the other organisms of the world; the morphological, physiological, taxonomic and ecological relationships of man. Lectures and laboratory experience.

*** BOT 503 Plants and Nature. Two sem hours**

Plants in their natural environment; identification and classification of local

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

flowering plants. use of hand-lens and plant manuals and methods of collection and preservation. Major plant groups and their climatic and geographic significance.

* **ZOO 504 Field Zoology. Two sem hours**

Animals in their natural habitats; identification, behavior and environmental relations. Field study and observations in woods, fields, ponds and streams; collecting and displaying living and preserved material.

* **BIO 513 Principles of Heredity. Two sem hours**

The basic principles of heredity with emphasis on inheritance in man. Not open to students who hold credit in 301 Genetics.

Prereq: A recent course in introductory biology, or 502 Biology of Man.

* **BIO 525 Conservation. Two sem hours**

A survey of the natural resources of Michigan; its land, water, minerals, forests, grasslands, wildlife and human powers. Some of the current problems in conservation peculiar to Michigan on the basis of its history, its present resource utilization and its future possibilities. Not open to students who hold credit in 224 Principles of Conservation.

* **BOT 530 Plant Products in Industry. Two sem hours**

The various ways in which plants and plant products are utilized in modern industry; plants as the source of technical raw materials; the dependence of man upon the plant kingdom. Not open to students who hold credit in 215 Economic Botany.

COURSES SPECIALLY FOR TEACHERS

* **ESC 505 Science in the Elementary School. Two sem hours**

A survey of subject matter and grade placement utilizing current science texts and courses of study; reading in current literature; the construction and use of science materials; and supply and equipment needs for elementary science. No credit ESC 302/402 last five years.

* **BIO 506 Methods in Teaching Biology. Two sem hours**

Salient techniques and methodology in presenting biological principles; text analysis, test construction, course content, planning and equipping a modern high school biology laboratory. Not open to students who hold credit in 403 Methods and Materials for Teaching Biology.

* **BIO 521 Outdoor Science and Land Laboratories. Four sem hours**

Using the outdoors effectively in instruction; recognition of instructional resources on school sites and other land laboratories. Basic ecological factors affecting associations of organisms; correlations between physical and social sciences. Field trips.

* **BIO 593, 594, 595 Workshops in Biology. One, two and three sem hours**

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** BOT 507 Experimental Plant Physiology for Teachers. Two sem hours**

Lecture and laboratory course concentrating on selected experimental physiological studies of seed plants. *Offered during the summer session only.*

Prereq: Fifteen hours in biology; not open to students who have had plant physiology.

OTHER COURSES

These upper division courses may also be taken for graduate credit and applied on the department's degree program. See the Undergraduate Catalog for course descriptions.

Biology

- 302 Genetics Laboratory. (2)
- 320 General Physiology. (4)
- 400 Principles of Biological Techniques. (1)
- 401 Biological Techniques Lab. (2)
- 403 Methods and Materials for Teaching Biology. (2)
- 405 Organic Evolution. (2)
- 412 Biogeography. (2)
- 427 Introductory Molecular Genetics. (3)
- 429 Cell Biology. (3)
- 442 Microbial Ecology. (3)
- 480 Radiation Biology. (3)
- 496 Practicum in Neuroanatomy. (3)

Botany

- 304 Mycology. (3)
- 310 Plant Physiology. (3)
- 312 Plant Anatomy. (3)
- 330 General Microbiology Lab. (2)
- 331 General Microbiology. (3)
- 332 Clinical Microbiology. (3)
- 345 Medical Mycology. (4)
- 430 Plant Morphology of Algae and Fungi. (4)
- 431 Plant Morphology of Mosses through the Vascular Plants. (4)
- 444 Microbial Physiology. (3)

Zoology

- 305 Neuroanatomy. (3)
- 306 Physical Anthropology. (3)
- 323 Animal Embryology. (3)
- 324 Comparative Anatomy of Vertebrates. (4)
- 327 Vertebrate Physiology. (3)
- 360 Parasitology. (3)
- 404 Mammalian Histology. (3)
- 430 Invertebrate Zoology. (4)

437 Invertebrate Physiology. (3)

460 Economic Zoology. (2)

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
BIO 502				†
BIO 505				X
BIO 509	X			
BIO 513	†			†
BIO 518	X		X	X
BIO 521			†	
BIO 522	X	†	†	X
BIO 523	X			
BIO 524	X	†	†	X
BIO 525	X	X		
BIO 526	†			†
BIO 528		†		
BIO 610				X
BIO 621	X			
BOT 500	†			
BOT 503		X		
BOT 507		†		
BOT 530	X			
BOT 543	X			
BOT 550		†	†	X
BOT 551		†		X
BOT 552		†	†	
BOT 554	X			
BOT 620				X
BOT 640		†		
ESC 505				X
ZOO 501				†
ZOO 504			†	
ZOO 570				X
ZOO 571	X			
ZOO 572		†	†	X
ZOO 575			†	X
ZOO 580		†		
ZOO 582		†	†	X
ZOO 583				†
ZOO 584	†		X	
ZOO 585		†	†	X
ZOO 586	X			
ZOO 670	X			
ZOO 671				X
ZOO 672	X			
ZOO 673		†		
ZOO 674		†		

† Courses offered on a two (2) year cycle.

CHEMISTRY

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The Chemistry Department offers two degree programs, one designed for those teaching at the secondary school level (M.S. in chemistry education) and the second for individuals wishing to pursue professional careers in chemistry (M.S. in chemistry).

MASTER OF SCIENCE IN CHEMISTRY EDUCATION

Objectives:

1. To provide a program of advanced study for previously-certified secondary school teachers who wish to improve their technical background.
2. To provide a program of study incorporating both advanced technical training and the opportunity for certification for those wishing to enter the teaching profession.

NOTE: This program is intended primarily for those interested in careers in teaching at the secondary school level. Anyone hoping to teach at the junior or community college level is encouraged to follow the professional M.S. in chemistry program.

Admission Requirements:

1. The equivalent of at least an undergraduate minor (20 semester hours) in chemistry.
2. One year of college physics.
3. Mathematics through Calculus with Analytic Geometry I (MTH 120). A student may be accepted for graduate study in this program with less than this background; however, the deficiencies must be remedied by taking the appropriate courses without graduate credit.
4. An undergraduate academic record that meets the degree admission requirements specified by the Graduate School.

Degree Requirements:

1. Successful completion of a minimum of 40 semester hours of chemistry, including both undergraduate and graduate credits.
2. Successful completion of the following 20-21 semester hours of chemistry courses:

	Sem Hours
(a) CHM 361 Fundamentals of Physical Chemistry	3
(b) CHM 362 Physicochemical Measurements (Lab)	1
(c) CHM 539 Inorganic-Analytical Chemistry for Teachers	4
(d) CHM 579 Organic-Biochemistry for Teachers	3
(e) One laboratory course from among 352, 373, 374, or 452.	1-2
For those students entering the M.S. program with prior credit equivalent to any of the above courses, approved 400 and 500 level chemistry courses may be substituted. Further specific course requirements:	
(f) CHM 503 Modern Approaches to Teaching Chemistry	2

- (g) CHM 596 Seminar in Chemistry (two separate enrollments) 2
 (h) CHM 592 Independent Study in Chemistry Education 4
 (Satisfactory completion of CHM 592 includes the writing of a comprehensive report summarizing the details of the project and its conclusions.)

3. Successful completion of six semester hours of courses in the College of Education. For students who are seeking teacher certification in conjunction with the M.S. degree, six credits of education courses taken in fulfillment of the requirements for certification may be counted.
4. Successful completion of three-four semester hours of approved electives, either in chemistry or outside the Department, bringing the overall total to 30 semester hours beyond the bachelor's degree. The total of 30 semester hours must include at least 15 hours in 500 numbered courses.

Although certification for teaching is not a formal requirement of this program, all students seeking the M.S. in Chemistry Education are encouraged to consider acquiring their certificate if they have not already done so. The basic requirements for teacher certification are listed in the undergraduate catalog and further information can be obtained from the Academic Records and Teacher Certification Office.

MASTER OF SCIENCE IN CHEMISTRY

Objectives: To provide individually prepared programs of advanced professional training for industrial chemists and to prepare students to enter a doctoral degree program.

Admission Requirements:

1. An undergraduate degree with either a major or a strong minor (approximately 25 semester hours in chemistry.)
2. Credit in advanced undergraduate courses corresponding to CHM 371-4 (Organic), 461-3 (Physical) and 481 (Instrumental Analysis), along with either CHM 432 (Advanced Inorganic) or 451 (Biochemistry). If deficiencies exist, a maximum of four semester hours of graduate credit will be allowed for courses taken to correct these deficiencies. Competency in any deficient areas may be established by examination. The graduate adviser will use the results of these examinations to ascertain advanced standing or the need for remedial work.
3. An undergraduate record that meets the requirements specified by the Graduate School.

Degree Requirements:

1. Satisfactory completion of a minimum of thirty (30) semester hours of graduate credit, at least fifteen (15) of which must consist of 500 numbered courses.
2. Two semester hours, i.e., two enrollments in CHM 596 Seminar.
3. Six semester hours of cognate courses, i.e. those related to the degree program outside the Chemistry Department and approved by the graduate adviser. The student is expected to take six semester hours of cognate courses. Any exceptions must be approved by the graduate adviser.
4. Demonstrated competence in the use of the chemical literature, either by examination or by satisfactory completion of CHM 490 (Literature of Chemistry).

5. The balance of the program will consist of one of the following four options:

A. Thesis Plan: all M.S. in chemistry degree candidates are encouraged to follow the thesis plan.

a. Dual major program—two areas of specialization are designated from among analytical, biochemistry, inorganic, nuclear, organic, physical, and polymer chemistry.

1. Twelve semester hours of approved courses in the two areas selected for the dual major, with a minimum of two courses in each area.
2. Ten semester hours of research (i.e., enrollments in CHM 597-9) culminating in a written thesis. (See the thesis guidelines)

or

b. General program

1. Twelve semester hours or demonstrated proficiency* in four of the following five courses: CHM 451, CHM 532, CHM 561, CHM 571, and CHM 581.
2. Ten semester hours of research (i.e., enrollments in CHM 597-9) culminating in a written thesis. (See the thesis guidelines)

*Credit is not given for demonstrated proficiency; instead, the student may substitute an approved elective course(s).

B. Non-Thesis Plan: intended primarily for the part-time student whose professional experience constitutes a reasonable substitute for the research requirement of the thesis plan.

a. Dual major program—two areas of specialization are designated by the student from among analytical, biochemistry, inorganic, nuclear, organic, physical, and polymer chemistry.

1. Sixteen semester hours of approved courses in the two areas selected for the dual major, with a minimum of two courses in each area.
2. Six semester hours of electives in approved advanced courses.
3. Satisfactory performance on a comprehensive exam (details regarding the exam are available from the graduate adviser).

or

b. General program

1. Fifteen semester hours or demonstrated proficiency* in the five courses CHM 451, CHM 532, CHM 561, CHM 571, and CHM 581.
2. Seven semester hours of electives in approved advanced courses.
3. Satisfactory performance on a comprehensive exam (details regarding the exam are available from the graduate adviser).

*Credit is not given for demonstrated proficiency; instead, the student may substitute an approved elective course(s).

For information regarding the Master of Science in general science, see page 128.

***CHM 503 Modern Approaches to Teaching Chemistry. Two sem hours**

A lecture/discussion course covering recent developments in high school chemistry curricula and modern approaches to teaching high school chemistry, including computer-based instructional methods and the effective use of audiovisual materials.

Prereq: Three courses in chemistry.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** CHM 520 Introductory Chemistry. Three sem hours**

A course designed for teachers in the elementary school. Special emphasis is given to topics that may not be included in the first course in chemistry but which are of general concern to the public. Representative topics include air and water pollution, energy considerations and an introduction to organic and biochemistry.

Prereq: One course in general college chemistry. Not open to junior/senior high school science majors.

*** CHM 530 X-Ray Crystallography. Three sem hours**

Crystal symmetry including crystal classes, point groups and space groups. The origin and production of X-rays, the design of X-ray equipment and the diffraction of X-rays by crystals. The theory of single crystal and powder X-ray equipment and the diffraction of X-rays by crystals. The theory of single crystal and powder X-ray methods; the role of modern automated diffractometers and electronic computers in the solution of crystal structures; laboratory experience in the Weissenberg single crystal technique and the powder method.

Prereq: Physical chemistry or approval by the department.

*** CHM 532 Structural Inorganic Chemistry. Three sem hours**

Physical and chemical methods for determining structures of inorganic substances and the relationship between structure and descriptive chemistry.

Prereq: One year of physical chemistry and one course in advanced inorganic chemistry

*** CHM 537 Special Topics in Chemistry for Elementary Teachers. One sem hour**

An experimental course covering subject matter not provided in other department offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are covered.

*** CHM 553 Enzymology. Two sem hours**

A lecture course covering the nomenclature, kinetics, mechanism and isolation of enzymes.

Prereq: 451 Biochemistry.

*** CHM 554 Biochemistry Research Techniques. Two sem hours**

A laboratory course dealing with the special techniques employed by biochemists.

Prereq: 452 Biochemistry laboratory.

*** CHM 555 Biopolymers. Two sem hours**

A lecture course concerned with the chemistry and function of proteins, nucleic acids and polysaccharides.

Prereq: 351 Introductory Biochemistry or 451 Biochemistry.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

* **CHM 561 Advanced Physical Chemistry. Three sem hours**

A survey course at an advanced level; quantum mechanics, molecular spectroscopy, statistical mechanics and kinetics.

Prereq: One year of physical chemistry, at least two years of analytical geometry and calculus and one year of college physics.

* **CHM 565 Nuclear Chemistry. Three sem hours**

The course will cover topics such as radioactive decay, decay systematics, nuclear models and nuclear reactions. Applications of radioactivity to chemical problems will be discussed. Techniques of nuclear chemistry, nuclear processes as chemical probes and other such topics will be covered. A discussion of the preparation and properties of transplutonium elements will be included.

Prereq: One year of college chemistry, one course in physical chemistry, or modern physics.

* **CHM 570 Modern Topics in Organic Chemistry. Four sem hours**

Modern chemical principles, updated information for students lacking recent instruction in chemistry. For non-majors only.

* **CHM 571 Advanced Organic Chemistry. Three sem hours**

A lecture course providing intensive coverage of reaction mechanisms.

Prereq: One year of organic chemistry.

* **CHM 572 Stereochemistry of Organic Compounds. Two sem hours**

Study of the fundamentals of stereochemistry, including such topics as structure and symmetry, stereoisomerism, classification and separation of stereoisomers and stereospecific and stereoselective reactions.

Prereq: 372 Organic Chemistry.

* **CHM 575 High Polymer Chemistry. Three sem hours**

Macromolecules and the reactions that produce synthetic plastics, elastomers, resins and fibers; physical methods of evaluation and characterization of polymers and the relation of polymer structure to physical properties.

Prereq: 372 Organic Chemistry, 373 Organic Chemistry Laboratory, 461 Physical Chemistry or consent of the department.

* **CHM 576 High Polymer Chemistry Laboratory. Two sem hours**

Experimental methods for preparing, evaluating, characterizing and analyzing polymers. Preparatory methods include step-growth and chain-growth polymerization via several mechanisms. Methods for evaluation, characterization and analysis include osmometry, viscosimetry, D.T.A.—T.G.A., fractionation and degradation.

Prereq or coreq: CHM 575 High Polymer Chemistry or permission of the department.

* **CHM 579 Organic-Biochemistry for Teachers. Three sem hours**

A lecture course for secondary school teachers covering the properties and reactions of those organic functional groups most relevant to the study of the chemistry of molecules present in living systems; also, the chemistry of selected biomolecules such as carbohydrates and proteins.

Prereq: 270 Organic Chemistry or equivalent.

* Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** CHM 581 Analytical Chemistry. Three sem hours**

A course stressing modern methods of analysis, with special emphasis on trace determinations. Optical, x-ray, electrochemical and nuclear methods are examined in detail.

Prereq: Instrumental analysis and one year of physical chemistry.

*** CHM 589 Inorganic-Analytical Chemistry for Teachers. Four sem hours**

A lecture/laboratory course for secondary school chemistry teachers covering both the theory and practice of selected modern analytical techniques, plus a survey of the descriptive inorganic chemistry of a variety of metals and non-metals.

Prereq: One year of general chemistry.

*** CHM 592 Independent Study in Chemistry Education. Four sem hours**

An independent study experience in which the student plans, conducts, and evaluates a curricular innovation or some new technique for teaching chemistry under the direction of a staff member. An extensive, written report is required.

Prereq: Permission of department.

*** CHM 594 Special Topics in Chemistry. Two sem hours**

An in-depth study of a specialized area of chemistry.

Prereq: Graduate standing or permission of the department.

CHM 596 Seminar in Chemistry. One sem hour

Discussions of specific topics in chemistry by graduate students, staff and visiting scientists. Attendance at all sessions is expected. Two enrollments are required for all Master of Science in Chemistry candidates. Each student makes one presentation per enrollment. One of these must be based upon research if the student is following the thesis plan.

Prereq: Graduate standing or permission of the department.

CHM 597, 598, 599 Research in Chemistry. One, two and three sem hours

The student performs original research under direction. Thesis is submitted

OTHER COURSES FOR CREDIT TOWARD THE MASTER'S DEGREE

These upper division courses may also be taken for graduate credit and applied on the department's degree program. See the Undergraduate Catalog for course description.

- **351 Introductory Biochemistry. (3)
- **352 Basic Biochemical Analysis. (1)
- **361 Fundamentals of Physical Chemistry. (3)
- **362 Physicochemical Measurements. (1)
- **373 Organic Chemistry Laboratory. (2)
- **374 Organic Chemistry Laboratory. (2)
- 410 Scientific Glassworking. (1)
- 415 Environmental Chemistry. (3)

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

- 432 Advanced Inorganic Chemistry. (3)
 451 Biochemistry Lecture. (3)
 452 Biochemistry Laboratory. (2)
 453 Biochemistry. (3)
 462 Physical Chemistry Laboratory. (2)
 463 Physical Chemistry. (3)
 472 Spectrometric Organic Structure Determination. (2)
 473 Qualitative Organic Chemistry Laboratory. (2)
 481 Instrumental Analysis. (4)
 485 Radioisotope Techniques in Chemistry and Biology. (3)
 490 Literature of Chemistry. (2)
 **491 History of Chemistry. (2)
 496, 497 Special Topics in Chemistry. (2)
 **No credit given toward the M.S. in chemistry degree.

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
CHM 503			X	
CHM 530	†			
CHM 532				†
CHM 553				†
CHM 554	X			
CHM 555				†
CHM 561				†
CHM 565	†			
CHM 571	X			
CHM 572				†
CHM 575				†
CHM 576	†			
CHM 579	X			
CHM 581		†		
CHM 589				X
CHM 592	X	X	X	X
CHM 596	X	X	X	X
CHM 597	X	X	X	X
CHM 598	X	X	X	X
CHM 599	X	X	X	X

† Courses offered on a two (2) year cycle.

ECONOMICS

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The graduate program in economics leading to the Master of Arts degree is designed to prepare students for responsible positions in business, industry, and government service at the state, local, and federal levels. It also provides training for students desiring to pursue the study of economics at more advanced levels.

DEGREE ADMISSION

Degree admission to the graduate program is available to those meeting the following requirements:

1. Must meet Graduate School degree admission requirements.
2. Have an undergraduate grade point average of at least 2.5.
3. Submit a Graduate Record Examination aptitude test score of at least 900 (verbal plus quantitative) or Graduate Management Admission Test score of at least 400.
4. Have the equivalent of at least a minor in economics, including intermediate theory courses.

CONDITIONAL ADMISSION

Conditional admission may be granted those students not meeting the above standards but who show promise. All students are expected to submit GRE or GMAT scores. Those not meeting the undergraduate minor requirement will be expected to take courses for undergraduate credit. Students who are conditionally admitted are required to maintain a B+ grade average to be granted degree admission. A maximum of 12 hours earned as a conditionally admitted student may be applied toward the M.A. degree.

DEGREE REQUIREMENTS

In addition to the general requirements established by the Graduate School, the student shall:

1. Complete a minimum of thirty (30) hours of graduate credit. This will normally include 24 to 30 of economics and six to zero of cognates.
2. Demonstrate research ability by successfully completing either:
 - (A) a master's thesis; or
 - (B) the graduate research seminar and two (2) research papers approved by departmental faculty.
3. Satisfactorily complete the following:
 - (A) Macroeconomic Analysis (ECO 601);

(B) Microeconomic Analysis (ECO 602);

(C) at least one approved quantitative economics course.

For information regarding the Master of Arts in social science, see page 000.

BASIC COURSES FOR NON-MAJORS

ECO 500 Economics: Principles and Institutions. Three sem hours

Study of major economic institutions, the basic analytic tools of economic theory and their use.

Prereq: Not open to students having had Principles of Economics (ECO 201 and 202 or equivalent).

ECO 501 Macroeconomic Theory and Policy. Three sem hours

National income analysis, employment theory, monetary theory and practice and their application to economic policy. This course is designed for graduate students majoring in fields other than economics, primarily those in the College of Business.

Prereq: One course in economics or permission of the department. Not open to students who have had Intermediate Macroeconomic Analysis (ECO 301).

ECO 502 Microeconomic Theory and Policy. Three sem hours

Analysis of the economic behavior of individuals and firms under various market conditions, the determination of relative prices, the allocation of resources and related problems. This course is designed for graduate students majoring in fields other than economics, primarily those in the College of Business.

Prereq: One course in economics or permission of the department. Not open to students who have had Intermediate Microeconomic Analysis (ECO 302 or equivalent).

ECO 503 Contemporary Economic Problems. Three sem hours

The economic content of one or more current economic issues is analyzed with a goal of better public understanding of the issue implications of policy solutions.

Prereq: Principles of Economics (201 and 202 or equivalent) or permission of department. Not open to economic majors.

COURSES FOR DEGREE PROGRAM

ECO 504 Research Methods Seminar. Three sem hours

A research methods course designed to develop the skills necessary for effective research in economics. This course is to be taken very early in the student's graduate program.

Prereq: Graduate student in economics.

*** ECO 506 Development of Economic Analysis. Three sem hours**

Review of major theories and concepts in the development of economics as a scientific discipline. Emphasis is directed toward changing methods and theories of economic analysis and their implications for economic policy, includ-

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

ing Pre-classical, Classical and Neo-classical, Keynesian and Neo-Keynesian thought.

Prereq: Intermediate Macroeconomic Analysis and Intermediate Microeconomic Analysis (ECO 301 and 302) or departmental permission.

***ECO 510 Applied Economic Statistics. Three sem hours**

The application of statistics and quantitative analysis to economic problems using computer techniques.

Prereq: Economic Statistics (ECO 310 or equivalent) or permission of department.

***ECO 511 Mathematical Economics. Three sem hours**

Study of economic models, matrix algebra and linear economic models, linear programming and game theory, optimization problems and calculus of variations.

Prereq: Calculus (MTH 120 or 119) or Mathematics for Economics (ECO 210) and Intermediate Macroeconomic Analysis and Intermediate Microeconomic Analysis (ECO 301 and 302) or equivalent.

***ECO 515 Econometrics: Theory and Applications. Three sem hours**

Development and analysis of econometric models using the tools of statistics for estimation. Treatment of errors in variables and some other problems arising from autocorrelated disturbances, and various other problems such as multicollinearity, heteroscedasticity, lagged variables and dummy variables. Analysis of the simultaneous-equation problems, including identification problems, indirect least squares, two stage least squares, limited-information methods, full-information methods, full-information and three stage least squares.

Prereq: Introduction to Econometrics (ECO 415) or departmental permission.

***ECO 522 Collective Bargaining. Two sem hours**

Labor and management relations considered from the point of view of the two parties and the public welfare; labor contracts. Traditional and current areas of dispute and methods of settlement.

Prereq: One course in economics or permission of department.

***ECO 524 White Collar and Public Employee Unionism. Two sem hours**

An analysis of the special characteristics of labor organizations and collective bargaining patterns in public employment and in selected white collar occupations of the private sector of the economy.

Prereq: One course in economics or permission of the department.

***ECO 526 Economics of Education. Three sem hours**

Identification and measurement of economic value of education and its contribution to economic growth and development.

Prereq: Economic Theory and Policy (ECO 501 or ECO 502) or equivalent.

***ECO 534 Regional and Urban Economics. Three sem hours**

Examination of problems of economic adjustment and development by regions, including inner city and metropolitan areas. Mass transit, public finance, hous-

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

ing, economic base studies, race relations, health care, income distribution and poverty will be examined.

Prereq: Six hours of economics or permission of department.

*** ECO 540 Monetary Economics. Three sem hours**

The development of monetary and central banking theory; policy applications and limitations in the context of the relationships between money, prices, national income and the balance of payments.

Prereq: *Intermediate Macroeconomic Analysis (ECO 301) or equivalent.*

*** ECO 550 Public Finance: Analysis and Policy. Three sem hours**

A detailed, theoretical analysis of the problems of budgeting and budget techniques, methods to evaluate expenditures, efficiency and equity considerations in tax policy, problems of stabilization policy and growth policy, evaluation of the impact and importance of national debt.

Prereq: *Intermediate Macroeconomic Analysis and Intermediate Microeconomic Analysis (ECO 301 and 302) or departmental permission.*

*** ECO 551 State and Local Government Finance. Three sem hours**

Economic analysis of expenditures, revenues and debt management of state and local governments.

Prereq: *Principles of Economics (ECO 201 and 202 or equivalent) or permission of department.*

*** ECO 555 Stabilization Policy. Three sem hours**

An examination of monetary and fiscal stabilization policies in the context of the multiple objectives of full employment, price stability and economic growth.

Prereq: *Intermediate Macroeconomic Analysis (ECO 301 or equivalent).*

*** ECO 560 Economics of Industrial Organization. Three sem hours**

The enterprise sector of a capitalist economy; incidence of competition and monopolistic tendencies in various industries and markets, market structure, conduct and performance, mergers and concentration and public policies.

Prereq: *Intermediate Macroeconomic Analysis and Intermediate Microeconomic Analysis (ECO 301 and 302) or departmental permission.*

*** ECO 561 Economics of Multinational Enterprise. Three sem hours**

Economics of international competition and monopoly. Analysis includes studies of direct foreign investment, national economic anti-trust policies, the multinational firm and their relation to trade and economic efficiency.

Prereq: *International Economics (ECO 480) or Economics of Industrial Organization (ECO 560) or permission of department.*

*** ECO 562 Government and Business. Two sem hours**

The political and economic functions of government; business corporations and financial mergers; direct control of business; control versus government ownership of utilities; governmental controls of agriculture and natural resources; the responsibility of government in maintaining employment.

Prereq: *One course in economics and one course in political science.*

** Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

*** ECO 575 The Economics of Socialism. Three sem hours**

A survey of the economic thought bases of the various types of socialism followed by a comprehensive study of the planning and operation of modern socialist economies.

Prereq: Six hours of economics or equivalent or permission of department.

*** ECO 580 International Trade: Theory and Policy. Three sem hours**

Analysis of international trade theories and trade policy with reference to the effects of domestic fiscal and monetary policy on international economic problems.

Prereq: Intermediate Macroeconomic Analysis and Intermediate Microeconomic Analysis (ECO 301 and 302 or equivalent).

*** ECO 581 The International Monetary System. Three sem hours**

Theoretical and empirical examination of international monetary issues including the balance of payments, fixed vs. flexible exchange rates, stabilization policies in an open economy, disturbance transmission mechanisms and interdependence, institutions.

Prereq: Intermediate Macroeconomic Analysis and Intermediate Microeconomic Analysis (ECO 301 and 302).

*** ECO 585 Economic Growth and Development. Three sem hours**

Conditions, courses and consequences of growth and development, instruments of expansion and control and important theories and models of growth. Economic growth in both the United States and underdeveloped countries.

Prereq: Intermediate Macroeconomic Analysis and Intermediate Microeconomic Analysis (ECO 301 and 302 or equivalent).

*** ECO 586 Economic Planning. Three sem hours**

A study of the government's economic decision-making apparatus, the formulation of economic plans, the selection of optimal plans from among a feasible set, and the problems of transition from general to sectoral and decentralized plans.

Prereq: Intermediate Macroeconomic Analysis and Intermediate Microeconomic Analysis (ECO 301 and 302) or departmental permission.

*** ECO 587 Case Studies in Economic Development. Three sem hours**

A survey of economic development in selected countries or regions with emphasis on development policies, theoretical applications and economic structures of countries or regions surveyed.

Prereq: Intermediate Macroeconomic Analysis and Intermediate Microeconomic Analysis (ECO 301 and 302) or departmental permission.

*** ECO 594 Special Topics. Three sem hours**

An advanced level course in a specific area of economics.

Prereq: Intermediate Macroeconomic Analysis and Intermediate Microeconomic Analysis (ECO 301 and 302 or equivalent).

*** ECO 595 Workshop in Economics. Two sem hours**

Selected principles of economics presented by visiting consultants. Class discussion on phases of contemporary economics.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

ECO 596 Seminar in Economics. Three sem hours

A seminar in advanced economic theory or policy open only to degree students of the department.

Prereq: Twelve hours toward M.A. degree.

ECO 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a member of the economics faculty.

Prereq: Permission of the graduate director in economics.

ECO 601 Macroeconomic Analysis. Three sem hours

National income accounting as a framework for economic analysis; determinants of consumption, investments and government expenditures; models of underemployment and inflation.

Prereq: Intermediate Macroeconomic Analysis (ECO 301 or equivalent) or permission of department.

ECO 602 Microeconomic Analysis. Three sem hours

Economic analysis of the behavior of individuals and firms; price determination in competitive and monopolistic markets; general static equilibrium and the allocation of resources.

Prereq: Intermediate Microeconomic Analysis (ECO 302 or equivalent) or permission of department.

ECO 690, 691, 692 Thesis. One, two and three sem hours

Completion of research problem and writing thesis.

Prereq: Approved thesis proposal.

OTHER COURSES

These upper division courses may also be taken for graduate credit and applied on the department's degree program providing prior approval has been given by adviser. See the Undergraduate Catalog for course descriptions.

301 Intermediate Macroeconomic Analysis (3)

302 Intermediate Microeconomic Analysis (3)

310 Economic Statistics (3)

321 Black Workers and Labor Market (3)

323 Labor and Government (3)

341 Money and Banking (3)

365 Public Utility Economics (3)

366 Economics of Transportation (3)

370 Comparative Economic Systems (3)

415 Introduction to Econometrics (3)

420 Comparative Labor Unionism (3)

422 Union Leadership (3)

424 Seminar in Labor Issues (3)

436 Health Economics (3)

445 Economic Fluctuations and Forecasting (3)

455 Economic Efficiency in the Public Sector (3)

471 Case Studies of Developing Economies (3)

472 Soviet Economy (3)

480 International Economics (3)

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
ECO 500			X	
ECO 501	X			X
ECO 502	X			X
ECO 504	X			
ECO 506	X			
ECO 510				‡
ECO 511		‡		
ECO 515				†
ECO 522				X
ECO 524	X			
ECO 534				‡
ECO 540	‡			
ECO 550	†			
ECO 551			‡	
ECO 555		†		
ECO 560				†
ECO 561	‡			
ECO 562			†	
ECO 575	†			
ECO 580				†
ECO 585				‡
ECO 596	X			
ECO 601				X
ECO 602	X			

† Courses offered on a two (2) year cycle during odd years.

‡ Courses offered on a two (2) year cycle during even years.

ENGLISH LANGUAGE and LITERATURE

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Students enrolling in the program for the Master of Arts in English may choose one of three separate concentrations: (1) Literature, (2) English Language and Composition, (3) Children's Literature. Each of these concentrations is described on the following pages. Candidates for degrees in other departments may elect English Department courses as cognates.

General requirements for the master's degree: In addition to the Graduate School degree admission requirements set forth in the early pages of this catalog the Department of English requires (A) for admission to the program, at least 2 semester hours of undergraduate English, excluding freshman composition, (B) for the degree, a minimum of 30 semester hours of graduate work (usually 12

hours in an English major, 6 hours in an English minor, 6–12 hours of electives in English and 0–6 hours of cognate study) with grades averaging B or better. A master's thesis is not required.

Language Requirement: A candidate is expected to possess some knowledge of a foreign language or of early English. This requirement may be fulfilled in one of the following ways:

- a. by presenting two years (or the equivalent) of undergraduate foreign language credit.
- b. by passing French 516, 517 Reading French for Graduate Students with a grade of B or better (recommended for students planning to do Ph.D. work in English).
- c. by taking 6 hours of graduate work chosen from Old English, Old English Poetry, Old and Middle English Dialects, Chaucer, History of the English Language. (Students with equivalent undergraduate training may be excused by petition).

The director of graduate studies is **Professor Paul D. McGlynn**. Members of the Department Graduate Committee are **Professors Paul Bruss, Gilbert Cross, Judith Johnson, Donald Lawniczak, George Perkins, and O. Ivan Schreiber**. All are available during regular office hours for information or counseling.

THE MASTER OF ARTS IN ENGLISH WITH CONCENTRATION IN LITERATURE

Objectives of the degree:

The M.A. in English with concentration in literature is designed to provide master's level competence in the study of literature through the dual requirements of depth and breadth of approach to the discipline. Candidates achieve depth through the selection of a major area of study defined in terms of three choices: national focus (English or American literature), or a major period focus, or genre focus (poetry or prose). Candidates are assured of breadth of approach through the choice of a minor area of study and of electives from the two areas of study not selected for the major.

The degree is an appropriate choice for candidates who anticipate teaching on the elementary, high school or community college level. It has also been elected by candidates who anticipate doctoral study in some field of English or American literature. The degree provides a valuable educational background for library careers or for many professions where accuracy and clarity of expression are requisities, such as communications, government, business, editing and publication. It is also useful for professions in which high value is placed on ease of communication and facility of expression, such as counseling, guidance, personnel relations or management.

Major and minor requirements for the M.A. in English with concentration in literature:‡

Ordinarily a candidate will complete a major of 12 hours in a field chosen from those listed under groups I (a) or (b); II (a) or (b); and III (a) or (b), a minor of

‡A revision of this program may be approved in 1978. Inquire at the English Department for details.

six hours in a field chosen from a second group or subgroup and electives of four hours, three of which must be chosen from fields of a third group.

Candidates may choose up to six additional hours of electives from any of the department's courses approved for graduate study, or they may choose up to four hours of cognates in other departments.

Group I

(a) MEDIEVAL and RENAISSANCE

(b) 17th and 18th CENTURIES

Group II

(a) 19th and 20th CENTURIES

(b) AMERICAN LITERATURE

Group III

(a) PROSE FICTION (A student presenting prose fiction as a major is advised to include a course in literary criticism and must include one course each in 18th, 19th and 20th century British prose fiction and one in American prose fiction among his total undergraduate and graduate credits.)

(b) POETRY (A student presenting poetry as a major is advised to include a course in literary criticism and must include one course each in Chaucer, Shakespeare and Milton among his total undergraduate and graduate courses.)

It should be noted that the same course may not be presented for credit toward both the major and minor. The major and minor program is designed to provide some depth in particular areas, but in considering his entire training in English (both undergraduate and graduate) the student should aim for breadth as well. It is especially advised that the minor be chosen in an area where he would otherwise be weak.

COURSES FOR MASTER OF ARTS IN ENGLISH WITH CONCENTRATION IN LITERATURE

Medieval and Renaissance

*** LIT 512 Middle English Literature. Three sem hours**

A study of the genres of Middle English Literature (chronicle, dialogue, exemplum, fable, romance, sermon, etc.)

Prereq: Fifteen hours of credit in literature.

*** LIT 530 Studies in Chaucer. Three sem hours**

Intensive reading of Chaucer's major works and supplementary reading in Chaucerean criticism.

Prereq: Fifteen hours of credit in literature.

*** LIT 540 Elizabethan Drama. Three sem hours**

The plays of Marlowe, Jonson and Webster, considered primarily for their intrinsic literary and dramatic merit and secondarily for the light they throw on Shakespeare's milieu. A greater understanding of the term "Elizabethan Drama."

Prereq: Fifteen hours of credit in literature.

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

* **LIT 541 Studies in Shakespeare. Three sem hours**

Studies in the historical, biographical, textual and critical scholarship relevant to two or three of Shakespeare's plays. Investigations, reports, papers.

Prereq: Fifteen hours of credit in literature, including one course in Shakespeare.

* **LIT 542 Elyot, Sidney, Spenser. Three sem hours**

To examine in depth the artistic aims, techniques and achievements of three Sixteenth Century British authors, including their relation to Renaissance Christian Humanism.

Prereq: Fifteen hours of credit in literature.

Seventeenth and Eighteenth Centuries

* **LIT 550 Donne, Browne and Others. Three sem hours**

The principal works of two or three English authors from the period 1600–1660.

Prereq: Fifteen hours of credit in literature.

* **LIT 551 Studies in Milton. Three sem hours**

The complete poetry and selected prose of John Milton, with some attention to his intellectual milieu.

Prereq: Fifteen hours of credit in literature.

* **LIT 560 Dryden, Pope. Three sem hours**

A study of the major works of Dryden and Pope, with an introduction to the most important criticism of their writing.

Prereq: Fifteen hours of credit in literature.

* **LIT 562 Boswell and Johnson. Three sem hours**

Major writings with attention to the men and times.

Prereq: Fifteen hours of credit in literature.

* **LIT 563 Studies in Eighteenth-Century Comic and Satiric Fiction.**

Three sem hours

Major comic or satiric authors of the 18th century and the literary, historical and critical problems arising from their work. On a cyclical basis, the authors studied will include Swift, Fielding, Sterne and Smollet, and some of their imitators and minor successors; the Fielding-Richardson inter-action.

Prereq: Fifteen hours of credit in literature.

* **LIT 564 Studies in Eighteenth-Century Sentimental and Gothic Fiction.**

Three sem hours

Major sentimental or Gothic authors of the 18th century and the literary, historical and critical problems arising from their work. On a cyclical basis, the authors studied will include Defoe, Richardson, MacKenzie, Goldsmith, Godwin, Walpole, Radcliffe and Lewis.

Prereq: Fifteen hours of credit in literature.

* *Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

Nineteenth and Twentieth Centuries

*** LIT 570 Wordsworth. Three sem hours**

An intensive study of the poetry and critical essays of Wordsworth.
Prereq: Fifteen hours of credit in literature.

*** LIT 571 Byron, Keats. Three sem hours**

An intensive study of the poetry of Byron and Keats.
Prereq: Fifteen hours of credit in literature.

*** LIT 573 Tennyson and Browning. Three sem hours**

Reading and analysis of major works by Tennyson and Browning, with peripheral study of their social and literary background.
Prereq: Fifteen hours of credit in literature.

*** LIT 575 Carlyle, Arnold. Three sem hours**

A close examination of selected works, accompanied by rapid reading of other works and of biographies, correspondence and other background materials that will aid students in placing these two major writers in their time, and in discovering their relevance to our time.
Prereq: Fifteen hours of credit in literature.

*** LIT 581 Eliot, Jeffers, Auden. Three sem hours**

Intensive study of the work of three major modern poets. *This course may also be credited under American Literature.*
Prereq: Fifteen hours of credit in literature.

American Literature

*** LIT 510 Problem of Evil in American Literature. Three sem hours**

Analysis of selected essays, poems, short stories and novels in which three great American writers, Emerson, Hawthorne and Melville, have delineated and speculated upon the nature, loci, causes and effects of evil in the cosmos, in society and in the individual soul.
Prereq: Fifteen hours of credit in literature.

*** LIT 520 Dickinson, Robinson, Frost. Three sem hours**

The lyric and narrative poetry of three New England poets: explication of poems, biography and the poets' reflection of their times.
Prereq: Fifteen hours of credit in literature.

*** LIT 521 Whitman and Contrasting American Poets. Three sem hours**

Form and content in Whitman's poetry as related to the literary, social and political backgrounds of his time. Comparisons with the theory and practice of Bryant, Poe, Whittier and Longfellow.
Prereq: Fifteen hours of credit in literature.

*** LIT 523 Realism and Naturalism in the American Novel. Three sem hours**

Realism and naturalism as theory and as practice in the late 19th and early 20th centuries, with emphasis on Howells, Twain, James, Crane, Norris and Dreiser.
Prereq: Fifteen hours of credit in literature.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

* **LIT 525 Henry James. Three sem hours**

Major novels, shorter fiction and literary criticism of Henry James.
Prereq: *Fifteen hours of credit in literature.*

* **LIT 526 The Harlem Renaissance and Beyond. Three sem hours**

A study of Afro-American literature since 1920 with special emphasis on the 1920's and the influence of this period upon more contemporary works. Parallels will be drawn between trends in Afro-American literature and American literature as a whole and between the Harlem Renaissance and the literature of the last decade.

Prereq: *Fifteen hours of credit in literature.*

Special Courses

* **LIT 511 Literary Criticism. Three sem hours**

A study of various approaches to literary criticism with application to specific works.

Prereq: *Fifteen hours of credit in literature.*

* **LIT 596 Seminars in Selected Topics. Three sem hours**

Topics will be announced from time to time. The following are examples of topics offered in recent years:

Joyce, Yeats, and Shaw

Southern Gothic Fiction

Medieval and Renaissance Allegory

Hemingway, Fitzgerald, and Faulkner

Prereq: *Fifteen hours of credit in literature. Further prerequisites may be required for some topics.*

LIT 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member. *Not to be elected until a student has been accepted as a candidate for the master's degree in literature.*

By permission of the Graduate Committee only.

OTHER COURSES FOR CREDIT TOWARD MASTER OF ARTS IN ENGLISH WITH CONCENTRATION IN LITERATURE

The following courses for advanced undergraduates are also available to graduate students. For descriptions of these courses, see the Undergraduate Catalog. Ordinarily a maximum of three undergraduate courses may be approved for graduate credit.

305 Shakespeare: The Major Comedies and Histories. (3)

312 Medieval Literature. (3)

315 The Poetry of Chaucer. (3)

216 English Literature 1500-1600. (3)

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

- 317 English Literature 1600–1660. (3)
- 318 English Literature 1660–1744. (3)
- 319 English Literature 1744–1798. (3)
- 328 The American Novel 1798–1920. (3)
- 330 The Eighteenth Century Novel. (3)
- 331 The Nineteenth Century Novel. (3)
- 332 The Twentieth Century American Novel. (3)
- 333 The Twentieth Century British and European Novel. (3)
- 340 English Drama 1558–1642. (3)
- 341 English Drama 1660–1779. (3)
- 344 Women in Literature (3)
- 401 Modern American and British Poetry. (3)
- 403 Modern Drama. (3)
- 404 English Literature 1798–1832. (3)
- 405 English Literature 1832–1880. (3)
- 408 American Literature 1608–1830. (3)
- 409 American Literature 1830–1890. (3)
- 410 American Literature 1890 to Present. (3)
- 420 Old English Poetry. (3)
- 430 History of Literary Criticism. (3)
- 434 English Literature in Transition, 1880–1914. (3)

THE MASTER OF ARTS IN ENGLISH WITH CONCENTRATION IN ENGLISH LANGUAGE AND COMPOSITION

Objectives of the degree:

The M.A. in English with concentration in English language and composition offers candidates options for increasing their professional competence in several areas of language and literary study and in composition. Language as an affective medium of expression is emphasized in the areas of advanced composition, creative writing and literature; language as a consistent chronological progression is viewed in the study of the history of the language and in the historic periods of the language (Old English, Middle English); language as a coherent and discrete system of behavior is studied in grammar and syntax; methods and procedures of language analysis are studied in linguistic science courses.

The degree is an appropriate choice for candidates preparing for teaching on the elementary, high school, or community college level who wish to increase their competence in the several areas of language, literary study, and writing. It is also chosen by candidates who intend to undertake Ph.D. work in linguistics. The degree is an appropriate background for those who intend to proceed to such careers as editing, publishing or writing, where analytical facility and effectiveness in communicating ideas are necessary. It is especially valuable for those who have some background in science, business, or technology and wish to prepare themselves as skilled writers in these fields.

Requirements for the M.A. in English with concentration in English language and composition:

12 hours: Major in language and composition, including three hours required in advanced composition and nine hours of restricted electives in English

language, grammar, linguistics, and creative writing. (See courses listed on page 82 under Courses in English Language, Linguistics, and Composition and on page 81 under Other Courses for Credit toward M.A. in English with concentration in English language and composition.) Students with strong undergraduate preparation in language or writing may replace three to six of these hours with literature electives.

12 hours: Electives in literature. (See courses listed under Courses for the M.A. in English with concentration in literature, pages 80–83, and Other Courses for Credit Toward M.A. in English with concentration in literature, page 83).

6 hours: Cognates, consisting of such courses as the teaching of composition, the teaching of reading, or other cognate courses applicable to the candidate's professional aims. RDG 502 Developmental Reading—Secondary is strongly recommended as a cognate course for students without this type of background.

Language Requirement: Candidates are referred to the language requirement printed as part of the general requirements for the master's degree in the Department of English Language and Literature on page 79.

COURSES IN ENGLISH LANGUAGE, LINGUISTICS AND COMPOSITION

•ENG 501 American English: Regional and Social Dialects. Three sem hours

A study of both regional and social dialect differences in English and of recent dialect research demonstrating the correlation between reading and writing problems and dialect differences between pupils and their teachers and texts. Prereq: Department permission.

•ENG 502 History of Grammar. Three sem hours

Grammatical analysis from Plato to Chomsky: the influence of various linguistic theories and analytical methods on the development of contemporary language models and the teaching of grammar.

•ENG 503 Rhetoric and Advanced Composition. Three sem hours

A composition course designed to increase the student's proficiency in writing clear and precise expository prose. Considerable practice in writing, with attention to modern and classical theories of rhetoric.

•LIT 506 Introduction to Old English. Three sem hours

The reading of representative selections of prose and poetry in the original Old English, and an introduction to Old English grammar. Prereq: Three courses in literature.

•ENG 509 Old and Middle English Dialects. Three sem hours

A study of the dialectal differences of Old and Middle English exemplified in

Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

literary texts of the medieval period, with an investigation of their contributions to standard Modern English.

Prereq: 321 *History of the English Language* or 314 *Old English*.

Recommended: 315 *The Poetry of Chaucer*.

ENG 594 Teaching Composition on the College Level. Three sem hours

A course in the methods of teaching English composition, with particular attention to beginning courses on the college and junior college level.

Required of all Teaching Fellows and Graduate Assistants and open to other interested M.A. candidates.

OTHER COURSES FOR CREDIT TOWARD MASTER OF ARTS IN ENGLISH WITH CONCENTRATION IN ENGLISH LANGUAGE AND COMPOSITION

The following courses for advanced undergraduates are also available to graduate students. For descriptions of these courses see the Undergraduate Catalog. Ordinarily a maximum of three undergraduate courses may be approved for graduate credit.

- 301 *An Introduction to the English Language* (3)
- 302 *Modern English Syntax* (3)
- 306 *Feature, Interpretive and Editorial Writing* (3)
- 320 *Introduction to Linguistic Science* (3)
- 321 *The History of the English Language* (3)
- 325 *Expository Writing* (3)
- 335 *Imaginative Writing* (3)
- 420 *Old English Poetry* (3)
- 422 *Writer's Workshop* (3)
- 425 *Advanced English Syntax* (3)

THE MASTER OF ARTS IN ENGLISH WITH CONCENTRATION IN CHILDREN'S LITERATURE

Objectives of the Degree

The M.A. in English with concentration in children's literature provides an opportunity for advanced studies in all major areas of children's literature, folklore, mythology, and writing for children.

Candidates usually begin with an introduction to the major genres of children's literature. Extensive reading, criticism, and scholarship are emphasized. A second course is devoted to methods of teaching literature to children and is particularly recommended for prospective teachers. A third course traces the historical development of children's literature since the introduction of printing into England. In addition there is a special topics course that varies from semester to semester and can be repeated for credit.

This concentration is valuable not only for teachers of elementary, middle or junior high schools, but also for librarians, special education teachers, reading specialists, recreation supervisors, editors and representatives in publishing houses specializing in children's books, writers of children's books, directors of religious education, youth workers in social service agencies, day care center

directors and book store managers. It also provides preparation for teachers of children's literature in two and four year colleges.

Major and minor requirements for the M.A. in English with concentration in children's literature:

Ordinarily a candidate will complete a major of the twelve required hours:

LIT 516 Major Genres in Children's Literature. (3)

LIT 517 Teaching Children's Literature. (3)

LIT 518 History of Children's Literature. (3)

LIT 596 Seminar in Selected Topics [in Children's Literature]. (3)

Twelve additional hours may be chosen from appropriate English courses for which graduate credit is given; especially relevant are the following:

ENG 350 Critical Evaluation of Children's Literature. (3)

LIT 351 Folk Literature: Gods and Heroes. (3)

LIT 352 Folk Literature: Ballads and Folk Tales. (3)

Cognates: 0-6 hours. A course in reading is recommended for prospective teachers.

Language requirement—see *Departmental General Requirements* on page 79 of this catalog.

COURSES FOR THE MASTER OF ARTS IN ENGLISH WITH CONCENTRATION IN CHILDREN'S LITERATURE.

*** LIT 516 Major Genres in Children's Literature. Three sem hours**

An intensive study of the major genres of children's literature with emphasis on important representative examples and upon related criticism.

LIT 517 Teaching of Children's Literature. Three sem hours

A course concentrating on the value of literature for children with discussion and demonstration of various techniques used in teaching it. Additional readings in selected genres will be required. Offered for anyone planning to work with children, pre-school through grade nine.

Prereq: 516 *Major Genres in Children's Literature* or 207 *Introduction to Children's Literature* or the equivalent.

LIT 518 History of Children's Literature. Three sem hours

An examination of books for children written before the present century. Emphasis will be placed on major authors and movements from 1744 to 1908 and on what these reveal about changing attitudes toward children and the corresponding changes in the literature written for them.

GENERAL COURSES

LIT 500, 502, 503, and 580 are courses not credited toward an M.A. in the Department of English Language and Literature. Such courses are offered for the benefit of graduate students specializing in departments other than English who wish to take collateral or cognate work in the Department of English. Such students, however, are not restricted to these courses; they may take any graduate courses in English for which they have the prerequisites.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

* **LIT 500 Masterpieces of Literature. Two sem hours**

A study of various literary forms—drama, poems and prose works—to provide greater understanding of the significance of literature to the individual and to society. Chosen for their excellence in themselves and for their relevance to contemporary life are works of such authors as Homer, Sophocles, Shakespeare, Wordsworth and Ibsen.

* **LIT 502 Modern Problems as Portrayed in Modern Literature. Two sem hours**

The portrayal in modern literature of such problems as the relation between the individual and the state, the family and the crowd; the relation between Western and other civilizations. The effect of the industrial system and the search for values. Writers whose works might provide material include Huxley, Mann, Shaw, Forster, Joyce, Lawrence, Wells, Faulkner, Eliot, Auden, Malraux and Dos Passos.

* **LIT 503 Biography as Literature. Two sem hours**

The documentary biography, the portrait biography and the narrative-pictorial biography; biography as fact, as psychological interpretation and as art.

* **ENG 513 The Language Arts in Two Cultures. Three sem hours**

The course, held at London, England, will provide housing, breakfasts and lectures at the University of London, and field trips to city and country schools to explore methods of teaching the Language Arts, K-12.

Prereq: Graduate or senior standing.

* **LIT 580 The Making of the Modern Mind. Three sem hours**

The emergence of the moral, social, political and religious dilemmas that confront thinking men and women of the twentieth century, studied chiefly through works of British and American literature.

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
ENG 502			X	
ENG 503				X
ENG 504				X
LIT 510				X
LIT 511			X	
LIT 517	X	X		
LIT 518				X
LIT 520			X	X
LIT 521		X		
LIT 523				X
LIT 525				X
LIT 526	X			
LIT 530			X	
LIT 540		X	X	
LIT 541				X

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
LIT 550				X
LIT 560	X			
LIT 562	X			
LIT 563				X
LIT 564	X			
LIT 570	X			X
LIT 571			X	
LIT 573			X	
LIT 575	X			
LIT 581				X

FOREIGN LANGUAGES and LITERATURE

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Director,
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Education
106 Ford Hall,
Tele. 487-1035
John R. Hubbard
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The Department of Foreign Languages and Literature offers a Master of Arts in Spanish (Bilingual-Bicultural Education) and in cooperation with the College of Business, a Master of Arts in language and international trade. A major emphasis in French, German or Spanish can also be developed through the Master of Arts in secondary school teaching or the Master of Arts in individualized studies.

SPANISH (BILINGUAL-BICULTURAL EDUCATION)

OBJECTIVES

Objectives of the program are to produce graduates with high-level competencies in the following areas:

1. **Language.** This area of competence includes demonstrated proficiency in both Spanish and English, demonstrated ability to teach both languages as subject matters, and demonstrated ability to use both languages as media of instruction in other subject matter areas.
2. **Culture.** This area of competence requires students to demonstrate a number of specific abilities related to knowledge of Latino and other U.S. cultures

and the diversity within each; awareness of and sensitivity to differences in socio-economic, cultural, and linguistic background; and skill in guiding students to acceptance and positive evaluation of cultural pluralism.

3. **Methodology.** This area of competence includes, in addition to the skills mentioned above under Language and Culture, demonstrated ability to accommodate variations in cultural, linguistic, and socio-economic background by individualizing instruction and utilizing appropriate evaluation instruments and procedures; demonstrated skill in classroom management, including team teaching and working with paraprofessionals; and demonstrated skill in organizing, planning, and teaching lessons which integrate the bilingual-bicultural curriculum into the standard local district curriculum.

ADMISSION REQUIREMENTS

1. Meet Graduate School degree admission requirements.
2. Sufficient skills in both Spanish and English to successfully participate in graduate course and field work conducted in either language.
3. Experience with living and/or working in a multicultural setting, particularly with Hispanic people.
4. Intent to pursue and promise of successfully completing a full-time program leading to a graduate degree.
5. Conditional admission will not be granted.

PROGRAM REQUIREMENTS

The candidate for an M.A. in Spanish (Bilingual-Bicultural Education) must fulfill the following requirements before the degree will be awarded:

1. Demonstrate language proficiency in both Spanish and English; proficiency will be determined by examination.
2. Possess a valid teaching certificate. (Not required for admission, however.)
3. Bilingual-Bicultural Core Curriculum (18 sem hours)
 - FLA 421 History and Theory of Bilingual Education (3)
 - CEN 410 TESOL (Teaching English to Speakers of Other Languages) (3)
 - SPN 471 Culture and Literature of Hispanic Groups in U.S. (3)
 - SPN 482 Language of Hispanic Groups in U.S. (3)
 - FLA 522 Teaching Hispanic Culture and Language (3)
 - FLA 596 Seminar in Bilingual Education (3)
4. Electives and cognates from the following (12 sem hours):
 - RDG 501 Developmental Reading-Elementary (2)
 - RDG 502 Developmental Reading-Secondary (2)
 - CUR 541 Curriculum-Elementary School (2)
 - CUR 542 Curriculum-Secondary School (2)
 - CUR 546 The Dropout Problem (2)
 - RDG 560 Reading Problems of the Disadvantaged (2)
 - CUR 564 The Open Classroom (4)
 - CUR 565 The Community-centered Classroom (4)
 - CUR 567 Enriching the Early Elementary Classroom Program (2)
 - CUR 568 Individualizing Instruction in the Secondary School (2)
 - RDG 573 Programs in Language Arts (2)
 - CUR 587 Early Childhood Education (2)
 - SPN 519 Spanish Phonology (2)

- SPN 520 Spanish Grammar and Syntax (2)
 SPN 524 The Spanish Language in the New World (2)
 SFD 562 Cultural Determinants of Learning (2)
 SFD 580 Sociology of Education (2)
5. Collateral Field Experience
 An additional requirement for the core curriculum is three days' field experience for each course, except seminar. This represents a total of fifteen (15) days for the core-curriculum block.

LANGUAGE AND INTERNATIONAL TRADE

OBJECTIVES

Objectives of the program are to promote cultural awareness and sensitivity with reference to our own society as well as to societies of other world regions and to provide the skills and knowledge necessary for competent performance in an international environment.

ADMISSION REQUIREMENTS

1. Meet Graduate School degree admission requirements.
2. Six semester hours of undergraduate study, or the graduate level equivalent, in economics or accounting. Conditional admission may be granted students who do not meet the above undergraduate course requirement. These students will be expected to take courses for undergraduate credit to make up this deficiency.

PROGRAM REQUIREMENTS

1. **Business Area Core** (15–18 semester hours)
 MGT 491 Management: Concepts, Principles, and Practice. (3)
 MKT 491 Marketing. (3)
 Students who have had a basic management and/or marketing course must substitute an appropriate course(s) in consultation with an adviser from the College of Business.
 At least three of the following courses:
 ECO 501 Macroeconomic Theory and Policy. (3)
 ECO 502 Microeconomic Theory and Policy. (3)
 ECO 561 Economics of Multinational Enterprise. (3)
 ECO 580 International Trade: Theory and Policy. (3)
2. **Language Area** (10–12 semester hours)
 For those with no foreign language background, this requirement can be met by taking the respective intensive language courses; e.g., French 501 and 502, German 501 and 502, or Spanish 501 and 502. The following conditions apply to those with a language proficiency.
 - a. Native English speakers with required proficiency in a foreign language must elect, in consultation with an adviser from the Department of Foreign Languages, 10–12 hours at the 300 level or above in that language area.
 - b. Non-native speakers of English who have demonstrated English proficiency with a score of 85 or above on the ELI test (or equivalent) must complete 10–12 hours in a language other than English or their native language.

- c. Non-native speakers of English who have demonstrated only the minimal English proficiency for admission to the Graduate School (ELI score of 80 or equivalent) will also be required to take CEN 111 (3 hours) in addition to completing 10–12 semester hours in a third language area.
3. **Internship or Independent Study Project (3 semester hours)**
 FLA 590 Internship provides an opportunity for the graduate student to extend theoretical classroom learning through practical experience in an appropriate international business setting. In place of the internship, students may choose to do an independent study on a specific problem or group of problems related to language and international trade and will therefore elect one of the following courses: ACC 699, ADS 699, MGT 699, MKT 699 or FLA 599.

COURSE DESCRIPTIONS

1. IN ENGLISH

FLA 511 Methods of Teaching Modern Language. Two sem hours

The history, theory and techniques of modern language teaching.

Prereq: Permission of the department.

FLA 522 Teaching Hispanic Culture and Language. Three sem hours

The techniques and materials for teaching the language and culture of Hispanic groups within the bilingual classroom. The course also includes techniques and materials for teaching other subject matter areas in Spanish. A minimum of 24 hours of field experience in a bilingual classroom will be required. Not open to students on academic probation.

FLA 590 Internship in Language and International Trade. Three sem hours

Provides an opportunity for the graduate student to extend theoretical classroom learning through working experience in an appropriate setting. The Foreign Language Department in cooperation with the College of Business will arrange and supervise suitable assignments in firms conducting international business. A minimum of ten hours per week in the field will be supplemented by regular meetings with the faculty supervisors.

Prereq: Permission of the department.

FLA 596 Seminar in Bilingual Education. Three sem hours

Each semester different topics are selected for intensive study by advanced students. The course consists of a review and discussion of contemporary issues in bilingual-bicultural education, following which students select areas for research. Emphasis in seminar meeting on exchange of ideas and information developed through the research. (Taught in Spanish/English.)

Prereq: Permission of the department.

FLA 597, 598, 599 Independent Study. One, two and three sem hours

Intensive study of a problem under the direction of a member of the graduate staff.

Prereq: Departmental permission.

2. IN FRENCH

FRN 501 Intensive French. Five sem hours

An intensive course designed particularly for students who need language skills and cultural background in their professional work. The goal is to de-

velop limited working proficiency in spoken skills, minimum professional proficiency in reading skills, and understanding of French culture, including the customs, the geography, the social, economic, and political structures, and the legal environment.

FRN 502 Intensive French. Five sem hours

A continuation of FRN 501.

Prereq: FRN 501

FRN 516, 517 Reading French for Graduate Students. Three sem hours each
Structure, basic vocabulary, and common idioms of French for reading proficiency.

***FRN 520 French Grammar and Syntax. Two sem hours**

An advanced course in grammar and syntax. Intended to give a solid basis for oral and written expression and for the teaching of French.

Prereq: 443 French Syntax or equivalent.

***FRN 521 Advanced Conversation in French. Two sem hours**

Acquisition of an active vocabulary for daily life and greater oral facility. Oral reports.

Prereq: 444 Advanced French Conversation or equivalent.

***FRN 522 Stylistics. Two sem hours**

Translation of selected passages into French; some free composition in French. Explications de textes.

Prereq: 443 French Syntax or its equivalent.

***FRN 523 Contemporary French Scene. Two sem hours**

An interdisciplinary approach to French language, culture and literature. Material to be read in the original and to serve as a basis for class discussion in French. Assigned reading and oral reports.

Prereq: 444 Advanced French Conversation or its equivalent.

FRN 594 Special Topics. Three sem hours

An intensive study of a specific area of French language or literature, to be determined by the instructor's field of specialization and student interest. This course may be repeated for credit with departmental permission.

Prereq: Departmental permission.

FRN 597, 598, 599 Independent Study. One, two and three sem hours

Intensive study of a problem under the direction of a member of the graduate staff.

Prereq: Departmental permission.

3. IN GERMAN

GER 501 Intensive German. Five sem hours

An intensive course designed particularly for students who need language skills and cultural background in their professional work. The goal is to develop limited working proficiency in spoken skills, minimum professional proficiency in reading skills, and understanding of German culture, including the customs, the geography, the social, economic, and political structures, and the legal environment.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

GER 502 Intensive German. Five sem hours

A continuation of GER 501.

Prereq: GER 501.

4. IN SPANISH

SPN 501 Intensive Spanish. Five sem hours

An intensive course designed particularly for students who need language skills and cultural background in their professional work. The goal is to develop limited working proficiency in spoken skills, minimum professional proficiency in reading skills, and understanding of Spanish culture, including the customs, the geography, the social, economic, and political structures, and the legal environment.

SPN 502 Intensive Spanish. Five sem hours

A continuation of SPN 501.

Prereq: SPN 501

***SPN 519 Spanish Phonology. Two sem hours**

A study of the articulatory basis of the sounds in Spanish. Drills on rhythm and intonation patterns, with practice and recordings in the laboratory.

Prereq: 444 *Advanced Spanish Conversation* or equivalent.

***SPN 520 Spanish Grammar and Syntax. Two sem hours**

The morphological and syntactical structure of Spanish.

Prereq: 443 *Advanced Spanish Composition* or equivalent.

***SPN 521 Graduate Spanish Conversation. Two sem hours**

A continuation of advanced conversation with emphasis on matters of diction and style. This course may be repeated for supplementary credit.

Prereq: 444 *Advanced Spanish Conversation* or equivalent.

***SPN 522 Stylistics. Two sem hours**

The manner in which literary Spanish makes use of the means of expression available in the language.

Prereq: 443 *Advanced Spanish Composition* or equivalent.

***SPN 524 The Spanish Language in the New World. Two sem hours**

Acquainting the students with the Spanish language as it is used in several language areas of the American continent.

Prereq: 481 *History of the Spanish Language*, SPN 520 *Spanish Grammar and Syntax*.

SPN 597, 598, 599 Independent Study. One, two and three sem hours

Intensive study of a problem under the direction of a member of the graduate staff.

Prereq: Departmental permission.

Any 300 or 400 level undergraduate course in foreign language, French, German or Spanish may be taken for graduate credit in consultation with graduate adviser.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

GEOGRAPHY and GEOLOGY

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The Department of Geography and Geology offers courses leading to the degree of Master of Arts and to the degree of Master of Science. Students who complete programs emphasizing man and his works receive the degree of Master of Arts; those whose programs stress geology and other aspects of environmental studies receive the Master of Science degree.

Objectives: The objectives of programs leading to a master's degree are to help the student to prepare for further study toward a doctoral degree; a professional career using geography; or teaching at elementary, secondary or community college level with master's degree competence in geography. Geographers are employed by government agencies, from local to federal levels, to work in urban and regional planning, analysis of foreign areas, resources management, agricultural and transportation surveys, cartography, climatology, and general economic geography. Some opportunities also exist in private business for persons trained in geography who can do research in marketing and industrial location.

Admission Requirements: For admission to a master's degree program in geography the student must have a bachelor's degree from an accredited institution, meet Graduate School degree admission requirements, and must have attained at least a 2.5 grade point average in his major field or in the equivalent of a geography minor during his last two undergraduate years or must have scored at least 1000 on the aptitude test of the Graduate Record Examination. Students who have majored in a field other than geography may be admitted to a program with the understanding that they must satisfactorily complete a minimum of 36 semester hours of undergraduate and graduate work in geography for the master's degree.

Degree Requirements: Between 18 and 24 hours are to be taken in geographic course work and between 0 and 6 hours may be selected in cognate fields upon consent of the adviser. The remaining six hours are to be fulfilled by completion of one of three plans discussed later.

All candidates for the master's degree must complete, within the total of their undergraduate and graduate study, at least two physical geography courses, at least two cultural geography courses, at least one regional geography course (not including GEO 110 World Regions), at least two courses from among cartography, quantitative methods, and geographic field methods. GEO 596 Seminar in Geography is required of all master's candidates and, in addition, GEO 670 and GEO 696 are required for students selecting Plans A and B, discussed below. GEO 507, 508, 509, 529, and 530 may not be counted for credit toward a master's degree in geography.

All graduate students are required to pass a comprehensive oral examination as part of the master's degree program. The oral examination, conducted by a

committee of the graduate faculty, will cover the field of geography and will emphasize the student's special field of interest.

Once the student has completed a minimum of 12 hours of graduate work in geography, the six-hour plan most appropriate to career objectives may be selected. The student who selects a plan that does not include a thesis should be aware that, if a decision is made to ultimately pursue a doctoral degree, difficulty may be encountered in gaining entry into such programs. The student's selection of a plan is subject to approval by the graduate coordinator and the student's graduate adviser. A student may, with the approval of the graduate coordinator, change from one plan to another, but graduate credit earned more than six years prior to the date on which the degree is to be granted may not be applied to meet graduation requirements.

The plans for the final six hours of work are as follows:

Plan A: Students who intend to prepare for further study toward a doctoral degree will be required to write a thesis. The thesis option is also available to students with other career objectives. The subject of the thesis is to be determined by the student and the advisers with the aim of providing an opportunity for the student to work in a special field of interest.

Plan B: Students who intend to terminate their academic studies upon completion of the master's degree to pursue applied careers in geography will not be required to write a thesis. The following options will be available: (1) completion of an internship program (4 hours)*, and a paper of publishable quality (2 hours), or (2) those who are currently employed in some field of geography, geology, or an applied equivalency, may choose to present in a classroom environment, the practical application of their geographic or geologic speciality (4 hours)*, and the completion of a paper of publishable quality (2 hours). In either case, the student's selection must be approved by the department. Students selecting Plan B will emphasize, within the 24 credit hours of academic work, a block of courses that teach methods and techniques for solving problems in their selected fields of interest.

Plan C: Students who are practicing teachers will not be required to write a thesis. In lieu of six thesis hours, students will complete an independent library study of the literature in a selected field of geography or geology (2 hours) and will execute a supervised teaching project (4 hours)* within the framework of their own classroom.

For information regarding the master of arts in social science, see page 105.

**It is expected that the time investment of the student will be equivalent to that demanded by a four-hour course, including equivalent preparation and study time.*

***GEO 505 Remote Sensing of Earth Resources. Three sem hours**

Lecture and laboratory application of remote sensing techniques to land use planning, upgrading geologic maps, crop forecasting, and other environmental problems. The utility of ERTS and Skylab imagery will be emphasized.

Prereq: GEO 305 or approval of the department.

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

*** GEO 507 Resources and Nations. Two sem hours**

Patterns of distribution, production, consumption and adequacy of physical and cultural resources; different management characteristics and roles which resources play in the development of nations. *Not open to students who have more than eight hours of credit in geography.*

*** GEO 508 Earth Science I. Two sem hours**

Rocks and minerals and their significance in the development of landforms. *Not open to students who hold credit in 108 Earth Science.*

*** GEO 509 Earth Science II. Two sem hours**

Weather and climate and related phenomena such as natural vegetation and soils. *Not open to students who hold credit in 108 Earth Science.*

GEO 510 The New Earth Science. Two sem hours

Study of planet Earth—its interior, surface, and atmosphere—emphasizing the new theories of continental drift, sea floor spreading, and weather modification. *Prereq: GEO 202 or 108 or 508 or approval by the department.*

*** GEO 522 Processes of Landform Development. Two sem hours**

Interrelations of climate, microclimate, vegetation, near-surface materials, soil formation and types and landforms in Michigan, emphasizing direct observation in the field.

*** GEO 528 Plant and Animal Geography. Two sem hours**

A description of world vegetation and wildlife regions including the relationship of habitat to geologic, climatic and soil factors. The latter part of the course will deal with dispersal mechanisms, domestication, and the introduction of new species.

*** GEO 529 Common Rocks and Minerals. Two sem hours**

Materials and processes in the formation and distribution of important minerals and rocks. *Not open to students who have credit in 229 Rocks of Michigan.*

*** GEO 530 Principles of Earth History. Two sem hours**

Relationship of geologic processes to the rock record of the earth, its relationship to the solar system, time, earth change and the succession of life. *Not open to students who have credit in 230 Historical Geology.*

*** GEO 531 Introduction to Coastal Environments. Two sem hours**

Description and analysis of the physical and biogeographical processes of the coastal ocean, Great Lakes and inland lakes. Distribution and origin of the coastal environments, natural and human modification of beach, river valley, estuary, marsh, delta and coral reef environments. Classroom demonstrations and field trips.

Prereq: Approval of the department.

GEO 532 Environmental Impact Statements. Two sem hours

Interrelationships of physical and cultural ecosystems, and environmental poli-

** Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

cies particularly in the Great Lakes are analyzed. Existing environmental impact statements are evaluated and impact statements are prepared by the class using existing data. Not open to students with credit in GEO 495.

GEO 537 Special Topics in Earth Science for Elementary Teachers. One sem hour

An experimental course for subject matter not provided in other departmental offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are covered.

*** GEO 539 Special Topics in Geography. Two sem hours**

An experimental course for subject matter not provided in other departmental offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied. Information on content can be obtained at department office.

Prereq: Approval by the department.

*** GEO 541 South American Lands. Two sem hours**

A regional study of the countries of South America; resources, people and national cultures are stressed.

Prereq: Fifteen hours of credit in geography or approval by the department.

*** GEO 542 Middle America and the Caribbean World. Two sem hours**

A regional study of Mexico, Central America and the islands of the Caribbean. Conditions leading to the present political upheavals in the area; an effort is made to chart future trends.

Prereq: Fifteen hours of credit in geography, including one course in regional geography, or approval by the department.

*** GEO 544 Problems in Urban Geography. Two sem hours**

Selected geographic problems; urban sprawl, deterioration of the urban environment, changing urban functions and others. Acquisition of analytical techniques and geographical insights.

Prereq: Fifteen hours of credit in geography, including one course in urban geography, or approval by the department.

*** GEO 545 Studies in Political Geography. Two sem hours**

Study and comparison of the factors important in the political geographies of Brazil, Nigeria, India, Syria and the Soviet Union.

Prereq: Fifteen hours of credit in geography, including 432 Political Geography, or approval by the department.

*** GEO 546 Problems in Population Geography. Two sem hours**

Readings, discussion and research of selected problems in population geography.

Prereq: Ten hours of credit in geography including 361 Population Geography or approval by the department.

*** GEO 552 Historical Geography of Michigan. Two sem hours**

Geographical changes and developments in Michigan from pre-colonial times

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

to the present. The geography of the state in each of the important stages of its history.

Prereq: One geography course and one American history course.

*** GEO 556 Problems in the Geography of Western Europe. Two sem hours**

Selected problems in the cultural and economic geography of Western Europe.

Prereq: Fifteen hours of credit in geography including one course in the geography of Europe or approval by the department.

*** GEO 559 Problems in Soviet Geography. Two sem hours**

Individual and group research in selected problems in the geography of the Soviet Union.

Prereq: Fifteen hours of credit in geography, including a course in Soviet geography, or approval by the department.

*** GEO 561 Physical Landscapes. Two sem hours**

An examination of the processes involved in creating and modifying the earth's surface and the theoretical approaches used in examining the problems of selected landscapes.

Prereq: One course in physical geography, geology, or approval by the department.

*** GEO 562 Weather. Two sem hours**

Aimed at understanding the atmospheric processes which generate all weather; applies observations of weather elements to analysis of weather phenomena; concludes with experimental forecasting. One hour lecture and two hours laboratory per week. Not open to students holding credit in 223 Weather and Climate.

*** GEO 563 Climate. Two sem hours**

Regional climates are assessed in terms of characteristic types and frequencies of weather, with emphasis on geographic and atmospheric causes of differences and variations. Data in a number of statistical and graphical forms are interpreted in evaluating and classifying climates. One hour lecture and two hours laboratory per week.

Prereq: 223 Weather and Climate or GEO 562 Weather.

GEO 568 Geography Field Trips. Four sem hours

Representative geographic regions in the area visited; significant geographic and geologic characteristics of each region. Students will have an opportunity to visit typical mining, forestry, agricultural, industrial and cultural enterprises of the regions. A written report is required.

*** GEO 569 The American Midwest. Two sem hours**

A regional treatment. The natural setting, the distribution of the people, the important occupations and the present and future problems in each of the several regions.

Prereq: Fifteen hours of credit in geography, including a course in geography of Anglo-America, or approval by the department.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** GEO 571 Teaching of Social Studies. Two sem hours**

Subjects included: selecting, securing, organizing, presenting and evaluating materials. *Not open to students who hold credit in 348 Teaching Social Studies in Elementary Schools.*

*** GEO 574 Problems of Sub-Saharan Africa. Two sem hours**

Individual research in selected problems in the geography of Sub-Saharan Africa.

Prereq: Fifteen hours of credit in geography, including a course in the Geography of Africa, or approval by the department.

*** GEO 585 City and Regional Planning. Two sem hours**

Philosophy, history, legal aspects and techniques of the planning process. Case studies in the United States and Europe illustrating the impact of planning on man's economic, social and political activities.

Prereq: Ten hours of credit in geography or approval by the department.

GEO 586 Processes of Suburban Development. Two sem hours

The evolution of suburbs, the evaluation of the suburban environment, land use change in proximity to cities, and land use planning factors associated with suburban growth.

Prereq: A prior course in urban geography or an urban-oriented course in history, sociology or political science.

GEO 587 Urban Environmental Management. Two sem hours

Survey and evaluation of geologic, topographic, geomorphologic, hydrologic and atmospheric factors which potentially and actually have impact on urban development and environmental management.

*** GEO 595 Teaching College Earth Science. One sem hour**

A seminar for students teaching or preparing to teach freshman Earth Science at the college level. *Required of all Eastern Michigan University graduate assistants and teaching fellows in earth science and open to other interested M.A. candidates.*

GEO 596 Seminar in Geography. Two sem hours

Research, reports and group discussions emphasizing the distinctive concerns and methodology of geography. The particular topic that is examined will vary from semester to semester. Students may elect this seminar several times as long as the topics studied are different. Information regarding the content of a particular seminar may be obtained at the department office.

Prereq: Approval by the department.

GEO 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

Prereq: Approval by the department.

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

GEO 649 Problems in Economic Geography. Two sem hours

Research problems and techniques dealing with the production, distribution and consumption aspects of economic geography.

Prereq: Fifteen hours of credit in geography, including a course in economic geography, or approval by the department.

GEO 655 Field Studies in Michigan. Two sem hours

The geographic and geologic environment: on-campus sessions and field trips include both subject matter and methodological concern. Write department for information on content. Offered as a two-week workshop in the summer session.

GEO 660 Area Analysis. Two sem hours

Advanced geography field research. A philosophy of field geography; selected problems concerned with industry, recreation, agriculture and commerce.

Prereq: Fifteen hours of credit in geography, including 303 Field Geography, or approval by the department.

GEO 670 History of Geographic Thought. Two sem hours

The main themes of geographic thought from ancient times to the present day; the evolution of ideas fundamental to modern American geography.

Prereq: Approval by the department.

GEO 690, 691, 692 Thesis. One, two and three sem hours

An intensive study of a problem or problems under the direction of a faculty member.

Prereq: Approval by the department.

GEO 694 Internship in Geography-Geology. Four sem hours

Supervised internship in some aspect of geography or geology which is of mutual interest to the student and the public or private agency that would "employ" the student. This experience is designed to integrate academic training with practical application. This course may be taken once only.

Prereq: Permission of the department.

GEO 696 Seminar in Methods and Research. Two sem hours

Basic research techniques applicable to geography. Location and identification of source materials, statement and analysis of problems, and preparation and presentation of results of research.

Prereq: Approval by the department.

OTHER COURSES FOR CREDIT TOWARD A MASTER'S DEGREE IN GEOGRAPHY

A maximum of nine hours in advanced undergraduate courses from the following list is also available to graduate students. For descriptions of these courses see the Undergraduate Catalog. These courses are also suitable for use as cognates by majors in other fields.

- 301 Cartography. (3)
 302 Advanced Cartography. (3)
 303 Field Geography. (3)
 305 Aerial Photo Interpretation. (3)
 310 Energy Awareness. (3)
 312 Geography of Canada. (2)
 313 Geography of Michigan. (2)
 315 Land Use Planning. (3)
 321 Geography of Latin America. (3)
 322 Geography of Africa. (3)
 323 Geography of Australia and the Pacific Islands. (3)
 325 Geomorphology. (3)
 326 Structural Geology. (3)
 327 Introduction to Soil Science. (2)
 329 Petrology. (3)
 330 Sedimentation and Stratigraphy. (3)
 331 Introduction to Paleontology. (3)
 332 Urban Geography. (3)
 333 Settlement Geography. (3)
 340 Medical Geography. (3)
 359 Geography of the U.S.S.R. (3)
 360 Cultural Geography. (3)
 361 Geography of Population. (3)
 365 The Cultural Basis of the City. (3)
 370 Glacial Geology. (3)
 428 Optical Mineralogy. (4)
 430 Petroleum Geology. (3)
 431 Historical Geography of the United States. (3)
 432 Political Geography. (3)
 433 Political Geography of the United States. (3)
 438 Industrial Location. (3)
 439 Economic Geology. (3)
 440 World Food Systems. (3)
 441 Transportation Geography. (3)
 448 Ground Water. (3)
 462 Meteorology. (2)
 470 Quantitative Methods in Geography and Geology. (3)
 475 Computer Mapping. (3)
 481 Special Topics in Geography. (2)
 495 Environmental Impact Assessment. (3)

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
GEO 505				X
GEO 507	X			X
GEO 508	X			X
GEO 509			X	

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
GEO 510	X			
GEO 522	X			
GEO 528	X			
GEO 529			X	
GEO 530	X			
GEO 531	X			
GEO 539	X			X
GEO 542	X			
GEO 545				X
GEO 546		X		
GEO 552			X	
GEO 559	X			
GEO 561				X
GEO 562				X
GEO 563		X		
GEO 571			X	X
GEO 585	X			
GEO 595				X
GEO 596				X
GEO 649		X		
GEO 660				X
GEO 670				X
GEO 694	X	X	X	X
GEO 696	X			

HISTORY and PHILOSOPHY

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701-A Pray-Harrold,
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The Department of History and Philosophy offers a Master of Arts degree in history and coordinates an interdisciplinary Master of Arts in social science.

Master of Arts in History

Program Objectives

The Master of Arts in history enables students to acquire both general and specific knowledge concerning the human past and an appreciation of the philosophy of history. The program features specialization and breadth in subject matter through the requirements pertaining to areas and fields. It also incorporates instruction in historiography and methodology as well as practice in doing research and writing history. Through the curriculum, students learn how to

locate, evaluate, interpret, compile, and present historical data drawn from primary and secondary sources. Thus, the Master of Arts in history helps students refine their understanding of the meaning and matter of history. The degree can serve as preparation for teaching on the secondary or junior college level, for positions in government or business, or for further graduate work on the doctoral level.

Admission Requirements

In addition to meeting the Graduate School degree admission requirements, the applicant must present a minimum of 20 semester hours of undergraduate courses in history, with grade point averages of at least 2.25 (4.0=A) for all undergraduate courses, and 2.50 for all undergraduate courses in history.

Program Description

The Master of Arts in history is awarded upon satisfactory completion of at least 30 semester hours of credit. This may include up to 15 hours in approved upper division undergraduate courses.

For purposes of the degree requirements, the courses in history are divided into the following areas and fields:

Area 1	Area 2	Area 3
U.S. to 1877	Europe 1500-1815	Asia
U.S. since 1877	Europe since 1815	Latin America Middle East

In addition to the regular fields, elective courses are offered in the following subjects: Michigan (Area 1); Ancient and Medieval (Area 2); History of Religions (Area 3).

There are two options under which the M.A. in history may be granted. One requires an oral or written examination, and the other the writing of a thesis. The choice between these options must be made by the time candidates have completed at least twelve but not more than nineteen hours on their programs.

Plan A (examination option)

1. Twenty-four to thirty hours of history courses carrying graduate credit, including:
 - a. a course in historical method (students entering the program without such credit will register for HIS 505 during their first semester);
 - b. six hours in each of two fields, each of which must be selected from a different area;*
 - c. a course in historiography;
 - d. electives.
2. An examination, oral or written at the student's option, in each of the two fields of concentration.
3. Six to zero hours of cognate courses chosen in consultation with the graduate adviser.

*Students with records of superior upper division undergraduate performance in these areas and fields may be permitted to substitute elective hours for some or all of these requirements. The approval of the graduate adviser is required.

Plan B (thesis option)

1. Eighteen to twenty-four hours of history courses carrying graduate credit, including:
 - a. a course in historical method (students entering the program without such credit will register for HIS 505 during their first semester);
 - b. six hours in each of two fields, each of which must be selected from a different area;*
 - c. a course in historiography;
 - d. electives.
2. Six hours of directed research concluding with the completion of a thesis program (project). The thesis will be read and accepted by three professors, one of whom will be the director.
3. Six to zero hours of cognate courses chosen in consultation with the graduate adviser.

*Students with records of superior upper division undergraduate performance in these areas and fields may be permitted to substitute elective hours for some or all of these requirements. *The approval of the graduate adviser is required.*

Master of Arts in Social Science

Program Objectives

This degree program is an interdisciplinary effort among the Departments of Economics, Geography, History, Political Science, and Sociology/Anthropology, coordinated through the Department of History. Students in the program take courses in at least three of the five departments.

Because the Master of Arts in social science is interdisciplinary and does not require heavy specialization, it is responsive to individual interests and curricular needs. The program can offer greater expertise to social studies teachers in the elementary and secondary schools. Students with career interests in business or government service can acquire the deeper knowledge and broader perspective that stem from graduate work in social science. Beyond career or professional considerations, the program offers a fuller understanding of the social, cultural, political, economic, and geographic factors that have shaped the past and present human experience.

Admission Requirements

In addition to meeting the Graduate School admission requirements, the applicant must present a minimum of 30 semester hours of undergraduate courses in social science, with a grade point average of at least 2.5 in all undergraduate courses. Two letters of recommendation from former instructors and/or employers must also be submitted.

Conditional admission may be granted to those students not meeting the above requirements who show promise. Students who are admitted on a conditional basis must maintain a B+ average to be granted degree admission. A maximum of 12 credit hours earned as a conditionally admitted student may be applied toward the M.A. degree.

Program Description

The Master of Arts in social science is awarded upon satisfactory completion of at least 30 semester hours of credit. This may include up to 15 hours in

approved upper division undergraduate courses. The courses must be distributed as follows:

1. A concentration of 12 semester hours in one of the following disciplines: economics, geography (from those geography courses classed as social science), history, political science, or sociology/anthropology. At least six of these hours must be in 500 or 600 level courses.
2. Twelve semester hours to be selected from at least two of the disciplines other than the field of concentration.
3. Six elective semester hours of graduate work. The elective hours may be social sciences or any other graduate courses offered by the University.

Advising

In addition to the specific requirements mentioned above, it should be noted that degree candidates must satisfy all of the general requirements of the Graduate School.

Newly-admitted students should arrange an early conference with the graduate adviser, in order to plan their programs in detail.

All course elections must be approved by the graduate adviser prior to registration each semester.

I. HISTORY

Graduate courses (open to candidates for the M.A. in history or social science, and to students from other disciplines who wish to take cognate hours in history).

AREA 1: UNITED STATES

*HIS 531 Studies in Black History. Three sem hours

Selected major developments in the history of black Americans from 1619 to the present.

*HIS 533 Studies in Michigan History. Three sem hours

Intensive study of differing periods and topics in Michigan history.
Prereq: 313 *Michigan History* or permission of the department.

*HIS 538 Studies in Colonial American History. Two sem hours

Colonial American political, economic and social institutions; current scholarship and interpretation.

Prereq: 223 *American History to 1877* or permission of the department.

*HIS 541 The United States, 1825–1860; Ferment and Reform. Two sem hours

An intensive study of the reform movements of the era. Special emphasis is given to women, utopianism, antislavery, immigration, education, temperance, religion and the asylum.

Prereq: 123 *Trends in U.S. History* or 223 *U.S. History to 1877* or, permission of the department.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

* **HIS 568 Studies in 20th Century U.S. Reform. Two sem hours**

Selected treatment of the Reform movements in the 20th century with special emphasis on the Progressive Era and the New Deal.

Prereq: 224 *American History 1877 to the present* or equivalent.

* **HIS 583 Studies in the Civil War and Reconstruction. Three sem hours**

Major problems of interpretation in the period from 1850 to 1877.

* **HIS 584 Studies in the Gilded Age. Two sem hours**

The United States moving into a modern phase after the Civil War, leaving behind the old frontier and the blacksmith economy to enter an era characterized by factories, large cities, a race for colonies and socio-political unrest.

* **HIS 586 United States in World Politics. Two sem hours**

American foreign policy in the twentieth century; the nation's transition to great-power status and its adjustment to the demands of that role.

AREA 2: EUROPE

* **HIS 511 Studies in Ancient History. Two sem hours**

Intensive study of selected topics in Classical Greek and Roman history during the period 500 B.C. -A.D. 600.

* **HIS 514 Studies in Renaissance and Reformation History. Three sem hours**

An examination of major Renaissance and Reformation issues and developments in their historical setting.

Prereq: 330 *Europe in the Renaissance and Reformation* or permission of the department.

* **HIS 515 Studies in Medieval History. Three sem hours**

Intensive study of selected topics in European history during the period 300-1300.

* **HIS 517 Historical Background of Modern Britain. Two sem hours**

The history of Great Britain from 1815 to the present with primary emphasis on institutional development. Political, economic, social and imperial problems will be examined, and Great Britain's role in today's world will be assessed.

* **HIS 518 Studies in Recent German History. Two sem hours**

World War I, the Weimar Republic, the rise of National Socialism and the National Socialist state. World War II and contemporary Germany.

Prereq: 338 *German History since 1815* or permission of the department.

* **HIS 520 French Revolution and Napoleon, 1774-1815. Three sem hours**

A study of the French Revolution and its Napoleonic aftermath. Emphasis is

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

placed upon an understanding of the revolutionary movement, interpretation and significance for the future.

Prereq: 331 Modern Europe, 1648-1815.

*** HIS 522 Studies in Twentieth Century Europe. Three sem hours**

Topics in twentieth century European history selected from the following examples: The World Wars, European Communism, The Fascist Experience, The Crisis of European Democracies, The Cold War, Political Reconstruction and Economic Recovery, Post-War Social and Cultural Change.

*** HIS 547 Nineteenth Century Ideological Background of the Russian Revolution. Three sem hours**

Russian thought from the accession of Nicholas I (1825) until the Bolshevik revolution. Major themes to be treated are the Slavophiles and Westernizers, socialism, anarchism, nihilism, populism, liberalism and conservatism.

Prereq: One course in modern European history or permission of the department.

*** HIS 548 History Travel-Study Tours. Two sem hours**

Representative areas with significant historical background.

*** HIS 550 Twentieth Century Russia. Two sem hours**

Political, diplomatic, social, and cultural developments in Russia from 1894 to the present.

AREA 3: OTHER

HIS 510 Studies in the History of Religion. Two sem hours

Broad topics in one or more religious traditions, usually Hinduism, Buddhism, Judaism, Christianity or Islam. The current topic will be announced in the time schedule.

Prereq: One undergraduate or graduate course in history, preferably history of religion, or permission of the department.

*** HIS 543 Nationalism and Modernization in the Middle East and North Africa. Three sem hours**

The development of nationalism and modernization in the Middle East and North Africa from World War I to the present; political and social changes occurring in this developing area.

Prereq: 341 Middle Eastern History, 1798 to Present, 342 North Africa, 1798 to Present or permission of the department.

*** HIS 554 Studies in Modern India. Three sem hours**

The development of India from mid-19th century to the post-independence period; major problems confronting contemporary India.

Prereq: 375 Modern India or permission of the department.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

HIS 555 Studies in Far Eastern History. Two sem hours

Study of selected eras and topics in Far Eastern history. The topic selected will be announced in the time schedule.

Prereq: One course in *Far Eastern history*, or permission of the department.

HIS 560 Studies in Latin American History. Two sem hours

An intensive investigation of selected political, economic, social and cultural topics in Latin American History. The specific topics and chronological coverage are announced in the class schedule.

Prereq: One course in *Latin American history*, or permission of the department.

SPECIAL COURSES**HIS 505 Historical Method. Three sem hours**

This course, the first in the student's graduate program, treats the relationship of history to the humanities and social sciences, the use of the library, standard bibliographical aids and collected source materials and the skills and experience necessary to evaluate historical writing critically and to conduct historical research in a mature and professional manner. The preparation of a substantial paper demonstrating the ability of the student to apply the canons of historical scholarship will constitute part of the course.

***HIS 593, 594 Special Topics in History. Two or three sem hours**

Subject matter will change from semester to semester. Course may be repeated for credit, up to a limit of six hours.

HIS 597, 598, 599 Independent Studies. One, two or three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member. A maximum of six hours may be applied toward a degree program. A maximum of three hours may be taken in any one semester or session. *Approval of department head or graduate adviser is required as first step in registration process.*

HIS 688 Historiography. Two sem hours

A critical study of the writings, philosophy and influence of major historians.

Prereq: *Fifteen hours of graduate credit in history.*

HIS 690, 691, 692 Thesis

Intensive research into an historical problem, and the preparation of a thesis consistent in substance and form with the standards of the historical profession.

Prereq: *Permission of the department.*

HIS 696 Seminar in History. Three sem hours

Research in problems of significance in history; areas of concentration will vary. The preparation of a paper demonstrating the ability of the student to

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

apply the canons of historical scholarship will constitute a substantial part of the course.

Prereq: Fifteen hours of graduate credit in history plus HIS 505 Historical Method.

OTHER COURSES FOR CREDIT TOWARD THE MASTER'S DEGREE

The following upper division undergraduate courses may also be taken for graduate credit and applied toward the degree programs in history and social studies. Note that a maximum of 15 hours of such credit may be used in any one degree program. For detailed course descriptions, please consult the Undergraduate Catalog.

Area 1: United States

- 300 Topics in History. (3)
- 303 History of American Religion. (3)
- 304 History of the Old West, 1540-1890. (3)
- 305 History of Indians in the United States. (3)
- 313 Michigan History. (3)
- 315 History of Black Americans. (3)
- 336 History of Women in the U.S. and Great Britain, 1800 to the Present. (3)
- 350 History of Canada. (3)
- 360 United States Labor History. (3)
- 361 Foreign Relations of the United States. (3)
- 362 American Urban History. (3)
- 365 The Old South. (3)
- 368 Intellectual History of the United States to the Civil War. (3)
- 369 Intellectual History of the United States since the Civil War. (3)
- 380 American Colonies to Independence. (3)
- 382 The Age of Washington and Jefferson. (3)
- 383 The Age of Jackson. (3)
- 385 Civil War and Reconstruction. (3)
- 387 The United States as an Emerging World Power. (3)
- 411 United States Constitutional History. (3)
- 414 The Automobile Industry and Modern America. (3)
- 425 The United States in the 20th Century: Prosperity, Depression and World War II. (3)
- 426 The United States since World War II. (3)

Area 2: Europe

- 300 Topics in History. (3)
- 309 France to 1789. (3)
- 310 France since 1789. (3)
- 311 England to 1689. (3)
- 312 England 1689 to Present. (3)

- 323 Greek History. (3)
- 324 Roman History. (3)
- 327 Europe in the Making, 500–1300. (3)
- 330 Europe in the Renaissance and the Reformation. (3)
- 331 Europe from Absolutism to Revolution, 1648–1815. (3)
- 332 Modern Europe 1815–1919. (3)
- 333 Europe since 1919. (3)
- 335 History of Women in Europe. (3)
- 338 German History since 1815. (3)
- 343 Russia to 1855. (3)
- 344 Russia since 1855. (3)
- 390 Multimedia Approaches to History. (3)
- 433 Aspects of Europe Since 1919. (2)
(European tour)
- 435 Italy since 1815. (3)
- 439 Aspects of Medieval History. (2)
(European tour)
- 456 Europe since 1945. (3)
- 471 Social and Intellectual History of Nineteenth Century Europe. (3)

Area 3: Other

- 300 Topics in History. (3)
- 301 The Religions of South and East Asia. (3)
- 302 Near Eastern and Western Religions. (3)
- 306 History of Biblical Times. (3)
- 307 War in the Modern World. (3)
- 340 The Middle East and North Africa to 1798. (3)
- 341 Middle Eastern History, 1798–Present. (3)
- 342 North Africa, 1798–Present. (3)
- 355 Latin America: Colonial Period. (3)
- 356 Latin America: National Period. (3)
- 357 History of Mexico. (3)
- 371 The Far East to 1800. (3)
- 373 History of Modern China. (3)
- 374 History of Modern Japan. (3)
- 375 Modern India. (3)
- 377 History of Sub-Saharan Africa. (3)
- 378 Twentieth Century Africa. (3)

II. PHILOSOPHY

The following courses may be elected as cognate hours by students in other disciplines, subject to the approval of their graduate advisers.

A. Graduate Course

PHI 502 Foundations of Western Thought. Two sem hours

Writings of some of the most influential philosophers, e.g., Plato, Aristotle, Descartes, Berkeley, Hume and Kant. For graduate students with no previous work in philosophy.

B. Undergraduate Courses

For detailed course descriptions, please consult the Undergraduate Catalog.

- 310 Aesthetics. (3)
- 355 Philosophy of Law. (3)
- 380 Philosophy of Science. (3)
- 381 Symbolic Logic. (3)
- 400 Philosophy Seminar. (2)
- 425 Theory of Knowledge. (3)
- 442 Philosophy of Mind. (3)
- 460 Philosophy of Language. (3)
- 470 Contemporary European Philosophy. (3)
- 480 Metaphysics. (3)

MATHEMATICS

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DEGREE PROGRAM OFFERED

The Department of Mathematics offers a graduate program leading to the Master of Arts degree.

PROGRAM OBJECTIVES

- A. To develop a greater competence in mathematics or related areas beyond that attained at the undergraduate level.
- B. To improve pedagogical competence in the teaching of mathematics.
- C. To provide preparation for further study of graduate work beyond the master's level in mathematics or mathematics education.
- D. To strengthen the mathematical background of those who require analytical and quantitative skills in their professions.
- E. To meet the needs of teachers pursuing continuing education.
- F. To provide opportunity for research in mathematics and mathematics education.

ADMISSION REQUIREMENTS

The Graduate Advisory Committee of the department will consider admission to the program after assigning each student to an adviser. The requirements for admission to the program are:

- A. Meet Graduate School degree admission requirements.
- B. A strong undergraduate major in mathematics comparable to that offered at Eastern Michigan University; students without such a major may be admitted to the program after meeting requirements specified by the Graduate Advisory Committee.
- C. Acceptance by the Graduate Advisory Committee.

DEGREE PROGRAM DESCRIPTION AND GRADUATION REQUIREMENTS

A. The Master of Arts degree in mathematics requires a minimum of 30 semester hours of credit beyond the bachelor's degree to be distributed with the approval of the Graduate Advisory Committee, as follows:

1. Three required courses of basic mathematics:

MTH 411 Modern Algebra with Applications or equivalent.

MTH 416 Linear Algebra or equivalent.

MTH 420 Introduction to Analysis or equivalent.

Students with undergraduate credit in any or all of these courses will substitute approved mathematics electives for these hours.

2. A minimum total of four hours of electives from at least two of the following three groups:

a) **MTH 514 Theory of Fields, MTH 518 Theory of Groups**

b) **MTH 524 Complex Analysis; MTH 526 Real Analysis**

c) **MTH 471 Probability and Statistics II; MTH 573 Applied Statistics.**

3. (Optional) Four hours of thesis research. Additional thesis hours may be taken but will not replace the requirements of items 1, 2, 4, 5 under this section A. Students who elect the thesis option must present a request to form a thesis committee, to the department head, before the start of their thesis research. The committee will be made up of three faculty members of the Mathematics Department. The chairperson, who will direct the research, is usually selected by the student and requires the approval of the department head. The chairperson, in consultation with the student will then recommend, for department head approval, the other two committee members. At the conclusion of their research, students will submit to the department head the original thesis plus three (3) copies written in a manner suitable for publication and approved by the thesis committee.

4. Additional electives to make up a minimum of 24 hours with usually no more than 6 of these 24 hours to be in mathematics education courses. Thesis hours in mathematics education are not to be counted as part of this 6 hour limitation.

5. Cognate hours 0-6 in courses approved by the Mathematics Department. The number of such hours will be determined by the Graduate Advisory Committee based upon a student's background and need.

B. Approval by the Graduate Advisory Committee of each semester's courses.

C. Final recommendation for the degree by the Graduate Advisory Committee.

Students seeking a Master of Arts in mathematics and having an interest in computing and numerical analysis should call the Department of Mathematics for further information.

COURSE DESCRIPTIONS

* **MTH 500 Modern Mathematics Content, K-6. Two sem hours**

The modern mathematics required for teaching this subject in the elementary grades, K-6: set theory, logic, numeration systems, the real number system and

* *Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

geometry. Not applicable to program M.A. in Mathematics. Not open to students who have credit in MTH 501 New Topics in Modern Mathematics, K-8.

***MTH 501 New Topics in Modern Mathematics, K-8. Two sem hours**

New topics in modern mathematics programs; the materials of various study groups; practical problems in teaching mathematics in grades K-8. Not applicable to program M.A. in Mathematics. Not open to students who have credit in MTH 500 Modern Mathematics Content, K-6.

Prereq: Teaching experience or 381 *The Teaching of Mathematics*, K-6.

***MTH 503 Arithmetic Methods. Two sem hours**

Current problems in teaching arithmetic. Evaluating pupil achievement; new topics. Not applicable to program M.A. in Mathematics.

Prereq: Teaching experience or 381 *The Teaching of Mathematics*, K-6.

***MTH 506 Introduction to Mathematical Logic. Two sem hours**

Propositional and first order predicate calculi and rules of deduction; application in mathematical systems and proofs.

Prereq: A minor in mathematics.

***MTH 507 (Formerly MTH 516) Theory of Numbers. Two sem hours**

Divisibility theory of integers, primes, theory of congruences, Fermat's theorem, Wilson's Theorem, number theoretic functions, multiplicity, Möbius inversion formula, Euler's phi function.

Prereq: A minor in mathematics.

***MTH 508 Foundations of Mathematics. Two sem hours**

An introduction to axiomatic method, axiomatic set theory, transfinite arithmetic, logical paradoxes; their influence on modern conceptions of mathematics.

Prereq: A minor in mathematics.

***MTH 511 Linear Algebra I. Two sem hours**

Vector spaces, dimension, linear transformations, matrices and determinants with application to linear equations. Equivalence of matrices and an introduction to similarity theory.

Prereq: A minor in mathematics.

***MTH 512 Linear Algebra II. Two sem hours**

The theory of finitely generated modules over a ring of polynomials, as applied to similarity theory; canonical forms for similarity. Scalar products, the dual space, Sylvester's Theorem and the Spectral Theorem.

Prereq: MTH 511 *Linear Algebra I* or MTH 416 *Linear Algebra*.

***MTH 514 (Formerly MTH 614) Theory of Fields. Two sem hours**

Finite fields, prime fields and their extensions, splitting fields, separability, irreducibility and Fundamental Theorem of Algebra.

Prereq: MTH 411 *Modern Algebra with Applications or equivalent*. (Will allow MTH 518 *Group Theory I* during transition period.)

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

***MTH 518 Theory of Groups. Two sem hours**

Definitions and examples, permutation groups, subgroups, cyclic groups, homomorphisms and isomorphisms, normal subgroups and factor groups, finitely generated abelian groups, Sylow Theorems and their applications.

Prereq: MTH 411 *Modern Algebra with Applications* or permission of the department.

***MTH 520 The Real Number System. Two sem hours**

A development of the real number system and a study of its properties.

Prereq: A minor in mathematics.

***MTH 522 Fourier Analysis. Two sem hours**

An introduction to Fourier series and their application to the solution of boundary value problems in the partial differential equations of physics and engineering.

Prereq: MTH 325 *Differential Equations and Vector Analysis*, and MTH 420 *Intro to Analysis*. (Formerly 320 *Differential Equations I* and 420 *Advanced Calculus I*) or equivalent.

***MTH 524 Complex Analysis. Two sem hours**

Complex numbers, analytic functions, elementary complex functions and mappings, Cauchy's theorem and Cauchy's integral formula, maximum modulus principle, power series and calculus of residues.

Prereq: MTH 420 *Introduction to Analysis* or permission of the department. (Will allow 420 *Advanced Calculus I* or MTH 526 *Real Analysis* or equivalent during transition period.)

***MTH 526 Real Analysis. Two sem hours**

Topology of the real line, sequences and series, metric spaces, real valued functions, functions of bounded variation, theory of differentiation and integration.

Prereq: MTH 420 *Introduction to Analysis* or permission of the department. (Will allow MTH 520 *The Real Number System* during the transition period.)

***MTH 536 Introduction to Digital Computers and FORTRAN. Two sem hours**

A first course in computer programming designed for graduate students. The course concentrates on development of algorithmic problem solutions and their descriptions via flow charts and the FORTRAN IV language. The students will obtain experience using a digital computer by running several programs. Not open to students who have credit in 137 *Introduction to Computer Programming* or 237 *Computer Programming and Numeric Methods*.

Prereq: College algebra and permission of the department.

***MTH 537 Introduction to Numerical Analysis. Two sem hours**

Review of current computer language in use on campus, errors, evaluation of functions, root determination, numeric integration, interpolation, solution of

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

ordinary differential equations and simultaneous linear equations. Not open to students who have credit in 436 Numerical Analysis I.

Prereq: A course in computer programming and 223 Multivariable Calculus. (Will allow 221 Calculus with Analytic Geometry IV as a replacement for 223 during transition period.)

*** MTH 542 Non-Euclidean Geometry. Two sem hours**

Foundations of geometry and historical development. A study of hyperbolic and elliptic plane geometries. These compared with parabolic plane geometry. Prereq: A minor in mathematics.

*** MTH 543 Analytic Projective Geometry. Two sem hours**

Projective geometry as defined on a vector co-ordinate space. The corresponding vector algebra is studied and then adapted to the affine plane and two of its subplanes; Euclidean and Space-Time.

Prereq: An undergraduate major in mathematics.

*** MTH 546 Graph Theory. Two sem hours**

A study of undirected and directed graphs and their structural properties including connectivity and traversability. Associated matrices, groups and relations and applications to networks.

Prereq: A minor in mathematics.

*** MTH 548 Introduction to Differential Geometry. Two sem hours**

Fundamental concepts of the theory of curves and surfaces in three-dimensional space. Applications. (Offered as needed.)

Prereq: An undergraduate major in mathematics.

*** MTH 550 (Formerly MTH 528) General Topology. Two sem hours**

General theory of topological spaces, metric spaces, continuity, product and quotient spaces, separation axioms and compactness.

Prereq: MTH 420 Introduction to Analysis or permission of the department. (Will allow MTH 520 The Real Number System during transition period.)

*** MTH 560 Introduction to Optimization Theory. Two sem hours**

An introduction to various aspects of optimization theory including linear and non-linear programming, primal-dual methods, calculus of variations, optimal control theory, sensitivity analysis and numerical methods.

Prereq: A major in mathematics or permission of the department.

*** MTH 571 (Formerly MTH 574) Probability and Statistics. Two sem hours**

Probability, expectation, variance, co-variance, distribution functions, sampling theory and other topics. Not open to students who have credit in 370 Probability and Statistics I.

Prereq: Fifteen hours of undergraduate credit in mathematics including a second course in the calculus.

*** MTH 573 (Formerly MTH 577) Applied Statistics. Two sem hours**

Point and interval estimation, hypothesis testing, sample mean and sample

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

variance, analysis of variance, linear and non-linear regression, contingency tables, non-parametric methods, applications to the physical, biological and social sciences and to business and education.

Prereq: MTH 571 *Probability and Statistics* or 370 *Probability and Statistics I* or permission of the department. (Will allow MTH 574 *Probability* or 470 *Introduction to Mathematical Statistics I* during transition period.)

• **MTH 575 Statistical Problems. Two sem hours**

Probability densities, mathematical expectation, multivariate distribution theory, sampling distributions, point and interval estimations, test of hypotheses, an introduction to the analysis of variance and statistical decision problems. Not open to students who have credit in 471 *Probability and Statistics II*.

Prereq: MTH 571 *Probability and Statistics* or 370 *Probability and Statistics I*, or permission of the department.

• **MTH 581 Modern Mathematics Methods, K-6. Two sem hours**

Effective techniques in presenting materials, planning class activities and creating good learning situations; current problems in a modern mathematics curriculum for grades K-6. Not applicable to program M.A. in Mathematics.

Prereq: MTH 500 *Modern Mathematics Content, K-6* or permission of the department.

• **MTH 584 Middle School Mathematics, Methods and Content. Three sem hours**

Middle school mathematical content and contemporary ways of using materials and strategies to present the content. Topics include algebra, geometry, probability and statistics, number theory, logic and other general mathematics notions.

Prereq: Teaching experience in junior or middle school mathematics or 15 hours of undergraduate credit in mathematics or permission of the department.

• **MTH 585 Modern Mathematics Methods, Senior High School. Two sem hours**

For students lacking an undergraduate high school methods course in mathematics. Not applicable to program M.A. in Mathematics. Not open to students who have credit in 306 *Teaching of High School Mathematics*. (Offered as needed.)

Prereq: A minor in mathematics.

• **MTH 587 Enriching Instruction in High School Mathematics**

Two sem hours

New teaching aids and supplementary reading materials; subject matter usually not developed in standard texts (e.g., linear programming, principles of computers and advanced geometric constructions). Topics for accelerated high school classes.

Prereq: Teaching experience in high school mathematics.

• **MTH 588 High School Mathematics, Methods and Content. Three sem hours**

Presents information and materials to broaden and deepen a secondary teacher's background in teaching mathematics. Topics include general mathe-

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

matics, algebra, geometry, trigonometry and senior mathematics. Applications, strategies of presentation and teaching aids are discussed.

Prereq: A minor in mathematics or permission of the department.

* **MTH 589 (Formerly 547) Geometry for Secondary Teachers. Two sem hours**

Presents information and materials to broaden and deepen a secondary teacher's background in teaching of geometry. Foundations of geometry, modern geometry, non-Euclidean geometries and a little topology are studied.

Prereq: A minor in mathematics.

MTH 591 Special Topics in Mathematics. Two sem hours

A graduate level course in a specific area of mathematics, to be determined by the field of specialization of the instructor and the interest of the students

Prereq: Completion of a minimum of 10 hours of graduate credit in mathematics and overall graduate G.P.A. in mathematics 6.0 or above, and permission of the department.

MTH 595 Workshop. Two sem hours

Usually not applicable to problem M.A. in mathematics.

Prereq: Permission of the department.

MTH 597, 598, 599 Independent Studies. One, two and three sem hours

A report on an approved subject in the field of mathematics, the history of mathematics or the teaching of mathematics, under the guidance of Mathematics Department staff.

Prereq: Completion of a minimum of 10 hours of graduate credit in mathematics and overall graduate G.P.A. in mathematics 6.0 or above, and permission of the department.

MTH 610 Rings and Ideals I. Two sem hours

Polynomial rings, ideals and homomorphisms, imbedding theorems, prime ideals, the radical, minimal and maximal prime ideals belonging to an ideal. (Not offered currently.)

Prereq: Any course in abstract algebra.

MTH 681 The Teaching of Junior College Mathematics. Two sem hours

Current problems in a junior college mathematics program. The role of algebra and trigonometry, elementary functions, analytic geometry, the calculus and linear algebra; content and techniques of instruction. CUPM recommendation for a college program. (Not offered currently.)

Prereq: Permission of the department.

MTH 690, 691, 692 Thesis Research. One, two and three sem hours

Research in areas of mathematics or mathematics education under guided direction. Thesis is required at the conclusion of the research work.

Prereq: Permission of the department.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

OTHER COURSES FOR GRADUATE CREDIT

The following courses may also be elected for graduate credit; course descriptions may be found in the Undergraduate Catalog. INFORMATION ABOUT COURSES IN MATHEMATICS AND IN COMPUTER SCIENCE NOT LISTED HERE MAY BE OBTAINED FROM THE COORDINATOR OF GRADUATE ADVISING, DR. ENOCH TSE.

- 400 History of Mathematics. (3)
- 403 Current Research in Elementary School Mathematics. (3)
- 411 Modern Algebra with Applications. (3)
- 416 Linear Algebra. (3)
- 418 Applied Linear Algebra. (3)
- 420 Introduction to Analysis. (3)
- 425 Mathematics for Scientists. (3)
- 436 Numerical Analysis. (3)
- 471 Probability and Statistics II. (3)
- 491 Special Topics in Mathematics. (2)
- 496 Special Topics in Computer Science. (2)

MUSIC

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 Department Head
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 Coordinator of Advising
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 or 487-4381

Curriculums leading to the Master of Arts degree are offered in music education, music literature, music theory-literature, performance and choral music. Programs are flexibly designed to meet varying student needs. The primary objectives are to improve performance and musicianship, teaching skills and analytical and research skills.

Programs consist of ten hours of foundation courses in research techniques, music theory, and literature; fourteen hours of concentration in the student's field of interest; and six hours of cognate courses outside of the Department of Music.

A final recital, thesis, composition with supporting paper, or special project is required in each degree program.

All music curriculums are accredited by the National Association of Schools of Music.

ADMISSION

Application for admission should be made to the Graduate School, where undergraduate transcripts are evaluated. Transcripts should be forwarded to the Graduate School at the time of application. In addition, students wishing to major in performance should send a tape to the Department of Music or write for information on auditions. Admission to a graduate program in the Department of Music is granted to students who meet the requirements of both the Graduate

School of Eastern Michigan University and the Department of Music. In addition to Graduate School requirements for degree admission, the department requires the applicant to have an undergraduate degree in music or its equivalent and an overall undergraduate grade point average of 2.50. Upon general admission to the department, additional auditions are necessary for acceptance in a performance concentration.

Students who meet Graduate School requirements for admission but who do not meet all departmental requirements may be granted conditional admission. Conditions that must be met before degree admission is granted include: a) completion of all graduate placement examinations and auditions; b) completion of all deficiency courses and requirements; c) completion of the course Music 501: Introduction to Graduate Study; and d) completion of at least six credit hours of graduate study in music at Eastern Michigan University with a cumulative grade point average of 5.0 (B) or better.

Upon entering the Department of Music, each student is assigned to an adviser who assists in planning a curriculum based on student needs and future plans. Placement examinations in theory-literature-history and performance are given each semester and students are expected to complete these tests before decisions on course elections are made. The results of the placement tests are used by advisers in determining the course needs of students. Students with deficiencies may be required to take remedial courses without graduate credit.

AUDITIONS AND PLACEMENT TESTS

Placement tests for admission to the graduate music program will be held in 1979 on the following dates:

Winter Semester

February 1, 1979

Spring Session

June 20, 1979

Fall Semester

November 6, 1979

Auditions are arranged with the adviser and area chairman.

In addition to regular tuition, students accepted for private music lessons will be assessed an applied music fee described under the section on tuition and fees.

I. OPEN TO GRADUATE MUSIC MAJORS

MUS 642 History and Philosophy of Music Education. Two sem hours

The study of the development of music education in the United States and the influence of philosophy upon this development.

Prereq: Permission of the department.

MUS 652 Advanced Techniques and Materials for Developing the Vocal Music Program in the Elementary School. Two sem hours

An exploration of the latest trends, techniques and materials utilized in elementary school vocal and general music classes. Discussion of current practices in general education that affect the music program in the elementary school.

MUS 653 Advanced Techniques and Materials for Developing the Secondary School Vocal Program. Two sem hours

An exploration of the latest trends, techniques and materials utilized in middle, junior and senior high school vocal music. Both performance and non-performance types of classes are covered. Discussion of current practices in general education that affect the music program in the secondary schools.

MUS 654 Advanced Techniques and Materials for Developing the Secondary School Band Program. Two sem hours

Current trends in techniques and materials for the high school band.

MUS 655 Advanced Techniques and Materials for Orchestras in the Secondary Schools. Two sem hours

Selected problems and their solution pertaining to the improvement of the musical performance of the school orchestra. Major emphasis is placed on the string section and its problems.

MUS 690, 691, 692 Thesis. One, two, three sem hours

A substantial and original undertaking in scholarly research designed to reflect, focus and deepen the student's individual interests and to provide a culminating work leading to a master's degree in music.

Prereq: Permission of the department.

MUS 694 Final Project. Two sem hours

A creative, analytical or pragmatic project of a substantial and original nature designed to reflect the student's individual interests and to serve as a culminating work leading to a master's degree in music. Final projects may be of several types such as: Lecture-recital; original composition with analytical paper; annotated bibliography or discography; survey; unit of study; course outline.

Prereq: Permission of the department.

MUS 696 Seminar in Music. Two sem hours

Topics may be in some area of music education, theory, literature, history, musicology or performance. May serve for the development of research proposals, literature reviews, research techniques or other similar purposes. May be repeated for credit with permission of adviser.

Prereq: Permission of the department.

Performance Courses

*** AMU 601, 602, 603, 604 Applied Music—Performance.**

One, two, three, and four sem hours

Open to performance majors and graduate students who completed an undergraduate concentration in performance. May be repeated for credit.

Prereq: Audition.

MUS 689 Graduate Recital. Two sem hours

Required in partial fulfillment of the Master of Arts degree for those students

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

concentrating in performance and for those students who qualify for and select recital as a culminating option. Students must be enrolled in AMU 601/602/603/604 concurrently.

II. OPEN TO GRADUATE STUDENTS AND QUALIFIED SENIORS

* MUS 501 Introduction to Graduate Studies. Two sem hours

An introductory course in scholarly research and writing which includes: library orientation for the music researcher; basic types of music research; evaluation of basic source materials for music research; style for writing and documentation of scholarly research; organization of a bibliography.

* MUS 504 America's Music. Two sem hours

The diversified styles of music made and continuously used by the people of the United States in terms of our historical cultural traditions.

* MUS 510 Masterpieces of Music. Two sem hours

Promotes interest, enjoyment and understanding of some of the important works of great composers; importance of music as a factor in human experience and as a mode of thought. Not open to students who have a major or minor in music.

* MUS 511 Survey of Harmonic Techniques. Two sem hours

Compositional and harmonic techniques and practices of major composers of the eighteenth, nineteenth and twentieth centuries.

Prereq: 202 Music Theory-Literature IV or equivalent.

* MUS 513 Form and Analysis. Two sem hours

Structural principles and techniques through analysis of representative works of eighteenth, nineteenth and twentieth centuries.

Prereq: 202 Music Theory-Literature IV or equivalent.

* MUS 514 Sixteenth Century Counterpoint. Two sem hours

Polyphonic techniques and forms based upon stylistic principles of the sixteenth century.

Prereq: 202 Music Theory-Literature IV or equivalent.

* MUS 517 Music Composition I. Two sem hours

The creative process in music through analysis of traditional and new music; original composition in small forms illustrating various techniques and media.

Prereq: Permission of the department (may be repeated for credit).

* MUS 518 Music Composition II. Two sem hours

Original composition based upon techniques of the twentieth century; composition of works of moderate length.

Prereq: MUS 517 Music Composition I or equivalent.

* MUS 519 Music Composition III. Two sem hours

Original composition in larger forms with the intent of performance.

Prereq: MUS 517 Music Composition I and MUS 518 Music Composition II or equivalent.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

* **MUS 531 Renaissance Music. Two sem hours**

Selected works representing the forms, styles and idioms of the fifteenth and sixteenth centuries.

Prereq: Music major or department permission.

* **MUS 532 Baroque Music. Two sem hours**

Selected works representing some of the styles and idioms of the seventeenth century, and of the early and mid-eighteenth century (Bach, Handel).

Prereq: Music major or department permission.

* **MUS 533 Music in the Classic Era. Two sem hours**

The development of musical style and form in the classic era, principally in the works of Haydn, Mozart and Beethoven.

Prereq: Music major or department permission.

* **MUS 534 Music in the Romantic Era. Two sem hours**

The development of musical style and form in the romantic era. Intensive study of selected compositions.

Prereq: Music major or department permission.

* **MUS 535 Music of the Twentieth Century. Two sem hours**

Study of major works, composers and aesthetic systems of twentieth-century music. Selected works to be announced each time the course is offered.

Prereq: Music major or department permission.

* **MUS 536 World Music I. Two sem hours**

The study of music literature from a variety of times and cultures. Discussion of experimentation and improvisation characteristic of soloists and small groups in the history of world music. To include solo song, chamber music, madrigal, piano, lute, sitar (and other non-Western music). Open to majors and non-majors.

* **MUS 537 World Music II. Two sem hours**

A continuation of the study of music from a variety of times and cultures with emphasis on large groups. To include instrumental ensembles, orchestra, band, choir, composite groups, theatrical and festival music. Discussion of the culmination of style characteristics of large groups in the history of world music. Open to majors and non-majors.

* **MUS 538 The New Music. Two sem hours**

Examination of the new music; its sound, sources, structures, notation, performance and perception. Listening, study, discussion and performance, covering vocal, instrumental and electronic techniques.

Prereq: Music major or department permission.

* **MUS 540 The Orchestra and its Literature. Two sem hours**

A chronological survey of music for orchestra from its inception in the 18th Century to the present. It will include overtures, suites, concertos, symphonies, tone poems, pieces for chorus and soloists with orchestras and other miscella-

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

neous compositions. Emphasis will be on listening, stylistic features and historical background.

Prereq: Music major or department permission.

***MUS 551 The General Music Class. Two sem hours**

An exploration of the place of music in the education of adolescents; includes techniques and materials utilized in the general music class of the middle and junior high schools. Discussion of current trends in general education that affect the structure and place of the general music class in the secondary school curriculum.

***MUS 558 Administration and Supervision in Music Education. Two sem hours**

An examination of the purposes and function of school music administration. Emphasis is placed on the role of the music supervisor as an educational leader in the areas of curriculum, business, and personnel.

***MUS 577 Advanced Instrumental Conducting. Two sem hours**

Interpretative factors and more subtle baton techniques; greater understanding of style and form through analysis of representative scores.

Prereq: 327 *Instrumental Conducting* or equivalent.

***MUS 578 Advanced Choral Conducting. Two sem hours**

Choral conducting techniques, styles and materials, organization, balance of choral groups, score reading, control of voices for blending flexibility, vocal poise and musical discipline for both church and school singing groups.

Prereq: 328 *Choral Conducting* or equivalent.

***MUS 595 Workshop in Music. Two sem hours**

Topic to be announced in the schedule of classes. Topics will usually relate to some aspect of music education or performance such as Choral Workshop, String Workshop, Band Workshop, Keyboard Workshop, General Music Workshop, Chamber Music Workshop or some similar topic. *May be repeated for credit.*

***MUS 596 Seminar in Music. Two sem hours**

Topic to be announced in the schedule of classes. Seminar topics may be in some area of music education, theory, literature, history, musicology or performance. *May be repeated for credit.*

MUS 597, 598 Independent Studies. One and two sem hours

An intensive study of a program or group of problems under the direction of a University faculty member.

Prereq: Permission of adviser and study director.

Performance Courses

***MUS 546 Collegium Musicum. One sem hour**

Various ensembles of soloists-instrumental, vocal and mixed. Opportunity to perform old and new music infrequently heard.

Prereq: Departmental permission.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

* **MUS 547 Collegium Musicum. Two sem hours**

Various ensembles of soloists-instrumental vocal and mixed. Opportunity to perform old and new music infrequently heard. Credit beyond one semester hour is earned through individual projects and research.

Prereq: Departmental permission.

* **MUS 550 Ensemble. One sem hour**

Participation in any regular departmental ensemble as a means of expanding knowledge of literature, observing techniques of conducting, and increasing efficiency in principal or secondary performance areas. May be repeated for additional credit. Open to qualified students upon satisfactory audition.

AMU 500 Applied Music—Secondary Performance. One sem hour

Open to majors and non-majors. May be repeated for credit.

Prereq: Audition.

III. UPPER DIVISION COURSES OPEN TO GRADUATE STUDENTS

MUS 413 Orchestration. Two sem hours

Practical work in setting compositions for full orchestra and various other instrumental ensembles.

Prereq: 202 Music Theory-Literature IV.

MUS 414 Band Arranging. Two sem hours

Arranging for band; transcription from other media; original composition; analysis or representative work.

Prereq: Senior standing and permission of the department.

MUS 448 Opera Workshop. One sem hour

MUS 449 Opera Workshop. Two sem hours

A laboratory-performance course which will deal with performance of opera scenes and, when feasible, complete works. The musical, technical and dramatic aspects of production will be stressed.

Prereq: Permission of the department.

MUS 451 Vocal and Instrumental Accompanying. Two sem hours

Provides pianists with experience in accompanying singers and instrumentalists through acquisition of basic skills and repertoire. Course may be repeated for credit.

Prereq: Audition.

MUS 460 Studies in Pedagogy. Two sem hours

Topics may be selected from the following: piano, organ, voice, vocal diction, brass, woodwinds, strings, theory, literature, percussion or similar subjects.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

Topics to be offered will be announced in the schedule of classes. May be repeated for credit with permission of adviser.

MUS 461 Studies in Performance Literature. Two sem hours

Topics to be selected from the following: piano, organ, vocal repertoire, band, orchestra, choir, solo song, chamber ensemble, opera or similar topics. Topics to be offered will be announced in the schedule of classes. May be repeated for credit with permission of adviser.

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
MUS 501			X	X
MUS 511			†	X
MUS 513	X		†	
MUS 517	X			X
MUS 518	X			X
MUS 519	X			X
MUS 531		†		†
MUS 532	†		†	
MUS 533		†		†
MUS 534	†		†	
MUS 535		†		
MUS 536				†
MUS 537	†			
MUS 538		†		
MUS 546	X			X
MUS 547	X			X
MUS 550	X	X [Voc]		X
MUS 551				†
MUS 558	X			
MUS 642			X	
MUS 652				†
MUS 653				†
MUS 654			†	
MUS 655			†	
AMU 501	X	X	X	X
AMU 502	X	X	X	X
AMU 601	X	X	X	X
AMU 602	X	X	X	X
AMU 603	X			X
AMU 604	X			X

† Courses offered on a two (2) year cycle.

PHYSICS and ASTRONOMY

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The Department of Physics and Astronomy offers three programs leading to the degree of Master of Science. Each program requires a minimum of 30 semester hours of approved credits beyond the Bachelor's Degree, at least six hours of which must be in cognate areas and no more than 15 hours in approved upper division undergraduate courses. Upon admission to a program the student will arrange a program of study with his assigned adviser.

Admission Requirements:

Applicants must meet degree admission requirements of the Graduate School.

1. THE PHYSICS PROGRAM is designed to prepare students for advanced graduate study in physics, for a professional career in physics or for a teaching career in physics at the community college level. Those entering this program should have an undergraduate major in physics or be prepared to take courses without credit to achieve an equivalent to the major. Graduation requirements include an undergraduate and graduate combined total of a minimum of 50 approved semester hours in physics and 22 approved semester hours in mathematics, as well as a research problem culminating in a written report and satisfactory performance in an oral examination. In satisfying the requirements of 50 semester hours of physics (graduate and undergraduate combined), completion of the following physics courses (or their equivalents) is expected for a Master's Degree:

Physics 430	Intermediate Mechanics I
Physics 431	Intermediate Mechanics II
Physics 450	Electricity and Magnetism
Physics 475	Introduction to Quantum Mechanics
Physics 562	Advanced Mechanics
*Physics 571	Electromagnetic Theory or
440	Optics and
441	Modern Optics
*Physics 582	Quantum Mechanics or
460	Heat and Thermodynamics and
462	Kinetic Theory and Statistical Mechanics
Physics 697-9	Research in Physics

*Substitution of the 400 level courses may be made for 571 or 582, but not for both.

Further information may be obtained from Dr. Walter Gessert or Dr. Robert Silver, graduate advisers, Department of Physics and Astronomy.

2. THE PHYSICS EDUCATION PROGRAM is designed to improve the preparation of in-service and pre-service secondary school physics teachers. Those entering the program should have at least an undergraduate physics minor together with appropriate mathematics. Admission is restricted to either in-service teachers or to those intending to enter the teaching profession. Graduation requirements include an undergraduate and graduate combined total of a minimum of 44 approved hours of physics, mathematics through Multivariable Calculus, as well as an essay in physics, physics history, or the teaching of physics, and satisfactory performance in an oral examination. In satisfying the requirement of 44 semester hours of physics (graduate and undergraduate combined), the following physics courses (or their equivalents) are required for a Master's Degree:

Physics 430	Intermediate Mechanics I
Physics 440	Optics
Physics 460	Heat and Thermodynamics
Physics 515	Atomic and Nuclear Physics I
Physics 516	Atomic and Nuclear Physics II
Physics 550	New Approaches to Teaching Physics I
Physics 551	New Approaches to Teaching Physics II
Physics 597-9	Independent Study (Essay)

Further information may be obtained from Dr. Walter Gessert or Dr. Robert Silver, graduate advisers, Department of Physics and Astronomy.

3. THE GENERAL SCIENCE PROGRAM is interdisciplinary in nature and involves the areas of biological, earth and physical science (astronomy, chemistry and physics). The program is designed for pre-service and in-service elementary school teachers and junior high or middle school science teachers. The objectives of the program are to: increase teachers' subject matter competence in more than one area of science; familiarize teachers with both the philosophy and content of newer science curricula; increase teachers' knowledge of the processes, history and humanistic nature of science; and educate teachers so that they are prepared to assume leadership roles in the science programs of their schools and school districts. Prerequisites for admission to the program include a minimum of 30 semester hours of course work in science and mathematics with basic course preparation in the sciences. Graduation requirements include teaching experience or the completion of state certification requirements and the completion of a minimum of 60 semester hours (graduate and undergraduate combined) of approved work in science content and methodology with 20 semester hour concentrations (graduate and undergraduate combined) in each of two of the three science areas. Candidates holding, or aspiring to, an elementary teaching certificate may elect the elementary teacher option while all others will elect the junior high or middle school option. Program participants may utilize the facilities of the Science Teaching and Materials Center which is housed within the Department of Physics and Astronomy. A library of the latest textbooks, useful reference materials and equipment for many of the newer elementary and junior high or middle school science curricula is located within the Center. Further information may be obtained from **Dr. Jean R. Moore**, general science adviser, Department of Physics and Astronomy.

PHY 505 Physical Science for Elementary Teachers I. Two sem hours

A course which emphasizes both the content and the processes of the physical sciences. Discussions and demonstrations leading to an understanding of basic concepts through the processes of discovery and inquiry.

Prereq: Two (2) courses in physical science (such as PHY 100 or CHM 101).

PHY 506 Physical Science for Elementary Teachers II. Two sem hours

A course which emphasizes both the content and the processes of the physical sciences. Discussions and demonstrations leading to an understanding of basic concepts through the processes of discovery and inquiry.

Prereq: PHY 505 Physical Science for Elementary Teachers I.

PHY 511 Mechanics, Sound and Heat for Teachers. Three sem hours

A study of motion, forces, heat and sound for teachers of general science who have had little or no previous experience with physics.

PHY 512 Light, Electricity and Magnetism for Teachers. Three sem hours

A study of light, electricity, and magnetism for teachers of general science who have little previous experience with physics.

Prereq: 511 Mechanics, Sound and Heat for Teachers or equivalent; may be taken concurrently.

PHY 514 Instrumentation for Teachers. Three sem hours

This course treats the fundamentals of electrical instruments and the care and use of those instruments commonly encountered in secondary school science and in general science courses.

PHY 515 Atomic and Nuclear Physics I. Two sem hours

Electron physics, radiation, atomic structure, x-rays, the quantum properties of waves and particles, relativity, the Bohr atom and atomic spectra, wave mechanics and the Schroedinger equation.

Prereq: One year of college physics.

PHY 516 Atomic and Nuclear Physics II. Two sem hours

Nuclear structure, radioactive decay, detection and measurement of nuclear radiation, fission, fusion, cosmic rays, production of radioisotopes in Neutron howitzer.

Prereq: One year of college physics.

*** PHY 520 Teaching of Physical Science. Two sem hours**

Scientific attitudes for use with elementary pupils; the scientific method; a selected group of physical principles; simple experiments which may be used in the elementary school.

*** PHY 522 New Approaches to the Teaching of Science in the Junior High School I. Two sem hours**

Emphasis will be placed on the philosophy, content, teaching strategies, and implementation of newer science curriculum materials designed for use in the junior high or middle school. Needed subject matter background will be pro-

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

vided. Extensive hands-on experience with demonstration and laboratory equipment will be included.

Prereq: Science Teaching Experience or three laboratory science courses.

*** PHY 523 New Approaches to the Teaching of Science in the Junior High School II. Two sem hours**

Emphasis will be placed on the philosophy, content, teaching strategies and implementation of newer science curriculum materials designed for use in the junior high or middle school. Needed subject matter background will be provided. Extensive hands-on experience with demonstration and laboratory equipment will be included.

Prereq: Science teaching experience or three laboratory science courses.

*** PHY 525 Physical Science. Two sem hours**

A course for teachers dealing with some fundamentals of the physics and chemistry of electric charge, and the forms of energy and the conservation of energy.

Prereq: Three laboratory courses in science.

*** PHY 527 Introduction to the Use of Radioisotopes. Two sem hours**

Properties, measurement, safe handling and dosage of radioisotopes.

Prereq: 221 Mechanics, Sound and Heat and 222 Electricity and Light or the equivalent. Not open to students who have credit in 471 Nuclear Physics.

PHY 537 Special Topics in Physics and Astronomy for Elementary Teachers. One sem hour

An experimental course for subject matter not provided in other department offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are covered.

*** PHY 540 The History of Physics and Astronomy. Two sem hours**

A course designed to give students an understanding of the contributions made by selected scientists to the development of physics and astronomy and the relationship of these ideas to the period in which the scientists lived.

Prereq: Three courses in physics and/or astronomy (one may be taken concurrently).

*** PHY 550 Approaches to Teaching Physics I. Two sem hours**

Designed to increase the subject matter competency of those teaching or preparing to teach high school physics. Content, organization, problems and philosophy of the latest high school physics text materials.

Prereq: One year of college physics and one course in calculus.

*** PHY 551 New Approaches to Teaching Physics II. Two sem hours**

Designed to increase the subject matter competency of those teaching or preparing to teach high school physics. The content, organization, problems and philosophy of the latest high school physics text materials.

Prereq: PHY 550 New Approaches to Teaching Physics I.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

PHY 552 Supervision of the Science Program. Two sem hours

Problems in organizing, staffing, planning and evaluating the K-12 science program.

Prereq: Graduate standing.

PHY 553 Recent Science Curricular Developments. Two sem hours

Problems in development and implementation of materials, methods and content of recent curricular efforts.

Prereq: Science teaching experience and graduate standing.

***PHY 562 Advanced Mechanics. Three sem hours**

An overall view of the theoretical structure and the experimental foundations of physics. The methods of vector calculus and related mathematics concepts are applied to mechanics, vibrations and fluid systems. Recommended for physics teaching majors.

Prereq: 430 *Intermediate Mechanics I* or equivalent.

***PHY 571 Electromagnetic Theory. Three sem hours**

Provides the student with a foundation in the classical theory of the Maxwell field equations and indicates the many current applications. Typical topics covered are: Maxwell's equations, conservation laws, plane waves, wave guides, resonant cavities, dipole radiation, diffraction, radiation by moving charges, Bremsstrahlung, Cerenkov radiation, multipole fields, plasma electrodynamics.

Prereq: 450 *Electricity and Magnetism* or permission of the department.

***PHY 582 Quantum Mechanics. Four sem hours**

The Schroedinger equation and its applications in three dimensions, angular momentum, electron spin, Heisenberg's matrix mechanics, Dirac notation, perturbation theories, variational methods, scattering theory.

Prereq: 475 *Introduction to Quantum Mechanics*.

***PHY 593 Workshop. Three sem hours**

Laboratory and/or field experience guided toward problems and new curricula in physics and physical science.

Prereq: Departmental permission.

***PHY 594 Special Topics. Two sem hours**

An experimental or innovative approach to subjects in physics and physical science.

***PHY 595 Workshop. Two sem hours**

Laboratory and/or field experience guided toward problems and new curricula in physics and physical science.

Prereq: Departmental permission.

***PHY 596 Seminar. Two sem hours**

Presentation of special reports and group discussion on selected topics in physics and physical science.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

PHY 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

Prereq: Prior approval of the physics graduate adviser and permission of the department.

PHY 697, 698, 699 Research in Physics. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

Prereq: Undergraduate major or equivalent and permission of the department.

AST 503 Astronomy I. Two sem hours

A non-mathematical descriptive course in astronomy to acquaint the teacher with the general field of astronomy. Many of the topics considered can be used in the elementary classroom. A study of the sun and its family of planets as well as the stars and nebulae in the universe beyond the solar system. Naked eye observations of the constellations and telescopic observations of the moon, planets, double stars and clusters. *Not open to students who have credit in 203 Introduction to Astronomy or equivalent.*

AST 504 Astronomy II. Two sem hours

A non-mathematical descriptive course in astronomy to increase the teacher's acquaintance with the general field of astronomy and the work of the astronomer. Many of the topics covered can be used in the elementary and junior high school classroom. The stellar system; a review of the solar system and the motions of the earth. Naked eye and telescopic observations constitute the laboratory phase of the course.

Prereq: AST 503 Astronomy I or 203 Introduction to Astronomy or equivalent

OTHER COURSES FOR CREDIT TOWARD M.S. IN PHYSICS OR PHYSICS EDUCATION

The following courses for advanced undergraduates are also available to graduate students for credit depending on the background, needs, and curriculum of the student. On this matter the student should, before completing his registration, have a clear understanding with his adviser in the Department of Physics and Astronomy. For descriptions of these courses, see the Undergraduate Catalog.

- 430 Intermediate Mechanics I. (3)
- 431 Intermediate Mechanics II. (3)
- 436 Vibration and Sound. (3)
- 440 Optics. (3)
- 441 Modern Optics. (3)
- 450 Electricity and Magnetism. (4)
- 452 Electrical Measurements. (4)
- 456 Electronics for Scientists. (4)
- 460 Heat and Thermodynamics. (3)

- 462 Kinetic Theory and Statistical Mechanics. (3)
 471 Nuclear Physics. (4)
 475 Introduction to Quantum Mechanics. (3)
 476 Solid State Physics. (3)
 481 Mathematical Physics. (3)

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
PHY 505				†
PHY 506	‡			
PHY 511				†
PHY 512	‡			
PHY 515				X
PHY 516	X			
PHY 520		X		
PHY 522			‡	
PHY 523			‡	
PHY 525		‡		
PHY 527	†			
PHY 540				‡
PHY 550				‡
PHY 551	†			
PHY 552		†		
PHY 562				X
PHY 571				X
PHY 582	X			
PHY 596				‡†
AST 503			X	X
AST 504	X		X	

† Courses offered on a two (2) year cycle in odd years.

‡ Courses offered on a two (2) year cycle in even years.

‡† The Seminar in Science Teaching is offered on a two (2) year cycle in even years, alternating between PHY 596 and BIO 596. It will be offered as PHY 596 in the winter of 1980.

POLITICAL SCIENCE

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 Department Head
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At this time there is no graduate program in political science. Graduate courses in this area are available and a major emphasis can be developed in political science through the Master of Arts in social science degree program. Information on this program is listed in the History and Philosophy Department section of this catalog.

PLS 505 Problems in Public Administration. Two sem hours

Selected problems in public administration on the local, state and federal levels; inter-governmental administrative relationships.

PLS 539 Special Topics in Political Science. Two sem hours

An experimental course for subject matter not provided in other departmental offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied. Information on content can be obtained at department office.

Prereq: *Approval of the department.*

*** PLS 545 International Relations. Two sem hours**

Relations between nations; factors affecting behavior in the state system and possibilities of developing a viable international system.

Prereq: 112 American Government or 202 State and Local Government.

*** PLS 546 Studies in International Law. Two sem hours**

Selected problems in international law; the Law of the United Nations; world law; the law of war and peace; the International Court of Justice; national concepts of international law.

*** PLS 549 Comparative Administrative Systems. Two sem hours**

Processes of administrative adaptation to development goals in newly independent non-Western countries; current approaches and theories of administrative modernization and development in the light of Western and non-Western experiences.

Prereq: 210 Comparative Political Analysis or 211 European Political Systems or permission of the department.

*** PLS 580 American Executives: The Presidency and the Governorship.**

Two sem hours

A survey of the development of these two offices, individually and comparatively, including the historical evolution of the presidency and the governorship; problems relating to the powers, responsibilities and limits of these respective offices; current trends in White House and State House activities; the impact of "The New Federalism" on federal-state and other intergovernmental relationships.

*** PLS 581 Contemporary Problems in American Government. Two sem hours**

Executive-legislative relationships; judicial review; the making of foreign policy; national defense; public welfare; the electoral process and the role of the citizen in American government.

*** PLS 587 Studies in State and Local Government. Three sem hours**

Studies in the governmental process at the state and local levels. Focuses on current issues and problems, including the changing aspects of federalism.

*** PLS 596 Seminar in Current Affairs. Two sem hours**

The problems involved in the teaching of current affairs and exploration of the most effective techniques and materials available in the field.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

PLS 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

Prereq: Permission of the department

UPPER DIVISION COURSES THAT MAY BE TAKEN FOR GRADUATE CREDIT AND APPLIED ON THE DEGREE PROGRAM IN SOCIAL STUDIES OR AS COGNATES BY MAJORS IN OTHER FIELDS

- 301 American Legal System. (3)
- 310 Scope and Methods. (3)
- 312 American Constitutional Law I. (3)
- 313 American Constitutional Law II. (3)
- 315 Consumer Law and Politics. (3)
- 330 Urban Politics. (3)
- 332 Intergovernmental Relations and Federalism. (3)
- 335 Labor in American Politics. (3)
- 342 International Organization. (3)
- 352 Politics of Government Budgeting. (3)
- 354 Government and Politics of Canada. (3)
- 358 Parties, Elections, and Interest Groups. (3)
- 359 Public Opinion and Propaganda. (3)
- 361 Government and Politics of the USSR. (3)
- 362 Foreign Relations of the Soviet Union. (3)
- 364 The Legislative Process. (3)
- 371 Government and Politics of the Middle East. (3)
- 372 Government and Politics of Sub-Sahara Africa. (3)
- 375 Political Sociology. (3)
- 377 American Foreign Policy Process. (3)
- 381 Public Policy Analysis. (3)
- 382 Politics of the 21st Century. (3)
- 385 Judicial Process and Behavior. (3)
- 388 Political Violence and Revolution. (3)
- 401 Special Studies in Political Science. (3)
- 410 Political Science in Fiction. (3)
- 415 Classical Political Theory. (3)
- 416 Modern Political Theory. (3)
- 418 Recent Political Theory. (3)
- 422 American Political Theory. (3)
- 432 Public Bureaucracy in a Democracy. (3)
- 456 Criminal Law I. (3)

PSYCHOLOGY

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DEGREE PROGRAMS OFFERED

The Department of Psychology offers graduate programs leading to the Master of Science degree with emphasis in general psychology and clinical psychology.

PROGRAM OBJECTIVES

The curriculum is designed to produce a master's level psychologist with general knowledge of psychology that includes a variety of content areas, research methodologies and theoretical formulations. Students completing these programs should be able to:

1. Pursue employment in a wide variety of industrial and institutional settings.
2. Continue their training in doctoral programs.
3. Qualify for teaching positions in community and four-year colleges.

ADMISSION REQUIREMENTS

Admission to the graduate program of the Psychology Department is available to those students who meet the degree admission requirements of both the Graduate School of Eastern Michigan University and the Department of Psychology. The primary criterion on which the selection is made is the promise of successful completion of the program requirements based on previous academic performances and acceptable scores on the Graduate Record Examination.

To qualify for consideration for degree admission status in the graduate program in psychology the student must:

1. Meet the academic requirements for admission to the Graduate School.
2. Present a minimum of 20 semester hours of credit in psychology, including courses in statistics and experimental psychology.
3. Present an undergraduate academic record of good quality (approximately "B" average or better).
4. Submit a transcript of scores from the Graduate Record Examination which include the Verbal, Quantitative and the Advanced (Psychology) tests. The applicant is expected to attain a combined score of 1000 on the Verbal and Quantitative tests in order to be admitted.

Application to the psychology program should not be made until the stated requirements can be satisfied. Credits earned under non-degree status do not automatically apply to the requirements of the degree program.

Applications should be submitted to the Graduate School in accordance with the instructions described in this catalog.

Completed applications must be received before March 1 for consideration for fall term admission and before November 1 for consideration for winter term admission. There are no admissions to the degree program in the spring or summer terms. Students who meet the qualifications for admission but whose completed applications are received after the above deadlines will be placed on a waiting list for admission if the Departmental quota for admission has already been filled. Placement on the waiting list, however, does not guarantee admission unless spaces become available, in accordance with Departmental admission standards and policies. All applications are reviewed by the Committee on Graduate Studies.

PROGRAM DESCRIPTION AND GRADUATION REQUIREMENTS

I. Master of Science Degree in General Psychology

The Master of Science degree in general psychology requires the completion of thirty graduate credits, twenty-four credits in psychology, plus six credits in cognate area. The specific program of each student is designed in consultation with a graduate adviser. This program must be approved by the graduate adviser before the student may enroll for course credit.

The requirements outlined below provide the basic guidelines within which students' programs are developed.

	Sem Hours
1. Core Requirement (nine sem hours)	
PSY 600 Psychological Statistics I	3
PSY 620 Learning	3
PSY 646 Personality: Theory and Research	3
2. Minimum of one course from Group A and one from Group B	
Group A (Three sem hours)	
PSY 601 Psychological Statistics II	3
PSY 605 Research Design	3
PSY 623 Experimental Analysis of Behavior	3
PSY 626 Motivation and Emotion	3
PSY 629 Physiological Psychology	3
PSY 632 Sensation and Perception	3
Group B (Three sem hours)	
PSY 635 Cognitive Processes	3
PSY 637 Social Psychology	3
PSY 640 Developmental Psychology	3
PSY 643 Psychopathology	3
PSY 650 Clinical Psychology	3
PSY 660 Theory of Psychological Testing	3
3. Electives (12 sem hours)	
Psychology courses within the department	6-12
Cognate courses from outside the department	0-6
4. Thesis (PSY 692)	
Original research designed and completed	3

by the student under the guidance
of the thesis committee

5. Comprehensive Examination

Teaching Emphasis

In addition to completing the basic program requirements, students wishing to prepare for teaching positions in psychology will be required to participate in a practicum experience in teaching psychology either as a teaching assistant at Eastern Michigan University or in a supervised school or college setting.

II. Master of Science Degree in Clinical Psychology

This program offers specific training for the development of knowledge and skills required of the master's-level clinician functioning in a variety of institutional and community mental health settings. This program is designed as a terminal degree, although it will not prevent the student from continuing graduate study.

The program objective is to produce graduates capable of recognizing, assessing and ameliorating client problems under the supervision of doctoral-level clinical psychologists. It is intended that the graduate will be able to undertake and complete research problems typically found in the clinical setting. The practicum experiences are designed to provide opportunities to develop a variety of skills in assessment, diagnosis, psychotherapy and research commensurate with the master's level of training, and to provide the opportunity for professional growth through interaction with professional people from the various allied areas, such as medicine, social work, psychiatry and public health.

This program requires the completion of forty-five graduate credits consisting of the basic master's course requirements, plus twelve credits in clinical assessment courses which include Psychology 662, 663, 670, and six credits in practicums. The research project completed as a part of the second practicum experience replaces the thesis requirement. Preliminary pre-clinical practicum experience, not included in the six credit hours of practicum, may be required of certain students if, in the judgement of the clinical faculty, such experience is necessary to prepare the student to take best advantage of the practicum experience.

SPECIALIST IN SCHOOL PSYCHOLOGY

This program is an interdisciplinary effort among the Departments of Educational Psychology, Psychology and Special Education and is coordinated through the Department of Psychology.

PURPOSE AND OBJECTIVES

- A. Meet the state requirements for full approval as school psychologists
- B. Provide the psychological services required by state and federal laws
- C. Promote the student welfare through the development of effective programming recommendations

- D. Develop improved understanding of students' educational needs in parents, teachers, administrators and others interested in promoting student welfare.

ADMISSION REQUIREMENTS

The admissions Committee will select students in terms of the promise of successful completion of program requirements based on previous academic performance, evidence of aptitude, past experience and letters of recommendation. Committee decisions will be made once each year by March 15 for the fall class. Approximately ten students will be accepted each year.

Applicants with a bachelor's degree (including all persons without a master's degree) must meet the following requirements:

1. Present background preparations in the areas of psychology, special education or education. This preparation must include a bachelor's degree with a minimum of 36 hours, primarily in the preceding fields.
2. Must have a minimum undergraduate grade point of 2.75 on a 4.0 scale.
3. Normally, students applying for the specialist program should have a minimum of three years of full-time successful professional experience in the fields of psychology, special education or education.
4. Must submit results of the verbal and quantitative sections of the Graduate Records Examination. In addition, the applicant must supply the advanced achievement tests in psychology or education of the Graduate Records Examination and achieve scores acceptable to the admissions committee.
5. Must supply letters of recommendation from three professional persons familiar with the academic performance and professional abilities.

Applicants holding the master's degree must meet all the above requirements except number 2. Persons with a master's degree must present a minimum undergraduate GPA of 2.5 and a graduate GPA at least 6.0 (B+).

PROGRAM DESCRIPTION AND GRADUATION REQUIREMENTS

The Specialist in Arts degree in school psychology requires a minimum of 62 semester credits of graduate work. The course work and required educational experiences are designated to provide the competencies required by state law. These competencies insure that the graduate will have a depth of understanding and ability to perform psycho-educational evaluations, help plan educational strategies, communicate findings, implement intervention programs, consult and counsel with school personnel, parents and pupils, and assume a leadership role in developing services to students.

Program requirements, including practicum and internship, will generally necessitate two calendar years of study. A minimum of three semesters of full-time day scheduling is required.

GRADUATE COURSES OPEN TO SENIORS

PSY 520 Coping With Problem Behavior. Two sem hours

The application of psychological principles of learning to school (and school-related) problem behaviors. Emphasis is on procedures that can be implemented with minimal cost by classroom teachers, principals, and other school-related personnel.

Prereq: One course in psychology.

PSY 532 Psychology of Adolescence. Two sem hours

Physical, intellectual, emotional and social development from puberty to adulthood with emphasis on the significance for teachers and others interested in youth.

Prereq: One course in psychology.

PSY 540 Psychology of Adjustment. Two sem hours

Issues, concepts, principles and theories in human adjustment.

Prereq: One course in psychology.

PSY 543 Abnormal Psychology. Two sem hours

Behavior pathologies of children and adults, including symptom origins and methods of treatment. Not open to students who hold credit in *Abnormal Psychology 360*.

Prereq: One course in psychology.

PSY 550 Dynamics of Human Behavior. Two sem hours

The determinants of behavior and personality with emphasis on the physiological, psychological and cultural bases.

Prereq: One course in psychology.

PSY 551 Psychology of Death and Dying. Two sem hours

Study of attitudes toward, theories about and empirical data concerning human mortality and suicide and its relevance to life adjustment, aging, religion and other areas.

Prereq: 360 *Abnormal Psychology* or PSY 543 *Abnormal Psychology* and PSY 552 *Theories of Personality*.

PSY 552 Theories of Personality. Two sem hours

Major theories of personality including Freud, Jung, Adler, Rank, Sullivan, Kelly, Holistic and learning theorists.

Prereq: One course in psychology.

PSY 553 Existential Psychology. Two sem hours

Origins, growth, major contributors and foci of concern of the existential movement(s) in psychology and psychotherapy.

Prereq: Two courses in psychology; PSY 552 *Theories of Personality* is recommended.

PSY 565 Industrial Psychology. Two sem hours

Psychological principles, theories and methodology applied to behavior in industrial settings. Not open to students who hold credit in 351 *Industrial Psychology*.

Prereq: One course in psychology.

PSY 570 Consumer Psychology. Two sem hours

A survey of psychological principles, theories and methodology relating to consumer behavior.

Prereq: One course in psychology; open to majors and minors with permission of the department.

PSY 580 Psychology of Individual Differences. Two sem hours

The objective and quantitative investigation of human variability in behavior phenomena and the factors influencing these differences.

Prereq: One course in psychology.

PSY 591, 592, 593 Individual Reading. One, two and three sem hours

Supervised reading of psychological literature to provide in-depth understanding of a selected psychological problem.

Prereq: One course orienting student to the problem area and permission of the department.

PSY 595 Workshop in the Scientific Approach to Problem Solving.**Two sem hours**

The scientific approach to the solving of problems: the application of psychological principles.

Prereq: One course in psychology.

COURSES OPEN ONLY TO GRADUATE STUDENTS**PSY 600 Psychological Statistics I. Three sem hours**

A study of statistical techniques including small sample theory, analysis of variance and non-parametric statistics.

Prereq: 205 Quantitative Methods in Psychology or equivalent.

PSY 601 Psychological Statistics II. Three sem hour

More complex analysis of variance models plus various correlational procedures.

Prereq: PSY 600 Psychological Statistics I.

PSY 605 Research Design. Three sem hours

Research methods and analysis of data.

Prereq: 301 Introductory Experimental Psychology or equivalent and department permission.

PSY 620 Learning. Three sem hours

Research methods, experimental findings and theories of learning.

Prereq: Twenty hours in psychology, including 301 Introductory Experimental Psychology or equivalent and department permission.

PSY 623 Experimental Analysis of Behavior. Three sem hours

The principles and parameters of respondent and operant conditioning and their application. Lecture and laboratory.

Prereq: Twenty hours in psychology, including 301 Introductory Experimental Psychology or equivalent and department permission.

PSY 625 Behavior Change Methods. Three sem hours

The study of various behavior change programs that can be applied to the alteration of problem behaviors in humans, including those traditionally labeled as mentally retarded, psychotic, neurotic, emotionally disturbed, and delinquent. The methods can be applied in the home, day care center, counseling center, community, classroom or institution.

Prereq: 620 Learning and departmental permission.

PSY 626 Motivation and Emotion. Three sem hours

A review of major findings, theories and recent research developments in the areas of motivation and emotion.

Prereq: Twenty hours in psychology, including 301 Introductory Experimental Psychology or equivalent and department permission.

PSY 629 Physiological Psychology. Three sem hours

An examination of physiological processes and their relationships to behavior. Lecture and laboratory.

Prereq: Twenty hours in psychology, including 301 Introductory Experimental Psychology or equivalent and department permission.

PSY 632 Sensation and Perception. Three sem hours

A review of research and theory dealing with sensory experience and perception.

Prereq: Twenty hours in psychology, including 301 Introductory Experimental Psychology or equivalent and department permission.

PSY 635 Cognitive Processes. Three sem hours

A review of theoretical and empirical developments in the area of thinking, problem solving, concept formation, creativity and decision making.

Prereq: Twenty hours in psychology, including 301 Introductory Experimental Psychology or equivalent and department permission.

PSY 637 Social Psychology. Three sem hours

The study of the processes underlying social interaction and behavior in social contexts.

Prereq: Twenty hours in psychology and department permission.

PSY 640 Developmental Psychology. Three sem hours

Biological, intellectual, social and emotional changes through the life span. Major concepts and problems related to development stages of life.

Prereq: Twenty hours in psychology and department permission.

PSY 643 Psychopathology. Three sem hours

A study of behavior disorders with emphasis upon current research methodologies, special problems and theoretical formulations, including controversial issues and social and ethical considerations.

Prereq: Twenty hours in psychology, including 360 Abnormal Psychology or equivalent or permission of the department.

PSY 646 Personality: Theory and Research. Three sem hours

Advanced study of concepts and empirical research in personality.

Prereq: Twenty hours in psychology, including 451 Dynamics of Personality or equivalent and department permission.

PSY 650 Clinical Psychology. Three sem hours

Theory, rationale and application of various psychotherapeutic techniques. Examination of critical issues involved in the practice of clinical psychology.

Prereq: Twenty hours in psychology and department permission.

PSY 660 Theory of Psychological Testing. Three sem hours

Assumptions, rationale and statistical foundation of psychological tests used in differential diagnosis.

Prereq: Twenty hours in psychology and department permission.

PSY 662 Individual Testing I. Four sem hours

Training and supervised experience in the administration and interpretation of the WISC and WAIS tests, plus a review of the relevant clinical research literature.

Prereq: Department permission.

PSY 663 Individual Testing II. Four sem hours

Training and supervised experience in Binet and special diagnostic tests.

Prereq: PSY 662 Individual Testing I and department permission.

PSY 670 Personality Evaluation I. Four sem hours

An introduction to individual clinical tests in the study of personality diagnosis. Includes learning to administer, score and interpret the MMPI and 16 PF. Entails a knowledge of the clinical assessment research literature covering the reliability of each testing method.

Prereq: Department permission.

PSY 671 Personality Evaluation II. Four sem hours

Supervised practice is given in test administration, scoring and interpretation of test protocols administered to psychiatric patients and emotionally disturbed children.

Prereq: Department permission.

PSY 680 Practicum in Clinical Psychology I. Three sem hours

Supervised psychological testing and interviewing in a clinical setting.

Prereq: PSY 650 Clinical Psychology and 662 Individual Testing I and department permission.

PSY 681 Practicum in Clinical Psychology II. Three sem hours

Supervised psychological testing and counseling in a clinical setting, plus completion of a research project in that setting.

Prereq: PSY 680 Practicum in Clinical Psychology and department permission.

PSY 690, 691, and 692 Thesis. One, two and three sem hours

Completion of research problem, writing thesis and defense of thesis.

Prereq: Permission of the department.

PSY 696 Seminar in School Psychology. Four sem hours (one hour per sem)

Bi-weekly seminar for presentation and discussion of critical issues and problems in school psychology, including case studies, role definitions, ethical problems, inter and intra-professional relationships and research findings.

Prereq: Admission to the School Psychology Program.

SOCIOLOGY

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The Sociology Department offers two graduate degree programs; one in sociology, and one in criminology and criminal justice.

MASTER OF ARTS IN SOCIOLOGY

The M.A. program in sociology is designed to prepare students for: careers in business, industry and government at local, state and federal levels; further graduate work leading toward the Ph.D. in sociology; and post-secondary teaching

ADMISSION REQUIREMENTS

To qualify for admission to the M.A. program in sociology, applicants must have an undergraduate grade point average of at least a 2.5 (A=4.0) with a 3.0 in their major or demonstrate the ability to do quality graduate work by attaining a score at the 60th percentile on the Graduate Record Exam. In addition they must have completed the following undergraduate courses or their equivalents:

- 250 Elementary Social Statistics
- 403 Sociological Theory
- 404 Methods in Sociological Research

Applicants who have not completed one or more of these courses may be admitted conditionally to the program with the permission of the program chairperson. Courses required to make up deficiencies in sociology will be arranged with the graduate adviser in the Sociology Department and will be above and beyond (and sometimes prior to) the 30 hours of requirements.

COURSE REQUIREMENTS

	Sem Hours
1. SOC 530 Advanced Social Statistics	3
SOC 535 Advanced Methods in Sociological Research	3
SOC 540 Advanced Sociological Theory	3
	9
2. Additional graduate sociology electives as approved by graduate adviser in the Sociology Department	15-9
3. Thesis credit	4
4. At least one seminar (Sociology 596). The specific seminar(s) selected to be approved by the graduate adviser	2
5. Cognate courses in other fields, as approved by graduate adviser in the Sociology Department	0-6
TOTAL	30

Selected 300 or 400 level undergraduate courses in sociology and anthropology may be taken for graduate credit in consultation with the graduate adviser. Graduate students in sociology may take courses SOC 500-509 for elective credit as part of their course requirements only upon the approval of the graduate

adviser in the Sociology Department. Graduate students not majoring in sociology but desiring a cognate in the department may also elect these courses for cognate credit in consultation with their advisers.

All graduate students in sociology are required to have their programs approved by the graduate adviser in the Sociology Department prior to registration each semester.

MASTER OF ARTS IN CRIMINOLOGY AND CRIMINAL JUSTICE

The master's degree curriculum in criminology and criminal justice serves the following educational and career goals:

1. the attainment of advanced education for persons who wish to enter careers in post-secondary education;
2. the development of skills in research and program planning and evaluation in criminology and criminal justice;
3. the strengthening of the professional qualifications of persons employed in the fields of criminal justice.

The analytical and evaluative skills offered by this program should enable students to identify, evaluate, and assess the often conflicting objectives of criminal justice and to apply this knowledge to the investigation of basic issues and practical problems in criminology and the administration of criminal justice.

ADMISSION REQUIREMENTS

Applicants must have at least a "B" average in their undergraduate work or demonstrate the ability to do quality graduate work by attaining a score at the 60th percentile on the Graduate Record Exam. In addition they must have completed the following undergraduate courses or their equivalent:

- 250 Elementary Social Statistics
- 404 Methods in Sociological Research
- 406 Criminology
- 407 Criminal Justice in Contemporary Society

A grade of no less than "B" is required in 250 Elementary Social Statistics and 404 Methods in Sociological Research. Applicants who have not completed one or more of these courses may be admitted conditionally to the program with the permission of the program chairperson and complete them while taking required graduate courses.

COURSE REQUIREMENTS

The degree program consists of 31 hours of credit apportioned as follows:

	Credit Hours
1. Core Courses	
412 Law and Society	3
510 Theories of Criminal Behavior	3
511 Sociology of Crime and its Correction	3
513 Social Deviance	3
591 Research Methods in Criminology and Criminal Justice Evaluation	3

2. Master's Thesis	4
3. Electives	12-6
4. Cognate Courses (to be approved by the program chairperson)	0-6
TOTAL	31

THESIS REQUIREMENT

Each student is required to write a thesis as part of either the Master of Arts Program in sociology or criminology and criminal justice (four hours of the graduate program are set aside for thesis preparation). The subject of the thesis is determined by the student and the advisers in light of the special interests of the student. The completed thesis must be approved by the department:

For information regarding the Master of Arts in social science, see page 105.

I. SOCIOLOGY

*** SOC 500 Man in Society. Two sem hours**

Basic concepts, theory and analysis of social structures, social process and social disorganization. Not open to students who have credit in sociology.

*** SOC 501 Contemporary Society. Two sem hours**

Basic sociological concepts and principles in an understanding of contemporary society; sociological research studies will be analyzed in detail. Not open to students who have credit in more than two courses in sociology.

Prereq: SOC 105 Introduction Sociology or SOC 500 Man in Society.

*** SOC 502 Racial and Cultural Minorities. Two sem hours**

Racial and cultural minorities in the modern world with particular references to the Negro and to European and Oriental immigrants in the United States, racial myths, doctrines and movements; conflict and accommodation of majority and minority peoples; proposed solutions of ethnic problems. Not open to students with credit for 214 Racial and Cultural Minorities.

Prereq: 105 Introductory Sociology, or SOC 500 Man in Society.

*** SOC 503 Marriage and the Family. Two sem hours**

The course highlights changes in marriage, family composition, social relations and roles, as well as the mutual interdependence between these and other institutions of society. It begins with the traditional pre-industrial or pre-urban family, showing how and why the family began changing at a rapid rate and exploring the problems of transitional phases. The present family with its middle class ideals is then examined closely. Finally, several trends in modern families are identified and some tentative predictions about future families and alternate family forms are made. Not open to students with credit in SOC 450 The Family.

Prereq: SOC 105 or SOC 500.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** SOC 504 Population. Three sem hours**

An examination of the determinants and consequences of population dynamics, with specific emphasis on fertility, mortality, and migration. Also examination of the relationship between human numbers and resources and its politico-economic implications. Makes use of computer simulation to better understand these concepts. Not open to students with credit in SOC 334 Population.

Prereq: SOC 105 or SOC 500.

*** SOC 505 Cultural Anthropology. Three sem hours**

Technology, social structure, political institutions, warfare, kinship and the family, religion and magic, art, creation and education in the cultures of non-literature peoples. Cultural dynamics; applied anthropology. Not open to students with credit in 135 Cultural Anthropology.

*** SOC 506 Criminology. Two sem hours**

An examination of the types of crime and theories of criminal causation and prevention. Attention is given to the functioning of police and court systems and problems of penology including parole. Not open to students with credit in 406 Criminology.

Prereq: SOC 105 or SOC 500; no credit 406.

*** SOC 508 Social Psychology. Two sem hours**

An introductory study of the order and regularity underlying processes of human interaction, motives and attitudes, social norms and roles, the socialization process, personality and group membership. The effect of group membership upon individual behavior. Not open to students with credit in SOC 308 or PSYCH 308.

Prereq: SOC 105 or SOC 500 and 101 or 102 General Psychology.

*** SOC 509 Personality and Social Systems. Two sem hours**

The cross-cultural study of personality and socio-cultural systems. Attention is paid to modal personality types as these relate to group structure, socialization, and social structure. Individual differences are not studied. Not open to students with credit in ANT 309 Culture and Personality.

Prereq: SOC 105 or SOC 500 or ANT 135 or ANT 505.

*** SOC 510 Theories of Criminal Behavior. Three sem hours**

Consideration of major theories of criminal delinquent causation. Emphasis on sociological factors in criminal acts and dynamics of criminal and delinquent behavior.

Prereq: At least two courses in Sociology; including 406 Criminology.

*** SOC 511 Sociology of Crime and its Correction. Three sem hours**

Punishment, rehabilitation, contemporary correctional policies. The courts and criminal responsibility. The social structure of correctional organizations and institutions and their effect on the correctional process.

Prereq: At least two courses in sociology, including 406 Criminology.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** SOC 513 Social Deviance. Three sem hours**

The development of deviant self-conceptions; social psychological processes of group alienation and individual estrangement. Deviant behavior patterns and the development of deviant careers; theories of deviance.

Prereq: *At least two courses in sociology.*

*** SOC 530 Advanced Social Statistics. Three sem hours**

This course will focus considerable attention on non-parametric statistics but will also examine the problem of controlling for variables in a statistical sense. Certain of the classical techniques of multivariate analysis will be included.

Prereq: *250 Elementary Social Statistics.*

*** SOC 535 Advanced Methods in Sociological Research. Three sem hours**

Relationship of theory and research is stressed. Consideration of the research process as a decision-making situation both on the general level of research design and the specific level of special techniques. The process and logic of data analysis.

Prereq: *403 Modern Sociological Theory and 404 Methods of Sociological Research.*

*** SOC 536 Qualitative Analysis. Three sem hours**

An examination of the methods and techniques of qualitative analysis in sociology. Research will be conducted by class members and reviewed in seminar presentations.

Prereq: *403 Modern Sociological Theory and 404 Methods in Sociological Research.*

*** SOC 539 Special Topics in Sociology. Two sem hours**

The content and form of this course will be experimental and vary from year to year. Special topics in sociology not given in usual course offerings but of sociological importance will be covered. The exact title of the course will be announced in the appropriate schedule.

*** SOC 540 Advanced Sociological Theory. Three sem hours**

An analysis of contemporary theoretical schools of thought in sociology.

Prereq: *403 Modern Sociological Theory and 404 Methods in Sociological Research.*

*** SOC 541 Theory Construction and Verification. Three sem hours**

Analysis of contemporary strategies in theory, construction and verification. Problems of validity and reliability will be emphasized. Open to non-sociology majors with permission of the instructor.

Prereq: *403 Modern Sociological Theory and 404 Methods in Sociological Research.*

*** SOC 542 Social Stratification Theory and Research. Three sem hours**

A comprehensive study of the theories of social stratification; an examination of the problems encountered in attempts at empirical verification of these theories; and an exploration of current research relating to social stratification.

Prereq: *310 Contemporary American Class Structure or an undergraduate degree in sociology.*

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

* **SOC 545 Advanced Social Psychology. Three sem hours**

This course is an in-depth study of interpersonal behavior and group processes with special emphasis on the effects of group membership on individual behavior. Topics studied may include attitudes, interpersonal influence and attraction and leadership.

Prereq: 250 *Elementary Social Statistics*, 308 *Social Psychology*, and 404 *Methods in Sociological Research*.

* **SOC 551 Research in Family Interaction. Three sem hours**

Review of research on family interaction, with particular emphasis on experimental observational studies. Power structure role differentiation, communication patterns and coalition formation.

Prereq: Nine hours of sociology.

* **SOC 555 Contemporary Community Structure. Three sem hours**

Theoretical perspectives in the analysis of urban communities including urban change; the development of stratification patterns and power structures and the role of various urban institutes.

Prereq: Nine hours of sociology.

* **SOC 556 Human Ecology and Community Development. Three sem hours**

An analysis of the forms and development of the urban community; spatial and temporal patterns, organization of urban functions, rural-urban relationships and the current metropolitan trend in the U.S.

Prereq: Nine hours of sociology.

SOC 592 Research Methods in Criminology and Criminal Justice Evaluation. Three sem hours

Research design in criminology: the application of criminological theories and methods to the evaluation of policies and programs in criminal justice. A case study analysis of examples of basic and evaluation research employing standard techniques and methods.

* **SOC 594 Supervised Field Experience. Two sem hours**

Supervised internship in a community agency such as a correctional institution, an enforcement agency, human relations committee, city planning agency or in a project for the rehabilitation of persons in culturally or economically deprived segments of the community. Students are ordinarily placed for two consecutive semesters.

Prereq: Permission of the department.

* **SOC 595 Workshop in Crime and the Community.**

Two sem hours (summer only)

A brief, intensive exploration of specific aspects of crime and its relationship to social organization. Not open to students with credit in 406 *Criminology* or equivalent.

Prereq: 105 *Introductory Sociology* or SOC 500 *Man in Society*.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

SOC 596 Seminar in Sociology. Two sem hours

The intensive exploration of theoretical and methodological issues in a selected area of sociology. The topic will be announced in the class schedule issued prior to registration.

Prereq: Permission of the department.

SOC 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a member of the sociology faculty.

Prereq: Permission of the department.

SOC 690, 691 and 692 Thesis. One, two and three sem hours

Prereq: Permission of the department.

II. ANTHROPOLOGY

***ANT 505 Cultural Anthropology. Three sem hours**

Technology, social structure, political institutions, warfare, kinship and the family, religion and magic, art, recreation and education in the cultures of non-literate peoples. Cultural dynamics; applied anthropology. Not open to students with credit in 135 Cultural Anthropology.

***ANT 509 Personality and Social Systems. Two sem hours**

The cross-cultural study of personality and socio-cultural systems. Attention is paid to modal personality types as these relate to group structure, socialization, and social structure. Individual differences are not studied. Not open to students with credit in SOC 309 Culture and Personality.

Prereq: SOC 105 or SOC 500 or ANT 135 or ANT 505.

ANT 525 Anthropology of Contemporary Issues. Three sem hours

This course will look at the contributions of anthropology to an understanding of contemporary social issues. The various issues to be examined from a social and cultural perspective include violence, poverty, political, economic, educational, cross-cultural, racism, ethnicity, and the role of Western culture on the 3rd World.

III. OTHER

Any 300 or 400 level undergraduate course in sociology and anthropology may be taken for graduate credit in consultation with the graduate adviser.

SPEECH and DRAMATIC ARTS

Thomas J. Murray,
Department Head
124 Quirk,
Tele. 487-3131

Parker Zellers,
Coordinator of Advising
102 Quirk,
Tele. 487-1221

The Department of Speech and Dramatic Arts provides the following program of graduate study leading to the Master of Arts in speech and dramatic arts

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

- I. Objectives:
 - A. To provide advanced preparation both for the teaching of speech and dramatic arts and for other communication related pursuits.
 - B. To provide preparation for further study of advanced graduate work in speech and dramatic arts.

- II. Requirements for Admission:
 - A. Undergraduate major or minor in speech and/or dramatic arts.
 - B. Degree admission requirement of the Graduate School as described elsewhere in this catalog.
 - C. Regular admission to the department by the Graduate Committee of the Department of Speech and Dramatic Arts.

- III. Course of Study:
 - A. The completion of a minimum of 30 hours of approved course work beyond the bachelor's degree.
 - B. The selection of a specialization in (1) communication-public address, (2) dramatic arts, or (3) drama for the young.
 - C. Training in research approaches and resources in speech and dramatic arts; a possible interdepartmental cognate; and a possible intradepartmental cognate in communication-public address, dramatic arts, drama for the young, radio/tv/film, oral interpretation or speech science and pedagogy.

- IV. Graduation Requirements:
 - A. The completion of all conditions stipulated upon entry into the program.
 - B. The attainment of a 5.0 (B) average in all course work.
 - C. Either the successful completion of a terminal qualifying examination or the submission and defense of a thesis.

I. GENERAL COURSES

General courses in speech and dramatic arts are courses which, in addition to being offered for credit toward an M.A. in speech and dramatic arts, are offered for the benefit of graduate students specializing in departments other than speech and dramatic arts who wish to take collateral or cognate work in the Department of Speech and Dramatic Arts. Such students, however, are not restricted to these courses; they may take any other graduate courses in speech and dramatic arts for which they have prerequisites.

Communication and Public Address

* SPH 506 Persuasion in the Modern World. Two sem hours

Emphasis is placed on the uses and applications of persuasion in the various areas of social interaction. Persuasive influences will be examined in such areas as politics, business, religion and education.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** SPH 508 Small Group Decision Making. Two sem hours**

The theory and practice of discussion and practice of oral communication in small group decision-making (formerly SPH 589 Discussion and Conference)

*** SPH 509 Communications for Leaders. Two sem hours**

Theory and applications of communication in leadership roles. Deals with interviews, staff meetings, dyadic communication, communication in large and small organizations, and communication barriers with methods of evaluating and improving interpersonal, group, and public communication.

*** SPH 596 Seminar in Directing High School Forensics Activities.**

Two sem hours

The philosophy, organization and administration of forensic programs for those who direct or plan to direct extracurricular speech activities.

Radio, Television and Film

*** SPH 537 Mass Communications. Two sem hours**

A comparative study of the mass media in the United States: their development, function and import. Special emphasis will be placed on the process and effects of mass communication with detailed study of radio and television.

*** SPH 538 Television Techniques for Classroom Teachers I. Two sem hours**

Skills and techniques needed by classroom teachers for the effective presentation of educational materials through the medium of television. Theory and practice.

*** SPH 548 Television Techniques for Classroom Teachers II. Two sem hours**

A continuation and intensification of the theoretical and practical experience in instructional television provided in SPH 538 Television Techniques for Classroom Teachers I. Laboratory hours to be arranged.

*** SPH 596 Seminar in Directing High School Broadcasting and Film Activities.**

Two sem hours

Practical experience in radio, television and film. Available to teachers and high school students interested in broadcasting.

Dramatic Arts

SPH 503 Play Production—Junior-Senior High School. Two sem hours

Principles and techniques of play production with emphasis on problems encountered in secondary schools. Dramatic structure, play selection, directing scene design and construction, stage lighting, make-up, costuming, properties and business management; improvement of effectiveness in both curricular and extracurricular theatre.

*** SPH 596 Seminar in Directing High School Dramatic Activities**

Two sem hours

The philosophy, organization and administration of dramatic programs for those who direct or plan to direct extracurricular dramatic activities.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

Drama for the Young

*** SPH 501 Creative Drama. Two sem hours**

The theory and techniques of informal drama, improvisation, and dramatic play.

*** SPH 502 Drama for Children. Two sem hours**

An introductory consideration of the scope and purposes of theatre experience for children and adolescents.

*** SPH 504 Oral Literature and Language with the Young. Two sem hours**

Emphasis on the study of interpreting literature orally for and with the young, including developing competence and understanding in the adult and child in interpretive and improvised work emerging from literature and language.

*** SPH 565 Seminar in Dramatic Arts for Children. Two sem hours**

Advanced study of the history, theory and techniques of dramatic arts for children.

Prereq: 323 Improvisation or 501 Creative Drama plus 322 Theatre for Children or 502 Drama for Children.

II. SPECIALIZATION COURSES

Specialization courses in speech and dramatic arts are courses specifically designed for students wishing credit toward the M.A. in speech and dramatic arts. Such courses are open to other students, however, who have the necessary prerequisites.

Communication and Public Address

*** SPH 539, 540, 541 Special Topics in Speech and Dramatic Arts.**

One, Two and Three sem hours

A course which focuses on a particular topic in speech and dramatic arts which is approved by the department.

Prereq: Departmental permission.

SPH 570 College Teaching of Speech. One sem hour

Theory and practice of teaching speech at the college level.

Prereq: Permission of the department.

*** SPH 576 Public Address. Three sem hours**

Critical study of the significant speeches of leading speakers with reference to their dominant issues and their influence on social and political life.

Prereq: Fifteen hours of credit in communication-public address.

*** SPH 581 Rhetorical Theory to 1900. Three sem hours**

A study of selected rhetorical theories from the classical age to 1900. The course is designed to facilitate understanding of the transition from classical to modern rhetorical theory.

Prereq: Fifteen hours of credit in communication-public address.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** SPH 582 Modern Rhetorical Theory. Three sem hours**

A study of selected rhetorical theories from 1900 to the present with a view of discovering the methods and objectives of modern rhetoricians and relating them to society and its problems.

Prereq: Fifteen hours of credit in communication-public address.

*** SPH 584 Studies in Small Group Communications. Three sem hours**

An examination of methods and research currently being conducted in discussion and small group studies.

Prereq: Fifteen hours of credit in communication-public address.

*** SPH 585 Theories of Argument and Controversy. Three sem hours**

Theoretical foundations of argument and controversy and a review of related research.

Prereq: Fifteen hours of credit in communication-public address; and major graduates.

*** SPH 586 Theories of Persuasion. Three sem hours**

A review of contemporary research and theory in persuasion.

Prereq: Fifteen hours of credit in communication-public address; and major graduates.

*** SPH 587 Speech Communication Theory. Three sem hours**

A critical examination of fundamental processes and principles of communication behavior.

Prereq: Fifteen hours of credit in communication-public address; and major graduates.

*** SPH 588 Research Methods in Speech Communication. Three sem hours**

The examination of speech communication research methods with a major emphasis upon empirical research. Students will select and design a major research project.

Prereq: Fifteen hours of credit in communication-public address; and major graduates.

SPH 592 Research Techniques in Speech and Dramatic Arts. Two sem hours

An introduction to the nature and value of research; the research problem; basic research tools; philosophical foundations of historical, descriptive and experimental research; professional writing. (winter semesters)

Prereq: Fifteen hours of credit in speech and dramatic arts and major graduate.

SPH 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of one or more problems under the direction of a University faculty member.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

SPH 689 Readings in Speech and Dramatic Arts. One sem hour

Supervised reading in the literature of speech or dramatic arts to provide comprehensive understanding of the field.

Prereq: Graduate student in speech and dramatic arts and department permission.

SPH 690, 691, 692 Thesis. One, two and three sem hours

An intensive study of one or more problems under the direction of a University faculty member.

Prereq: Department permission.

SPH 696 Seminar in Speech and Dramatic Arts. One sem hour

A research-oriented course for graduate majors in speech and dramatic arts.

Prereq: Graduate student in speech and dramatic arts and departmental permission.

Dramatic Arts***SPH 539, 540, 541 Special Topics in Speech and Dramatic Arts.**

One, Two and Three sem hours

A course which focuses on a particular topic in speech and dramatic arts which is approved by the department.

Prereq: Department permission.

***SPH 551 Theatre Planning. Two sem hours**

A study of the steps and considerations appropriate to the design of theatre structures with emphasis on institutional and community playhouses.

Prereq: Nine hours credit in dramatic arts or permission of the department.

***SPH 556 Advanced Directing Lab. One sem hour**

Intensive scene study of selected dramatic styles and theatrical variants.

Prereq: One course in play direction or permission of the department.

***SPH 557 Advanced Acting Lab. One sem hour**

Intensive scene study of selected dramatic styles and theatrical variants.

Prereq: One course in acting or permission of the department.

***SPH 558 Advanced Directing. Two sem hours**

Theoretical and practical considerations involved in the direction of selected non-realistic styles of drama.

Prereq: One course in play direction or permission of the department.

***SPH 559 Advanced Acting. Two sem hours**

Theoretical and practical considerations involved in the acting of selected non-realistic styles of drama.

Prereq: One course in acting or permission of the department.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** SPH 560 Ancient Dramatic Theory. Three sem hours**

Study of the main theories regarding the nature and purpose of drama from ancient Greece to the end of the 17th century.

Prereq: 406 *History of the Theatre* or permission of the department.

*** SPH 561 Modern Dramatic Theory. Three sem hours**

The main theories regarding the nature and purpose of drama from the beginning of the 18th century to the present.

Prereq: SPH 560 *Ancient Dramatic Theory* or permission of the department.

*** SPH 562 American Theatre History. Two sem hours**

A tracing of the main currents in the history of the American Theatre from its beginnings in the middle 1700's to the present day.

Prereq: 406 *History of the Theatre* or permission of the department.

*** SPH 566 Seminar in Theatre History. Two sem hours**

This course will be concerned with a penetrating study of the theatrical activity and technology prevalent during a particular period in world history.

Prereq: 406 *History of the Theatre* or department permission.

*** SPH 567 Seminar in Design and Technical Theatre. Two sem hours**

An intensive study of the organic theory of theatre production with emphasis on the contributions of Craig, Appia, Bakst, Reinhardt, Jones, Simonson and BelGeddes.

Prereq: 370 *Scene Design*, 376 *Stage Lighting*, 406 *History of the Theatre* or permission of the department.

*** SPH 568 Seminar in Acting. Two sem hours**

Discussion in depth of outstanding representatives from the literature of the field of acting.

Prereq: Nine hours of credit in dramatic arts or permission of the department.

*** SPH 569 Seminar in Directing. Two sem hours**

Discussion in depth of outstanding representatives from the literature of the field of directing.

Prereq: Nine hours of credit in dramatic arts or permission of the department.

SPH 592 Research Techniques in Speech and Dramatic Arts. Two sem hours

An introduction to the nature and value of research; the research problem; basic research tools; philosophical foundations of historical, descriptive and experimental research; professional writing.

Prereq: Fifteen hours of credit in speech and dramatic arts and major/graduate.

SPH 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of one or more problems under the direction of a University faculty member.

Prereq: Department permission.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

SPH 651 Design I. Two sem hours

Intermediate consideration of the theoretical and mechanical factors governing the design of scenery for the stage.

Prereq: Six hours of credit in dramatic arts.

SPH 652 Lighting. Two sem hours

A continuation of 376 Stage Lighting.

Prereq: Graduate standing.

SPH 653 Costume I. Two sem hours

Intermediate study of the approaches to and the historical sources for stage costuming.

Prereq: Six hours of credit in dramatic arts.

SPH 654 Costume II. Two sem hours

Problems of construction and design of period costumes for the stage with emphasis on practical application culminating in a final design and construction project.

Prereq: 377 Stage Costume: History and Theory, SPH 653 Costume I or permission of the department.

SPH 655 Playwriting I. Two sem hours

Intermediate study of the approaches to and the structural composition of dramatic writing.

Prereq: Six hours of credit in dramatic arts.

SPH 656 Playwriting II. Two sem hours

A continuation of 386 Dramatic Writing.

Prereq: Graduate standing.

SPH 689 Readings in Speech and Dramatic Arts. One sem hour

Supervised reading in the literature of speech or dramatic arts to provide a comprehensive understanding of the field.

Prereq: Graduate student in speech and dramatic arts and department permission.

SPH 690, 691, 692 Thesis. One, two and three sem hours

Prereq: Department permission.

SPH 696 Seminar in Speech and Dramatic Arts. One sem hour

A research-oriented course for graduate majors in speech and dramatic arts.

Prereq: Graduate major in speech and dramatic arts and department permission.

Drama for the Young

* SPH 565 Seminar in Drama for the Young. Two sem hours

Advanced study of the history, theory and techniques of dramatic arts for children.

Prereq: 323 Improvisation or 501 Creative Drama plus 322 Theatre for Children or 502 Drama for Children.

SPH 592 Research Techniques in Speech and Dramatic Arts. Two sem hours

An introduction to the nature and value of research; the research problem, basic research tools; philosophical foundations of historical, descriptive and experimental research; professional writing.

Prereq: Fifteen hours of credit in speech and dramatic arts and major/graduate

SPH 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of one or more problems under the direction of a University faculty member.

Prereq: Department permission.

SPH 657 Advanced Improvisation. Three sem hours

A study of spontaneous dramatic play meant to develop deeper self-discipline and freedom and to extend resources for teaching, directing, and acting.

Prereq: Graduate in speech and dramatic arts.

SPH 658 Theatre for Children. Three sem hours

An extensive study of the nature and range of theatre experiences for children and adolescents.

Prereq: Six hours credit in dramatic arts.

SPH 689 Readings in Speech and Dramatic Arts. One sem hour

Supervised reading in the literature of speech or dramatic arts to provide a comprehensive understanding of the field.

Prereq: Graduate student in speech and dramatic arts and department permission.

SPH 690, 691, 692 Thesis. One, two and three sem hours

An intensive study of one or more problems under the direction of a University faculty member.

Prereq: Department permission.

SPH 696 Seminar in Speech and Dramatic Arts. One sem hour

A research-oriented course for graduate majors in speech and dramatic arts

Prereq: Graduate major in speech and dramatic arts and department permission.

III. OTHER COURSES FOR CREDIT TOWARD MASTER OF ARTS IN SPEECH AND DRAMATIC ARTS

The following courses for advanced undergraduates are also available to graduate students. For description of these courses, see the Undergraduate Catalog.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

Communication and Public Address

- 354 Organizational Communication. (3)
- 440 Survey of Public Address. (3)
- 460 Theory of Speech Criticism. (3)
- 466 Forensic Contest Speaking. (1)
- 475 Research in Speech Communication. (3)
- 485 Theories of Speech Communication Behavior. (3)

Broadcasting and Film

- 333 Fundamentals of Film Production (Cinematography). (3)
- 343 Broadcast News. (3)
- 431 Advanced Radio Production and Direction. (3)
- 432 Advanced Television Production and Direction. (3)
- 445 Film Theory. (3)
- 446 Broadcasting in Society. (3)
- 447 Broadcast Management. (3)

Interpretation

- 410 Interpretation of Shakespeare. (3)
- 411 Advanced Problems in Interpretation. (3)
- 414 Development and Theory of Oral Interpretation. (3)

Speech Science

- 400 Phonetics and Dialects of Spoken English. (3)
- 402 Voice Development. (1)
- 405 Voice and Dialects. (3)

Dramatic Arts

- 406 History of the Theatre. (3)
- 452 Theatre Management. (2)
- 467 Theatre Practice. (1)

Drama for the Young

- 467 Theatre Practice. (1)
- 468 Interpretation. (1)

The following courses for undergraduates are also available to graduate students under special circumstances. On this matter the student should have a clear understanding with the department and the Graduate School before completing registration.

Communication and Public Address

366 Forensic Debate and Discussion. (1)

Broadcasting and Film

331 Fundamentals of Radio Production and Direction. (3)

332 Fundamentals of Television Production and Direction. (3)

340 Broadcast Performance Techniques. (3)

344 Broadcast Continuity Writing. (3)

Interpretation

310 Oral Interpretation of Poetry. (3)

314 Interpretation of Drama. (3)

Speech Science

301 Speech Science. (3)

302 Voice Development. (1)

Dramatic Arts

335 Play Direction. (3)

367 Theatre Practice. (1)

Drama for the Young

322 Theatre for Children. (3)

323 Improvisation. (3)

324 Oral Interpretation of Children's Literature. (3)

368 Interpretation. (1)

COLLEGE OF BUSINESS

ACTING DEAN: Claude I. Shell

DEPARTMENTS

Accounting and Finance
Administrative Services and Business Education
Management
Marketing
Operations Research and Information Systems

GRADUATE PROGRAMS IN BUSINESS

The College of Business offers four graduate degree programs which provide professional preparation for management careers: the Master of Business Administration (MBA) degree which is designed to establish a broad understanding of the business function; the Master of Science in accounting (MSA) degree which is designed to provide an opportunity to specialize in financial management and accounting; the Master of Science in computer-based information systems (MSIS) degree designed to provide the basic conceptual framework and tools of analysis necessary to design, develop, implement and control computer based information systems; and a new program, the Master of Science in organizational behavior and development (MSOD) degree designed to provide training in solving personnel and organizational development problems.

The primary purpose of these programs is to provide high-level, professional education needed to enhance the career opportunities of men and women currently employed in business, industry and public service positions in Southeastern Michigan.

In addition, these programs provide professional preparation required for men and women who contemplate pursuing management careers in business, industry and government.

The College, in cooperation with the College of Education, offers a graduate program leading to the Master of Business Education (MBE) degree, a professional degree designed to prepare business students for teaching careers in secondary schools and community colleges. It is awarded by the College of Education.

Admission to graduate programs in the College of Business will be limited to students showing high promise of success in post-baccalaureate study in business. Various predictive measures of high promise will be used: (a) candidate's undergraduate grade point average; (b) undergraduate grade point average in the last 60 semester hours; (c) candidate's performance on the Graduate Management Admission Test; or any other relevant test; and (d) grades received in post-baccalaureate study.

General Admission Information

All applicants for admission must hold either the bachelor's or master's degree from a regionally accredited college or university. Admission to a master's degree program will not be granted until the applicant has completed all degree admission requirements of the Graduate School along with the requirements for the master's degree program selected.

Three options are available for meeting admission requirements to the graduate business programs.

The regular requirements for admission to each of the graduate programs are graduation from an accredited university or college, a specific undergraduate grade point average, and a GMAT score of 450 or higher.

There is also a formula admission which allow applicants with a lower than

required undergraduate grade point average to be admitted if they have a correspondingly higher GMAT score.

The third method is designed for the student with non-degree admission who has satisfactorily completed 12 hours of adviser approved classes (with no repeats) from any business program and has submitted a GMAT score of at least 400.

Specific admission requirements for each master's degree program are indicated in the program descriptions below.

Foreign Students

Applicants who hold degrees from foreign colleges or universities must present a Class I or II diploma, or the equivalent thereof. If the applicant's native tongue is not English, a TOEFL (Test of English as a Foreign Language) score of 500 or above, or a score of 85 on the English Language Institute Test, is required.

Length of Program

Under normal conditions, students with undergraduate business administration degrees may complete a full-time master's program in one calendar year. Two years of study are normally required for graduates with non-business undergraduate degrees. Students whose undergraduate preparation has been in a non-business area must complete all business prerequisites before degree program classes may be taken. The number of prerequisite courses required varies with the student's area of undergraduate preparation.

Eastern Michigan University offers a series of 400 level foundation courses designed and reserved for graduate students which may be taken in lieu of the undergraduate course requirements. The foundation classes may not be taken for graduate business program credit.

Foundation Courses (for all programs)

Undergraduate Prerequisites

Equivalent Foundation Classes

Principles of Accounting	(6)	ACC 491	(3)
Principles of Finance	(3)	FIN 492	(3)
Principles of Management	(3)	MGT 491	(3)
Principles of Marketing	(3)	MKT 491	(3)
Statistics	(3)	ORI 494	(3)
Fortran Programming	(3)	ORI 495	(3)
Legal Environment of Business	(3)	ADS 493	(3)
Principles of Economics	(6)	ECON 501 and 502	(6)
College Algebra and Beginning Calculus	(3 or 6)	• Math 118 and/or 119	(3-6)

Additional prerequisite requirements are listed on the following pages: MBA, page 165, MSA, page 166, MSIS, page 168, MSOD, page 170.

College Level Examination Program (CLEP) test scores or other proficiency examination results will be accepted.

Admission to the master's degree programs or enrollment in post-baccalaureate courses may be started at the beginning of any regular enrollment period, fall, winter, spring or summer.

Formula Admission

Applicants whose undergraduate grade point average is below 2.5 or that required by the department, may if they have a GMAT score above 450 be admitted if they comply with one of the formulas below:

$200 \times \text{overall undergraduate GPA} + \text{GMAT score (450 minimum)} = 950$ points for all graduate business programs except MSA which requires 990 points, or $200 \times \text{GPA for last 60 undergraduate hours} + \text{GMAT score (450 minimum)} = 1000$ points, for all graduate business programs except MSA which requires 1050 points.

Non-Degree Students

Most graduate students qualify for degree admission to a graduate business program through the regular or formula admission options, but many students interested in graduate business courses only, enroll under a non-degree admission issued by the Graduate School. Some of these students develop an interest in further post-baccalaureate study in business but do not have the required undergraduate grade point average and/or a 450 test score. These non-degree students, if they have a 400 test score, may establish eligibility for admission by completing all necessary prerequisites or foundation classes with a "B" average and 12 hours of graduate level core classes approved by the adviser, with a "B+" average with no grades below "B." Non-degree students are entitled to only one enrollment in graduate level business classes before submitting a 400 or higher GMAT test score.

No more than 12 semester hours of core classes completed before admission to a graduate business program may be applied to a degree program. Repeated classes will not be accepted.

Graduation Requirements

Each candidate's program must include at least 12 hours of business classes at the 600 level.

Candidates for graduation must have a cumulative grade point average of "B" in all graduate work completed and must have a "B" average in all business courses applied to the degree program. Degree programs may include only courses taken within six years prior to graduation.

Facilities

The College of Business classrooms and lecture halls are equipped with TV screens and have access to the educational computer facilities in the same building. There are special accounting and business education laboratory facilities. The ORIS Department maintains a computer laboratory with 14 terminals, some with hard-line connections to the Instructional Computer Center in the same building in which the College of Business is located.

MASTER OF BUSINESS ADMINISTRATION (MBA)

MBA Program Objectives

The program is designed to establish a broad understanding of the business function, its relation to society as a whole, as well as the effect of social and political forces on business, and to provide some specialization or concentration for the student to perform in a chosen area of employment.

MBA Program Admission

All applicants for admission to the MBA Program must meet the following requirements:

1. Bachelor's or master's degree from a regionally accredited college or university.
2. A cumulative undergraduate grade point average of 2.5 (4.0 system), or a 2.75 undergraduate grade point average for the last 60 hours or persons holding the master's degree must have a graduate grade point average of 5.0 (A=8.0)
3. Minimum score of 450 on the Graduate Management Admission Test (GMAT), or a minimum score of 1000 on the quantitative and verbal parts of the Graduate Record Examination (GRE).
4. Six semester hours of undergraduate study, or the grade level equivalent thereof in principles of accounting and in economics, plus three semester hours in principles courses in each of the following areas: management, marketing, computer programming, finance, statistics, legal environment of business, and in college algebra and introductory calculus.
5. See formula and Non-Degree Admission page 000.

MBA Program Requirements

The MBA degree program requires a minimum 30-33 hours plus any foundation or prerequisite course requirements.

The maximum class load for a full-time student is twelve hours per semester. An overload is permitted only after students have demonstrated their ability to achieve an outstanding graduate record at this university. Students working full-time should not take more than six hours.

1. Basic MBA Core (12 semester hours)

All MBA students take each of the following courses:

Quantitative Analysis for Business	ORI 586 (3)
Managerial Economics	ORI 588 (3)
Business Research	ORI 592 (3)
*Management Strategy and Policy	MGT 696 (3)

*Management Strategy and Policy, a capstone case course taken at or near the end of the program, is designed to improve decision-making ability.

2. Operational Areas (Core) (9-12 semester hours)

All MBA students will be required to take the operational area classes listed below. If a student has an undergraduate major in one of the operational areas, the required class in that area will be waived.

Marketing Policies and Problems	MKT 518 (3)
Administrative Controls	ACC 584 (3)
Organizational Theory and Behavior	MGT 585 (3)
Financial Administration Policies	FIN 683 (3)
3. Area of Concentration Electives (9 semester hours)	

Students may not elect more than three hours of graduate course work in their undergraduate major field and they may elect no more than six semester hours of 400 level undergraduate business or graduate non-business cognate credit to complete their areas of concentration.

An area of concentration may be elected in management, marketing, accounting, finance, information systems, computer systems, management science, college teaching in business, or a combination of business and/or business related (cognate) courses and/or independent study, research or thesis. Each student in an undergraduate program will be given full consideration when planning the area of concentration or electives.

Total semester hours required 30-3

MASTER OF SCIENCE IN ACCOUNTING (MSA)

MSA Program Admission

All applicants for admission to the MSA program must meet the following requirements:

1. Bachelor's or master's degree from a regionally accredited college or university.
2. A cumulative undergraduate grade point average of 2.70 or above (4.0 system) or a 3.00 undergraduate grade point average for the last 60 hours or person holding a master's degree must have a graduate grade point average of 5.50 or above (8.0 system). The master's degree grade point requirement must be met by all students who have completed 18 or more semester hours of post-baccalaureate study.
3. Minimum score of 450 on Graduate Management Admission Test (GMAT), or a minimum score of 1000 on the verbal and quantitative parts of the Graduate Record Examination (GRE).
4. Six semester hours of undergraduate study, or the graduate level equivalent thereof, in principles of accounting and in economics; plus three semester hours in principles courses in each of the following areas: management, marketing, computer programming, finance, statistics, legal environment of business and in college algebra and introductory calculus. In addition, all applicants must have completed at least six hours in intermediate accounting, three semester hours in cost accounting and three semester hours in tax accounting.
5. See Non-Degree Admission page 164.

MSA Program Requirements

Upon admission to the MSA Program, each student is required to prepare a total program of course work leading to the degree. The program is reviewed

with the student by the faculty or the MSA Program Committee to ascertain that it suits the student's background and career goals. The program of course work becomes the student's degree requirement when accepted by the student and the MSA Program Committee. Subsequent changes in course work must be approved by the MSA Program Committee.

1. Required Core Courses (15 semester hours)

ACC 587	Advanced Managerial Accounting	3
MGT 585	Organizational Theory and Behavior	3
ORI 586	Quantitative Analysis for Business	3
ACC 665	Theory of Accounting	3
ORI 592	Business Research	3

2. Electives Courses (15 semester hours) (At least six hours in accounting must be taken.)

ACCOUNTING

ACC 667	Professional Auditing	3
ACC 696	Seminar in Accounting	3
ACC 699	Independent Study	3

FINANCE

FIN 553	Business Financial Markets	3
FIN 573	Securities Analysis	3
FIN 683	Financial Administration Policies	3
ORI 689	Business Conditions: Analysis & Forecasting	3
FIN 693	Advanced Financial Management	3

INTERNATIONAL

ACC 544	International Taxation and Accounting	3
FIN 685	International Finance	3
MKT 460	International Marketing	3
MGT 489	Comparative Management Systems	3

SYSTEMS AND QUANTITATIVE ANALYSIS

ACC 610	Accounting System Design & Installation	3
ORI 687	Advanced Quantitative Methods	3

TAXATION

ACC 585	Business Tax Planning	3
ACC 672	Estate Tax Planning	3

Courses may be elected from other fields with the advice and consent of the program adviser.

Total semester hours required 30

MASTER OF SCIENCE IN COMPUTER-BASED INFORMATION SYSTEMS (MSIS)

MSIS Program Objectives

A program of study for students seeking a solid background in computer programming, computer systems analysis, management of computer related activities, design of information systems, modeling and computer simulation, and data base management.

MSIS Program Admission

All applicants for admission to the MSIS program must meet the following requirements:

1. Bachelor's or master's degree from a regionally accredited college or university.
2. A cumulative undergraduate grade point average of 2.5 (4.0 system), or a 2.75 undergraduate grade point average for the last 60 hours, or persons holding the master's degree must have a minimum grade average of "B."
3. Minimum score of 450 on the Graduate Management Admission Test (GMAT), or a minimum score of 1000 on the verbal and quantitative parts of the Graduate Record Examination (GRE).
4. Six semester hours of undergraduate study, or the graduate level equivalent thereof, in principles of accounting, economics, statistics, mathematics (including calculus); plus three semester hours in principles courses in each of the following areas: management, marketing, computer programming, finance and legal environment of business. Additional preparation in mathematics is recommended and students should be conversant in one low level and two high level computer languages.
5. See formula and Non-Degree Admission page 000.

MSIS Program Requirements

The MSIS requires a minimum of 30 hours of course work in addition to any foundation or prerequisite course requirements. The program consists of a required core directly related to information systems. In addition, students must select one of the following alternative plans:

	<i>Plan A</i>	<i>Plan B</i>	<i>Plan C</i>	Sem Hours
Required Core	Information Systems +	Information Systems +	Information Systems +	12

Concentration	Computer Systems	Management Science	Functional Area	9
	+	+	+	
Electives	Any combination of courses in Management Science and/or a Functional Area in business	Any combination of courses in Computer Systems and/or a Functional Area in business	Computer Systems or Management Science	
				<u>9</u>
				30

1. Required Core in Information Systems (12 semester hours)

All MSIS students take each of the following courses:

ORI 510	Access Methods and Data Structures	3
ORI 514	Project Mgt. for Comp.-Based Inf. Sys. I	3
ORI 615	Project Mgt. for Comp.-Based Inf. Sys. II	3
ORI 619	Research Seminar in Com.-Based Inf. Sys.	3

2. Concentration (9 semester hours)

(Select one of these areas: computer systems, management science or a functional area in business)

a. Areas of Concentration

Computer Systems

*ORI 520	Data Networks	3
*ORI 624	Operating Systems and Compiler Analysis	3
*ORI 628	Adv. Techniques of Info. Storage and Retrieval	3

b. Management Science

*ORI 530	Linear Programming and Extensions	3
ORI 536	Forecasting Models	3
*ORI 538	Simulation and Modeling	3
ORI 540	Operations Management	3
ORI 632	Nonlinear Programming	3
ORI 634	Stochastic Models	3

c. Functional Areas in Business

Options are Accounting, Finance, Marketing, Management, Operations Management or other area approved by adviser.

3. Electives (9 semester hours)

(Courses from remaining two areas not selected as concentration, i.e., computer systems as concentration, select electives from management science and functional area.)

Total semester hours required 30

A minimum of 30 semester hours of credit is required. No thesis is required. However, students are expected to develop a research paper related to the field of information systems in which they are interested. The research paper would be developed as part of the core requirements. Finally, students must be conversant in one low level and two high level computer languages before graduating.

*Required Courses for a particular area of concentration.

MASTER OF SCIENCE IN ORGANIZATIONAL BEHAVIOR AND DEVELOPMENT (MSOD)

MSOD Program Objectives

The program is designed to train organizational development practitioners to work with a complex network of events which enables organization members to better manage the culture of the firm, to be more resourceful in solving personnel development problems, and to assist the organization in adapting to ongoing change, both internal and external to its structure.

MSOD Program Admission

All applicants for admission to the MSOD Program must meet the following requirements:

1. Bachelor's or master's degree from a regionally accredited college or university.
2. A cumulative undergraduate grade point average of 2.5 (4.0 system), or a 2.7 undergraduate grade point average for the last 60 hours; persons holding a master's degree must have a graduate grade point average of "B" or better.
3. Minimum score of 450 on the Graduate Management Admission Test (GMAT) or a minimum score of 1000 on the verbal and quantitative parts of the Graduate Record Examination (GRE).
4. Three recommendations from professors or employers attesting to interest and need in Organization Development area.
5. Prior completion of two years successful full-time employment in an organization, preferably in a management role.
6. Approval, after an interview, by a program screening committee of Management Department faculty members.
7. Eastern Michigan University's College of Business is a member of the American Assembly of Collegiate Schools of Business, and is committed to maintaining the standards of this organization. In the area of curriculum, the assembly sets forth a common body of knowledge that must be met by all students receiving degrees from the member institutions. This common body includes areas of production; marketing; finance; economic, legal, social and political environment; accounting; quantitative methods; information systems; organization theory and behavior; interpersonal communications; and an integrative study of administrative processes. Each entering student's background is carefully examined to determine what, if any, deficiency exists and the best means of correcting such deficiencies. Typically, a student with a

undergraduate business degree will have satisfied all the requirements of the common body; those with different backgrounds frequently will have met some of the requirements, and the remainder can be met in various ways, including foundation courses which are made available to the student.

8. See formula and Non-Degree Admission page 164.

MSOD Program Requirements

1. Required Core Courses (24 semester hours)

MGT 585	Organization Theory and Behavior	3
MGT 586	Training and Organizational Development	3
MGT 587	Improving the Quality of Work Life	3
MGT 588	Organizational Communication	3
MGT 589	Techniques of Organization Development	3
MGT 590	Survey and Diagnostic Methods in Organization Development	3
MGT 593	Practicum in Organization Development	3
MGT 699	Independent Study	3

2. Electives Courses (9 semester hours)

ORI 592	Business Research	3
PSY 351	Industrial Psychology	3
SOC 307	Industrial Sociology	3
SPH 584	Studies in Small Group Communications	2
EDP 521	Statistics I: Descriptive Statistics	2
PSY 550	Dynamics of Human Behavior	2

Total semester hours required 33

Elective courses may also be elected from other fields with the advice and consent of the program adviser.

MASTER OF BUSINESS EDUCATION (MBE)

MBE Program Objectives

This graduate program recognizes the need for broadly educated business teachers. It is planned to qualify students for careers in the field of business education in secondary schools and community colleges. Special opportunity is provided for students wishing to complete academic study required for vocational certification in distributive and office education. Candidates completing the degree must be certified to teach in the secondary schools of Michigan.

MBE Program Admission

All applicants for admission to the MBE program must meet the following requirements:

1. Bachelor's or master's degree from a regionally accredited college or university.
2. Hold a valid teaching certificate.
3. Present evidence that at least two of the following qualifying standards have been met:

- a. Undergraduate grade point average of 2.50 (C+) on a four-point system. Persons holding a master's degree must have a minimum grade average of "B."
 - b. Score 400 or above on the Graduate Management Admission Test (GMAT), or a minimum score of 1000 on the verbal and quantitative parts of the Graduate Record Examination (GRE).
 - c. Complete at least six hours of graduate credit at Eastern Michigan University with a cumulative grade average of "B+."
4. Applicants must have completed (or agree to complete) undergraduate principles courses in economics, accounting, management, marketing, business writing, business law and data processing.

MBE Program Requirements

Upon admission, the candidate and the graduate adviser will jointly agree upon a program leading to the degree. Such a program includes maximum limits of six hours in arts and sciences; six hours in business administration, economics, or mathematics; six hours in general education; and the remainder, 18-24 hours, in business education.

All degree programs include only courses taken within a six-year period prior to graduation.

Additional information regarding graduate study in the College of Business may be obtained from:

MBA Degree Program	
MSOD Degree Program	517 Pray-Harrold
MBE Degree Program	
Department of Administrative Services and Business Education	515 Pray-Harrold
MSA Degree Program	
Department of Accounting and Finance	516 Pray-Harrold
MSIS Degree Program	
Department of Operations Research and Information Systems	511 Pray-Harrold

ACCOUNTING and FINANCE

**Elton A. Devine,
Department Head
516 Pray-Harrold,
Tele. 487-3320**

ACCOUNTING FOR POST-BACCALAUREATE STUDENTS

ACC 491 (formerly ACC 501) Accounting Principles. Three sem hours
For students who have not had undergraduate accounting. Introductory course

on accounting principles and techniques used to measure business transactions and to prepare financial statements.

Prereq: Open only to graduate students who have not had six hours of basic accounting.

ACC 515 Accounting for School Administrators. Two sem hours

Principles, theory and procedures of public school fund accounting; accounting principles, applied to various kinds of public school funds, financial statements and reports, internal accounting control, payroll accounting, business papers and procedures.

ACC 544 International Taxation and Accounting. Three sem hours

International accounting problems; the interaction of tax laws of the United States and of selected foreign countries.

Prereq: Completion of MSA Core.

ACC 584 Administrative Controls. Three sem hours

Areas covered include cost analysis; cost allocation to profit and investment centers; profit planning; cash flow analysis; inventory control; control of decentralized operations. Both text and cases are used.

Prereq: Completion of MBA Core. Not open to those MSA students who have taken a cost accounting course.

ACC 587 Advanced Managerial Accounting. Three sem hours

Covers concepts of management control through accounting, accounting for organizational objectives, profit and investment centers, budgeting, project planning and control. For MSA students; substantial completion of MSA prerequisites.

**OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS
IN THE COLLEGE OF BUSINESS**

ACC 585 Business Tax Planning. Three sem hours

Covers the taxation of corporation income retirement plans, mergers and other corporate reorganizations, transfers and liquidation.

Prereq: A basic income tax course (ACC 344); or departmental permission. Open only to students admitted to graduate programs in the College of Business.

ACC 610 Accounting System Design and Installation. Three sem hours

Provides the fundamentals of developing and analyzing accounting systems to produce efficient recording, optimum data processing procedures and appropriate analysis and interpretation for management. Case studies are used.

Prereq: ACC 584 Administrative Controls or 587 Advanced Managerial Accounting.

ACC 615 Corporate Financial Reporting. Three sem hours

Study of authoritative pronouncements on accounting principles for corporations which guide reporting financial position, results of operations and changes in fund flows. May include case studies or analysis of published financial reports. Not open to students who have taken six hours of intermediate accounting.

Prereq: Completion of MBA Core and ACC 584 Administrative Controls.

ACC 665 Theory of Accounting. Three sem hours

A study of the objectives, history and development of financial accounting theory; introduces advanced accounting problems in the areas of inventory accounting, intangibles, consolidations, partnership accounting, leases, pensions and prior period adjustments.

Prereq: ACC 615 Corporate Financial Reporting or 6 hours of intermediate accounting.

ACC 667 Professional Auditing. Three sem hours

A study of auditing concepts, objectives and procedures, and of the literature as it relates to current audit problems.

Prereq: ACC 615 Corporate Financial Reporting or 6 hours intermediate accounting.

ACC 672 Estate Tax Planning. Three sem hours

Study of the Federal taxation of estates, gifts and trusts, particularly as they affect family financial planning, and the preparation of federal estate tax, gift tax and fiduciary tax returns.

Prereq: A basic income tax course (ACC 344) or departmental permission.

ACC 696 Seminar in Accounting. Three sem hours

Study of selected problems in accounting. A contemporary issues seminar.

Prereq: ACC 615 Corporate Financial Reporting or department permission.

ACC 699 Independent Studies. Three sem hours

Directed study of problems in accounting or finance not otherwise treated in department courses.

Prereq: Completion of MSA core or departmental permission.

FINANCE FOR POST-BACCALAUREATE STUDENTS

FIN 492 (formerly FIN 502) Financial Principles. Three sem hours

An introduction to financial management of the business firm. Covers techniques and theory of asset management, financing, and dividend decisions.

Prereq: ACC 491 (formerly ACC 501) Accounting Principles. Open only to graduate students who have not had six hours of basic finance.

FIN 553 Business Financial Markets. Three sem hours

Study of the institutions from which long-term investment capital is obtained by a corporation through the several markets, and the allocation of funds among competing users.

Prereq: FIN 492 (formerly FIN 502) Financial Principles or departmental permission.

FIN 573 Securities Analysis. Three sem hours

An advanced course for the professional investment manager covering the areas of economic policy and forecasting, security valuation, technical analysis, portfolio methods and procedures applied to institutional portfolio management, trust financial management.

Prereq: FIN 492 (formerly FIN 502) Financial Principles or departmental permission.

INS 586 Risk and Risk Management. Three sem hours

Study of the nature of risk and the principles and methods used in risk management. Emphasis on use of insurance in handling business risks.

Prereq: *FIN 492 (formerly FIN 502) Financial Principles.*

OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS IN THE COLLEGE OF BUSINESS**FIN 683 Financial Administration Policies. Three sem hours**

The internal policies and problems of financial management encountered in business. Developing administrative insights in funds administration planning, capital structure planning, security distribution arrangements and timing, expansion financing and solvency maintenance.

Prereq: *Completion of MBA Core or departmental permission.*

FIN 685 International Finance. Three sem hours

Study of international monetary system, the environment of foreign investment decisions, financial control in multinational companies.

Prereq: *FIN 683 Financial Administration Policies or departmental permission.*

FIN 693 Advanced Financial Management. Three sem hours

Provides in-depth study of the central issues of corporate financial management, analysis of policies for high level financial decision making on capital budgeting and capital acquisition decisions.

Prereq: *FIN 683 Financial Administration Policies or departmental permission.*

FIN 694 Special Topics in Finance. Three sem hours

An in-depth study of a specialized area in accounting or finance.

Prereq: *FIN 683 Financial Administration Policies or departmental permission.*

**Tentative Schedule of Regularly Offered Graduate Courses
and Classes Reserved for Graduate Students**

Course	Winter	Spring	Summer	Fall
ACC 491	X	X		X
ACC 515			X	
ACC 584	X	X		X
ACC 585				X
ACC 587	X			
ACC 610				X
ACC 615	X			
ACC 665				X
ACC 667				X
ACC 672	X			
ACC 696	X			
FIN 492	X		X	X
FIN 553		X		X
FIN 573		X	X	X
INS 586		X		
FIN 683	X			X
FIN 693	X			

ADMINISTRATIVE SERVICES and BUSINESS EDUCATION

(formerly Business Education)

Rosetta Wingo
Acting Director
515 Pray-Harrold,
Tele. 487-3410

ADMINISTRATIVE SERVICES FOR POST-BACCALAUREATE STUDENTS

ADS 493 (formerly ADS 503) Legal Environment of Business. Three sem hours
The nature and operation of the American legal system; legal concepts of contract, property, tort; legal constraints on business activities. Law as an expression of social and political forces and as an instrument of economic and political change.

ADS 530 Modern Commercial Law. Three sem hours
Designed for students desiring a detailed knowledge of modern business law. Provisions of the Uniform Commercial Code are emphasized. Aspects of the law of sales; negotiable instruments, including effects of different endorsements; secured transactions, commercial financing and bankruptcy, bailments, bills of lading and letters of credit.
Prereq: Previous credit in law.

OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS IN THE COLLEGE OF BUSINESS

ADS 696 Seminar in Business Law. Three sem hours
A study of selected business law issues and topics which may vary from term to term.
Prereq: ADS 493 (formerly ADS 503) Legal Environment of Business; completion of MBA core.

ADS 697, 698, 699 Independent Studies. One, two and three sem hours
Students select a problem or group of problems to be researched or studied in depth under the direction of a designated faculty member.
Prereq: Departmental permission. Completion of MBA core.

BUSINESS EDUCATION FOR POST-BACCALAUREATE STUDENTS

BED 538 Special Topics in Business Education. One sem hour
Provides for intensive study of selected topics drawn from current developments in the total field of business education.

BED 539 Special Topics in Business Education. Two sem hours

Provides for intensive study of selected topics drawn from current developments in the total field of business education. Examples of topics:

- Word Processing
- Career Education
- Consumer Education

Prereq: Business Education major or department permission.

BED 540 Special Topics in Business Education. Three sem hours

Provides for intensive study of selected topics drawn from current developments in the total field of business education. Examples of topics:

- Exploring Careers in Business
- Competency-Based Education
- Operation of School Stores
- Youth Groups in Vocational Education
- Meeting Needs of Slow Learners
- Research in Business Education

Prereq: Business Education major or department permission.

***BED 555 Teaching Data Processing. Three sem hours**

Basic information in the area of storage and retrieval systems and the methodology for presenting such information.

***BED 568 Coordination of Cooperative Programs in Business Education.**

Three sem hours

Emphasizes the function and scope of the teacher-coordinator's duties and responsibilities. Required of all potential coordinators. Recommended for school administrators.

***BED 569 Foundations of Business Education. Two sem hours**

Principles and developments in business education for school administrators and business teachers. The objectives and curricular patterns in business for different types of educational institutions; professional leadership and current research in the field.

BED 571 Current Problems in Business Education. Two sem hours

Current problems confronting business teachers in the secondary schools. Organization and administration of business education programs; physical facilities, equipment, and instructional materials; student personnel relationships; school-business relationships; evaluation of business education programs.
Open to business education majors only.

BED 572 Administration of Business Education. Two sem hours

Analyzes administrative and supervisory duties and responsibilities. Local, state, and federal programs, finance and budgeting, physical facilities, selection and placement of teaching staff, public relations and publicity, equipment selection and maintenance.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

BED 580 Office Education Block. Three sem hours

Study of philosophy, planning and evaluation procedures for office education block programs. Prepare instructional materials for block programs.

Prereq: Graduate standing.

BED 595 Workshop in Business Education. Two sem hours

Modern methods, procedures, and materials for improving the effectiveness of the classroom teacher in the areas of shorthand, typewriting, bookkeeping and basic business.

BED 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member. *Departmental permission.*

BED 611 Curriculum Models in Business Education. Three sem hours

Objectives, levels; and patterns of business education programs will be studied and comparisons made with recent research.

Prereq: Business education major or permission of department.

BED 630 Psychological Development of Office Skills. Three sem hours

Psychological techniques and procedures for developing both basic and higher levels of facility in typewriting and shorthand courses.

Prereq: Business education major or permission of the department.

BED 696 Seminar in Business Education. Three sem hours

In-depth study of a selected problematic area of business education on the secondary and community college level. Lectures and discussions will be supplemented by library and experimental researches.

**Tentative Schedule of Regularly Offered Graduate Courses
and Classes Reserved for Graduate Students**

Course	Winter	Spring	Summer	Fall
ADS 493	X	X		X
ADS 530	X			
ADS 696			X	
BED 538	X		X 79,80,81	
BED 539			X 79,80,81	
BED 568	X 78		X 80	X 81
BED 569	X 79		X 78	X 79
BED 571	X 81	X 79	X 78	X 79
BED 572	X 78		X 79	X 80
BED 580	X 79		X 80	X 81
BED 596 (Research)	X 80		X 79	X 80
BED 611			X 81	X 79
BED 630	X 80		X 81	

MANAGEMENT

Floyd Patrick,
Acting Department Head
504 Pray-Harrold,
Tele. 487-3240

FOR POST-BACCALAUREATE STUDENTS

MGT 491 (formerly MGT 501) Management: Concepts, Principles and Practice. Three sem hours

The basic managerial functions are studied primarily from the perspective of the process design, but the behavioral, management science and other disciplinary schools of thought are also carefully examined.

Prereq: Open only to graduate students who have not had a basic management course.

MGT 568 Administrative Communication Theory. Three sem hours

A survey of the research and literature to familiarize the student with theory, concepts and methods relevant to administrative communication.

Prereq: MGT 585 *Organizational Theory and Behavior*.

MGT 576 Corporate Social Policy. Three sem hours

The subject of business and its social, economic and political environments covers relationships of a business institution to the broader society outside its own formal organization. Technological changes, demographic and ecological changes, urbanization, developments in transportation and communication, the expanded role of government, sophistication and extension of research and development, and changes in education are sectors relevant to the development and expansion of the American business system.

MGT 585 Organizational Theory and Behavior. Three sem hours

The objective is to apply social science concepts to organizational structure and design. Case studies are used to relate theory and behavior.

Prereq: MGT 491 (formerly MGT 501) *Management: Concepts, Principles and Practice* or equivalent; completion of graduate prerequisites.

MGT 586 Training and Organizational Development. Three sem hours

Course is designed to educate students in training needs analysis and program design; implementation of training programs; training evaluation procedures; human resource cost-effectiveness plans, organization development strategy.

Prereq: MGT 491 (formerly MGT 501) *Management: Concepts and Practice* or MGT 585 *Organizational Theory and Behavior*.

MGT 588 Interpersonal Communication Within Organizations. Three sem hours

The development of communication understanding and skills as required in organizational management and interaction by internal and external change agents.

Prereq: Department Permission.

MGT 593 Practicum in Organization Development Training. Three sem hours

The opportunity to participate in an organization development project in an active organization under the close guidance of a practicing consultant.

Prereq: MGT 585 *Organizational Theory and Behavior*, MGT Training and Organizational Development and MGT 588 *Interpersonal Communication within Organizations*.

OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS IN THE COLLEGE OF BUSINESS**MGT 687 Seminar in Personnel Administration. Three sem hours**

Problems actually faced by executives, line and staff, in all levels of an organization in carrying out their responsibility for personnel administration.

Prereq: MGT 585 *Organization Theory and Behavior* or permission of department.

MGT 695 Seminar in Management. Three sem hours

A study of selected management issues and problems. Specific topics vary from term to term.

Prereq: MGT 585 *Organizational Theory and Behavior*.

MGT 696 Management Strategy and Policy. Three sem hours

The development of overall strategy and supportive policies of the firm operating under competitive conditions, from the point of view of general management. Improvement of decision-making skills through case analyses of actual situations.

Prereq: Completion of MBA operational areas.

MGT 697, 698, 699 Independent Studies. One, two or three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

Prereq: MBA or MSOD core, MGT 585 *Organizational Theory and Behavior* and departmental approval.

**Tentative Schedule of Regularly Offered Graduate Courses
and Classes Reserved for Graduate Students**

Course	Winter	Spring	Summer	Fall
MGT 491	X		X	X
MGT 568				X
MGT 576	X	X		
MGT 585	X	X		X
MGT 586				X
MGT 687	X		X	
MGT 695	X			X
MGT 696	X			X

MARKETING

David L. Kurtz,
 Department Head
 512 Pray-Harrold,
 Tele. 487-3323

FOR POST-BACCALAUREATE STUDENTS

MKT 491 (formerly MKT 501) Marketing. Three sem hours

The development of skills in the analysis and resolution of management problems related to the marketing process; economic, psychological and sociological characteristics of demand for various products; marketing research; channels of distribution; advertising; personal selling; pricing policies; and regulation of marketing. *Open only to graduate students who have not had a basic marketing course.*

MKT 518 Marketing Policies and Problems. Three sem hours

Analysis of current marketing problems and their implications relative to the firm's marketing mix and external economic, social, cultural, legal and political environments.

Prereq: MKT 491 (formerly MKT 501) Marketing or equivalent.

MKT 565 Sales Operations Management. Three sem hours

An intensive investigation of the sales function and its relationship to the total marketing program. Topics considered include setting sales objectives, formulation of sales strategy, development of a sales organization, relationships with distributors and dealers, public policy as it relates to the sales function, analytical tools for forecasting sales, qualitative and quantitative measures of sales performance, control of sales operations, and integration of sales and other marketing functions. Reviews of the literature in the sales field and cases stressed.

Prereq: MKT 518 Marketing Policies and Problems.

MKT 575 Promotions Management. Three sem hours

An integrative decision oriented course emphasizing the strategic function of an effective program of corporate promotions employing mass communications, personal selling, sales promotion, publicity and public relations.

Prereq: MKT 518 Marketing Policies and Problems.

MKT 577 Channels of Distribution and Logistics. Three sem hours

Identification and analysis of problems involved in the development and operation of channels of distribution. Issues of trade structure and methods of cooperation among channel members are discussed from legal and managerial points of view. Specific analytical tools are developed for the individual firm in analyzing spatial arrangements of markets, plant and warehouse location, inventory systems and selection of carrier alternatives. Lecture, discussion and cases.

Prereq: MKT 518 Marketing Policies and Problems.

MKT 599 Independent Study. Three semester hours

An intensive study of a problem or group of problems under the direction of a university faculty member.

Prereq: MKT 518 Marketing Policies and Problems and approval of department.

OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS IN THE COLLEGE OF BUSINESS

MKT 680 Market Planning and Forecasting. Three sem hours

Development of student skills and techniques for strategic marketing planning and forecasting. Concepts relating to the mission, opportunity analysis, objectives, goals and programs will be explored. Individual planning and forecasting projects and exercises will be emphasized.

Prereq: MKT 518 Marketing Policies and Problems

MKT 693 Practicum in Marketing. Three sem hours

The course involves daily visitations to various types of foreign business enterprises where discussions are held in seminar fashion concerning marketing and other business affairs. Subsequent seminar sessions are held by the instructor at a classroom arranged prior to the trip. Credit-No Credit.

MKT 694 Special Topics in Marketing. Three sem hours

Selected topic(s) from the field of marketing.

Prereq: MKT 518 Marketing Policies and Problems.

MKT 696 Seminar in Marketing. Three sem hours

The purpose of this seminar is to develop both an understanding of and a point of view toward some of the major problems of marketing which are dealt with briefly or not at all in required course work. Topics vary from year to year in accordance with the needs and interests of the students.

Prereq: MKT 518 Marketing Policies and Problems.

MKT 697, 698, 699 Independent Studies. One, two and three sem hours

An intensive study of a problem under the direction of graduate faculty members.

Prereq: MKT 518 Marketing Policies and Problems and approval of department.

Tentative Schedule of Regularly Offered Graduate Courses and Classes Reserved for Graduate Students

Course	Winter	Spring	Summer	Fall
MKT 491	X		X	X
MKT 518	X	X		X
MKT 565	X		X	
MKT 575		X		X
MKT 577				X
MKT 693			X	

OPERATIONS RESEARCH and INFORMATION SYSTEMS

Robert Holland,
Department Head
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FOR POST-BACCALAUREATE STUDENTS

ORI 494 (formerly ORI 501) Introductory Probability and Statistics for Business. Three sem hours

Fundamental concepts of quantitative analysis for business and economics. Emphasis on probability as a basis for statistics, probability distribution, sampling distributions, regression, correlation and time series.

Prereq: Open only to graduate students who have not had a basic statistics course.

ORI 495 (formerly ORI 502) Introduction to Computers and Programming. Three sem hours

An introduction to the computer with emphasis on its use in solving problems related to business organizations. Includes elements of computer hardware and software systems, management information systems and actual programming experience. Designed for graduate business students with deficiency in the area of computers.

Prereq: Open only to graduate students who have not had a basic computer programming course.

ORI 510 Access Methods and Data Structures. Three sem hours

The primary emphasis is on those aspects of the design of a Management Information System that result in an efficient program and data file system. This includes the study of direct access methods, sorting and searching techniques, and data structures.

Prereq: ORI 495 (formerly ORI 502) Introduction to Computers and Programming or equivalent.

ORI 514 Project Management for Computer-Based Information Systems I. Three sem hours

Techniques of managing the design, development, and implementation of large scale computer-based information systems are discussed. Particular emphasis will be placed on automated PERT, progress feedback for control and economic evaluation of information system resources.

Prereq: One programming course and statistics.

ORI 520 Data Networks. Three sem hours

Fundamental concepts and techniques needed in the design of data transmis-

sion networks. The emphasis will be on the techniques needed in analysis of the system and various trade-offs within it.

Prereq: *MTH 119 Mathematical Analysis for Social Sciences II* and *ORI 495 (formerly ORI 502) Introduction to Computers and Programming* or equivalent.

ORI 530 Linear Programming and Extensions. Three sem hours

An introduction to the theory, computational techniques and business applications of linear programming. Topics include solution techniques; duality theorem; sensitivity analyses, Gomory's integer programming algorithm; transportation, transshipment, and assignment models; and zero-sum game models.

Prereq: *MTH 118 Mathematical Analysis for Social Sciences I* or *MTH 122 Elementary Linear Algebra* or equivalent.

ORI 536 Forecasting Models. Three sem hours

An introduction to forecasting models. Topics include linear and non-linear regression models; moving average method; exponential smoothing; fourier series method; Leontief's input-output model; and Markov model. Use of these models in making forecasts in business and industry is considered.

Prereq: *ORI 465 Business Statistics II* or equivalent.

ORI 538 Simulation and Modeling. Three sem hours

Introduction to digital simulation techniques as they apply to business. The course presents the basic concepts involved in simulation, describes applications of simulation to business problems, and discusses technical problems associated with the use of simulation. Emphasis is on the design and operation of computer models.

Prereq: *ORI 494 (formerly ORI 501) Introductory Probability and Statistics for Business* or *ORI 495 (formerly ORI 502) Introduction to Computer and Programming*.

ORI 540 Operations Management. Three sem hours

This course will investigate the use of "management science" techniques to analyze and solve various problems related to the design, operation and control of operating systems. Operating systems are broadly defined here to include service organizations (e.g. hospitals, banks) as well as manufacturing organizations. Topics included are process planning; location and layout of the production facilities; forecasting of demand; aggregate planning; inventory control; loading and sequencing jobs on facilities; statistical quality control; and management information systems.

Prereq: *ORI 586 Quantitative Analysis for Business* or department permission.

ORI 586 Quantitative Analysis for Business. Three sem hours

Business decision making; complex problems of the modern business enterprise. Quantification and measurement, statistical decision making, linear programming, game theory, inventory control, replacement decisions and various techniques of statistical optimization.

Prereq: *ORI 494 (formerly ORI 501) Introductory Probability and Statistics for Business* or equivalent and *ORI 495 (formerly ORI 502) Introduction to Computer and Programming*.

ORI 588 Managerial Economics. Three sem hours

Application of economic theory to problems facing business management. Emphasis on economics as a business tool that facilitates decision making. Topics

considered include optimization techniques, uncertainty, demand, production, cost and anti-trust economics.

Prereq: ECO 501 Macroeconomic Theory and Policy and ECO 502 Microeconomic Theory and Policy or equivalent and ORI 494 (formerly 501) Introductory Probability and Statistics for Business or equivalent.

ORI 592 Business Research. Three sem hours

Scientific research; basic considerations in research methodology; economic analyses. Oral and written reports.

Prereq: Business Major, ORI 494 (formerly ORI 501) Introductory Probability and Statistics for Business, ORI 495 (formerly ORI 502) Introduction to Computers and Programming or equivalent.

**OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS
IN THE COLLEGE OF BUSINESS**

ORI 615 Project Management for Computer-Based Information Systems II.

Three sem hours

A practicum in the design, programming, and implementation of large scale computer-based information systems. Staging of data elements in order to investigate various information accessing techniques is discussed. Information systems are tested with various functional transactions, and alternative designs undergo a comparative analysis.

Prereq: ORI 510 Access Methods and Data Structures and ORI 514 Project Management for Computer-Base Informations Systems I.

ORI 619 Research Seminar in Computer-Based Information Systems.

Three sem hours

This course investigates the impact of MIS in the organization, current design and implementation techniques, and the follow-up evaluation of such systems. The student writes original research paper on his area of particular interest in computer-based information systems.

Prereq: All other core courses ORI 510 Access Methods and Data Structures, ORI 514 Project Management for Computer-Based Information Systems I and ORI 615 Project Management for Computer-Based Information Systems II must be completed prior to this course.

ORI 624 Operating Systems and Compiler Analysis. Three sem hours

Coverage of the full spectrum of systems programming activities, including the use and implementation of assembler, compilers, and various types of operating systems, and the evaluations of software packages.

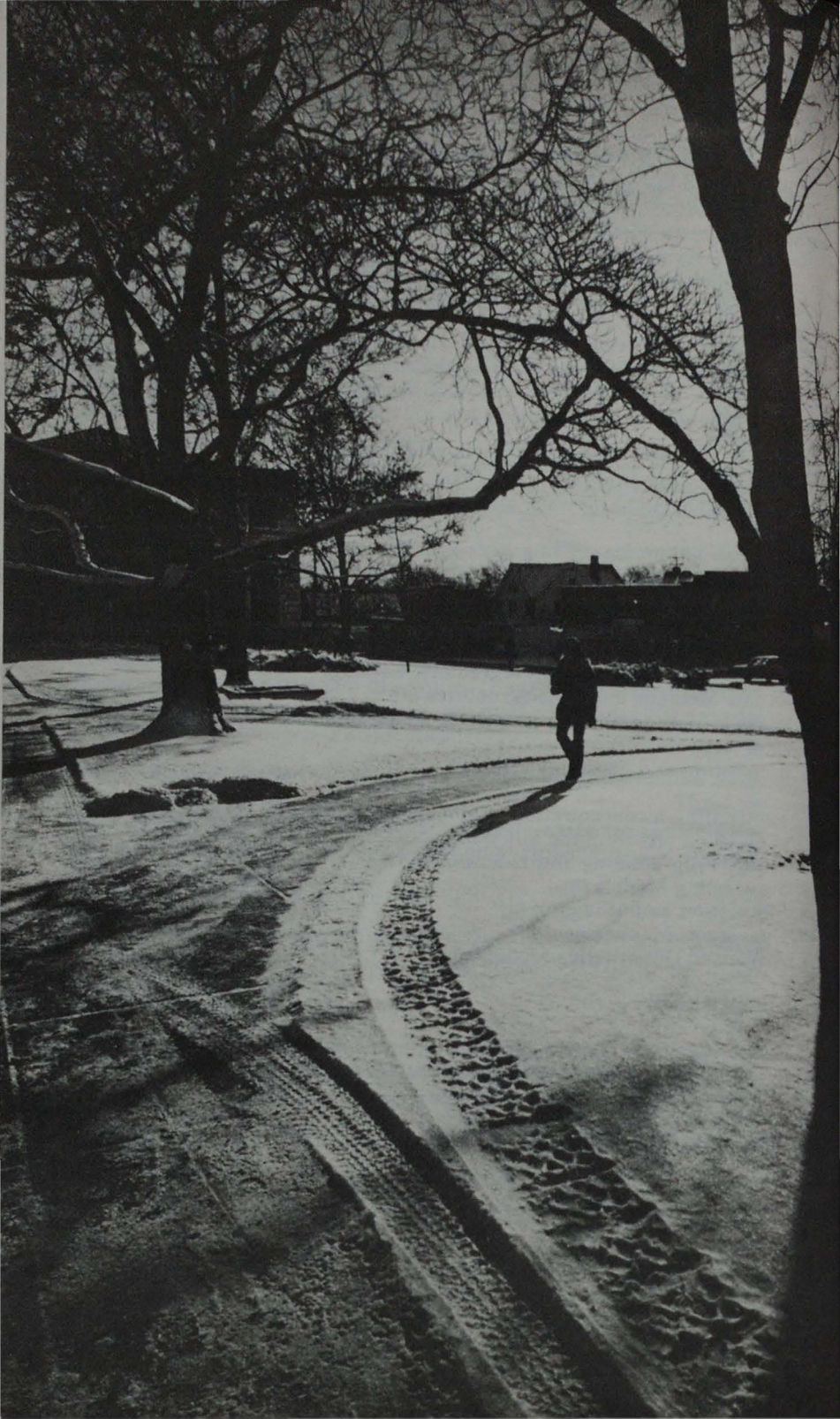
Prereq: ORI 447 Basic Assembly Language and ORI 510 Access Methods and Data Structures or equivalent.

ORI 628 Advanced Techniques of Information Storage and Retrieval.

Three sem hours

The techniques, concepts, and theory relating to the analysis and design of Information Storage and Retrieval Systems will be studied.

Prereq: ORI 510 Access Methods and Data Structures.



COLLEGE OF EDUCATION

DEAN: John D. Mulhern

DEPARTMENTS

**Curriculum and Instruction
Educational Leadership
Educational Psychology
Guidance and Counseling
Health, Physical Education, Recreation and Dance
Social Foundations Division
Special Education**

CURRICULUM and INSTRUCTION

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Tele. 487-3261

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The Curriculum and Instruction Department offers five programs leading to the Master of Arts degree. These are elementary education, middle school education, secondary school teaching, K-12 curriculum and reading.

Elementary Education

The program in elementary education focuses on basic concepts of the child's growth, development and behavior and on the multidimensional aspects of the teacher's role. The purpose of the program is to provide the increased depth and breadth in theoretical foundations and practical knowledge which insure more effective service as a classroom teacher in the elementary school. Five options are offered: (1) a general overview of elementary education, (2) early childhood education, (3) language arts, (4) open education and (5) educational media.

Middle School Education

The program in middle school education enriches the foundations work in education while providing opportunity to select courses which enhance understanding of the adolescent and the programs associated with the middle school. Emphasis is placed also on courses which improve teaching effectiveness.

Secondary School Teaching

The program in secondary school teaching enriches the foundations work in secondary education while providing opportunity to select courses which enhance the teacher's understanding of secondary pupils and the secondary school curriculum. Emphasis is placed also on courses which strengthen teachers' competencies in their teaching fields.

K-12 Curriculum

The program in K-12 curriculum is designed for those whose professional interests and responsibilities recommend a broad understanding of the current controversies and trends in education and the historical, social and philosophical influences which have shaped the K-12 curriculum.

Reading

The program in reading is designed for the professional preparation of classroom teachers, special teachers of reading at both elementary and secondary levels, supervisory reading specialists such as consultants, coordinators and supervisors and specialists for reading clinic positions including clinic directors and reading counselors. The program is consistent with the "Minimum Standards for Professional Training of Reading Specialists" as defined by the International Reading Association. Students can plan programs with their advisers that will enable them to meet the State of Michigan requirements for a reading specialist.

Admission to the Programs

Students must meet Graduate School degree admission requirements. Undergraduate records should be forwarded directly to the Graduate School at the time of application.

The coordinator of graduate advising of the Department of Curriculum and Instruction will assign an adviser to each student following receipt of the proper records from the Graduate School and acceptance into the program. The student will receive notification of the adviser's name and should arrange a personal interview in order to develop a program of graduate study.

* RDG 500 Foundations of Reading Development. Four sem hours

History of trends in reading instruction in America; factors influencing achievement in reading; goals, critique of current methods, reading skills functional in the content areas and organization, location and evaluation skills. *This is the first course in the concentration area.*

Prereq: A basic course in the teaching of reading.

* RDG 501 Developmental Reading—Elementary. Two sem hours

Objectives, approaches, materials and techniques for reading in the elementary school classroom. Factors influencing development; fundamental skills, assessing and providing for individual strengths and needs. *Not open to reading majors.*

* RDG 502 Developmental Reading—Secondary. Two sem hours

Curricular objectives and their implementation through recommended activities, methods and materials; functional programs for disabled readers.

* CUR 504 Creative Activities in Early Elementary Education. Two sem hours

Relationship of creative activities to the development of fully functioning, integrated individuals in kindergarten and primary grades. Planning for and implementing creative activities in play, dramatization, music and art.

* CUR 523 The Junior High/Middle School Curriculum. Two sem hours

History and philosophy of the junior high/middle school; curriculum, provision for individual differences, modern classroom procedures, use of materials and aids of instruction, the activity program and guidance.

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

***CUR524 Effective Teaching in the Middle School. Four sem hours**

This course is concerned with helping teachers examine the issues and possibilities of teaching middle school youth. Based on such an examination, each teacher works with other class members and the university professor in developing an effective teaching style within the context of his or her teaching situation.

***CUR 530 Education of the Black Man in Contemporary America.**

Two sem hours

This course focuses on the current problems, attitudes and opinions of black Americans and their relation to education. It is designed to help those planning teaching careers to better understand the black man in America.

***CUR 532 Elementary School Children and Social Studies. Two sem hours**

Current issues and controversies in the teaching of social studies in the elementary school.

***CUR 540 Curriculum Foundations. Two sem hours**

Curriculum content and patterns of schools in the United States. Historical and theoretical authority for the curriculum; criteria for the choice of content.

***CUR 541 Curriculum—Elementary School. Two sem hours**

Fundamentals of curriculum development; selected types, several basic determinants, some approaches to organization and the concept of change. In curriculum building, emphasis is placed on the role of the teacher and on the problem-census approach to defining problems.

***CUR 542 Curriculum—Secondary School. Two sem hours**

The development and present status of the secondary curriculum; principles of curriculum revision and some factors involved in curriculum changes. Students are encouraged to concentrate on curriculum problems present in their school system.

***CUR 543 Curriculum Futures. Two sem hours**

The effects of a rapidly changing society upon curriculum choices, possible directions for change, and learning skills for living in the twenty-first century.

CUR 545 K-12 Curriculum. 4 sem hours

An integrated study of curriculum from preschool through high school with emphasis on form, priorities and impact. Historical and contemporary study of school programs from a social-humanitarian vantage point.

***CUR 546 The Dropout Problem. Two sem hours**

An intensive review of this national problem; practical procedures based upon school and community resources for improving holding power.

RDG 560 Reading Problems of the Disadvantaged. Two sem hours

Methods, techniques and materials found effective in teaching reading to the disadvantaged, proper placement of developmental tasks; promising practices in large city school systems; compensatory education as it affects reading.

Prereq: A course in teaching reading or language arts.

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

***CUR 563 Integrating the Curriculum Via School Camping. Two sem hours**

A study of the history and purpose of school camping in Michigan. Students will develop their personal courses of study involving the integration of all curricular areas as well as the "know-how" and skills to completely organize an outdoor education class for their personal classroom use. Students will be required to participate in a minimum of one week-end camping experience together as a class. Students will be expected to pay the actual cost for the week-end camping experience.

***CUR 564 The Open Classroom. Four sem hours**

Deals with the open classroom tied to a demonstration center. Involves participants in planning an integrated day based upon learning centers and pupil self-direction. Deals with the child-centered, experience-based curriculum. Designed to help free teachers to become more innovative, open, creative and humane in curriculum development.

***CUR 565 The Community-Centered Classroom. Four sem hours**

An action-oriented course in which teachers will develop unit teaching techniques and resources for an integrated curriculum in which the community can be used as a learning laboratory. Emphasis will be placed upon creating an open and human learning environment which will promote multi-cultural understanding and a one-world concept.

***CUR 566 Improving Instruction. Two sem hours**

Identification, validation and use of criteria for appraising and improving teaching and learning, with focus on the classroom; principles underlying techniques of improving instruction.

***CUR 567 Enriching the Early Elementary Classroom Program.**

Two sem hours

Types of organization of elementary classroom activities and programs in relation to behavioral goals. Uses of direct and vicarious experiences, materials and instructional techniques to develop and extend vocabulary, language, experience backgrounds, self-concepts and social learnings. Particularly beneficial for teachers working with educationally disadvantaged.

***CUR 568 Individualizing Instruction in the Secondary School. Two sem hours**

A course designed to help secondary teachers meet individual differences among their students by using a variety of resources, pupil involvement, thematic approaches and other teaching strategies.

CUR 569 Career Education for Secondary Classroom Teachers. Two sem hours

The course includes the components of career education and evolving career education programs. Emphasis is on improvement of classroom instruction through development of strategies to increase community involvement, knowledge of the local community, appropriate use of consultants and resources for enriching instruction.

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

*** CUR 571 Teaching of Social Studies. Two sem hours**

Subjects included in social studies. problems related to the presentation of materials. planning of units and types of class activities. *Not open to students who have credit in HIS 481 and GEO 348.*

*** RDG 573 Programs in Language Arts. Two sem hours**

Curricular objectives and their implementation through listening, speaking, handwriting, spelling and creative, narrative and expository writing, evaluative procedures and some consideration of corrective techniques.

*** RDG 582 The Nature of Common Reading Problems. Two sem hours**

Problems of under-achievement; weaknesses and deficiencies in attitudes, comprehension, word recognition and facility and flexibility in silent and oral reading, physical, psychological, environmental and educational factors.
Prereq: RDG 500 Foundations in Reading Development.

*** CUR 584 Teaching in the Preschool. Two sem hours**

Overview of programs for preschool children, infancy through age five, including program goals, selection of curriculum content, materials and teaching techniques suitable for working with prekindergarten children. Requirements and recommendations for personnel, physical facilities and equipment for nursery schools and day care.

*** CUR 585 Planning and Implementing Prekindergarten Programs.**

Two sem hours

In depth study of planning and implementing prekindergarten programs including determination of need, legal requirements, selection of equipment and personnel, budgeting, record keeping and implementation of program goals
Prereq: CUR 584 or Instructor's Permission

*** CUR 586 Trends and Issues in Kindergarten Education. Two sem hours**

Important trends and issues affecting the education of kindergarten children.

*** CUR 587 Early Childhood Education. Two sem hours**

Educational implications of historical, developmental and curricular research; continuity in program development; foundations and techniques for establishing cooperative home-community-school relationships for the improvement of the education of young children.

RDG 589 Developing School-Wide Reading Programs. Two sem hours

Organization of school-wide reading programs; determinants of variability; effective interrelationships and communication; roles of special reading teachers and consultants.

Prereq: Eight hours of graduate credit in reading.

CUR 591 Supervision of Student Teachers. Two sem hours

Preparing the public school teacher to work with student teachers.

RDG 594 Practicum in Reading. Four sem hours

Supervised and directed experiences in teaching reading appropriate to the

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

student's needs. The practicum student will have a group experience, developmental or remedial. The student will diagnose the strengths and weaknesses of the subjects and design treatment to develop specific skills and abilities. Approved and supervised by the reading staff professor.

Prereq: Departmental permission.

CUR/RDG 595 Workshops in Selected Areas. Two sem hours

Please examine the current time schedule for specific workshop topics. Among those which have been offered in the past:

- The Adolescent in American Society.**
- The Curriculum and Racism.**
- Early American Life—Colonial Williamsburg.**
- East African Studies.**
- Individualizing Instruction.**
- Kindergarten Materials.**
- Providing for Individual Differences in Reading.**
- Teaching the Disadvantaged.**

CUR/RDG 596 Seminars in Selected Areas. Two sem hours

Please examine the current time schedule for specific seminar topics. Among those which have been offered in the past:

CUR 596 Seminar: Secondary Curriculum. Two sem hours

Prereq: CUR 540 Curriculum Foundations; CUR 523 The Junior High/Middle School Curriculum. CUR 542 Curriculum-Secondary School or CUR 545 K-12 Curriculum; and 20 hours of graduate credit.

RDG 596 Seminar: The Teaching of Reading. Two sem hours

Prereq: Eight hours of graduate credit in reading.

CUR 596 Seminar: Elementary School Curriculum. Two sem hours

Prereq: CUR 541 Curriculum-Elementary School and 20 hours of graduate credit.

CUR 596 Seminar: Early Childhood Education. Two sem hours

Prereq: 20 hours of graduate credit and one of the following courses: CUR 584 Teaching in the Preschool, CUR 585 Planning and Implementing Pre-kindergarten Programs, CUR 586 Trends and Issues in Kindergarten Education, or CUR 587 Early Childhood Education.

CUR 596 Seminar: Open Education. Two sem hours

Prereq: CUR 564 The Open Classroom or CUR 565 The Community-Centered Classroom and 20 hours of graduate credit.

CUR/RDG 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems. The completed study must give evidence to the student's ability to select a problem, set it up and pursue it to satisfactory completion. Must be done with approval of a full-time member of the staff.

RDG 661 Analysis and Treatment of Common Reading Problems.**Two sem hours**

Survey of diagnostic procedures, formal and informal; organization and interpretation of case history and test data; determinants of prognosis, preparation of recommendations; designing individualized programs.

Prereq: RDG 582 *Nature of Common Reading Problems.*

RDG 663 Evaluation of Reading Growth and Development. Two sem hours

Standardized and informal tests; selection, administration and interpretation techniques for appraising achievement in listening, speaking, reading and writing. Kindergarten through 12th grade.

Prereq: RDG 500 *Foundations in Reading Development.*

EDUCATIONAL MEDIA

At the present time there are no graduate degrees in either audio-visual or library science. The offerings in educational media provide some course work leading to permanent certification and electives in almost every master's degree program in education. The course work needed for school library certification in Michigan can be obtained through a sequence of undergraduate courses only.

Courses in educational media are designed to aid administrators, supervisors, directors, technicians and teachers in all aspects of media and educational technology. There are specific courses in television, motion picture projections, production of materials and resource material classification and utilization. If interested in courses in educational media, please check with your adviser.

*** EDM 512 Audio-Visual Instruction. Two sem hours**

A survey course for teachers and administrators in which the nature and effective use of teaching materials are considered and fully demonstrated. Provision is made for actual use of materials and equipment. Not open to students who have credit in 344 *Audio-Visual Methods in Teaching.*

EDM 522 Administration of Audio-Visual Services. Two sem hours

An analysis of the function of an audio-visual teaching materials program; the qualifications and duties of staff, the selection and evaluation of materials and equipment, unit costs, school plant requirements; the problems of developing a program and the measures for appraising its adequacy and effectiveness.

Prereq: 344 *Audio-Visual Methods in Teaching* or EDM 512 *Audio-Visual Instruction.*

*** EDM 524 TV in Education. Two sem hours**

Extent and nature of experimentation in instruction by radio and television; current philosophy and attitudes toward teaching by radio and television.

*** EDM 525 Resource Materials for the Elementary School. Two sem hours**

Criteria and sources for selection and purchase of books, pamphlets, periodicals and free materials for nursery school through the sixth grade. Teachers only.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

EDM 526 Radio and TV in the Classroom. Two sem hours

Study and practice in the utilization and evaluation of instructional, educational and enrichment radio and television programs. Familiarization with broadcast methods and facilities. Includes utilization guidebooks and sources of materials.

EDM 595 Workshops in Selected Areas. Two sem hours

Please examine the current time schedule for specific workshop topics. Among those which have been offered in the past:

EDM 595 Workshop in Reading Guidance for Children. Two sem hours

Reading guidance for teachers and librarians learning to meet the special needs of the individual child. Pre-school children to adolescents.

EDM 595 Workshop in Production of Instructional Materials. Two sem hours

Basic techniques in the production of a variety of teaching materials: lettering, mounting, and color application to flat pictures and graphics; projected materials of various sizes; overhead projectuals; display boards of all types.

Prereq: 344 Audio-Visual Methods in Teaching or EDM 512 Audio-Visual Instruction.

EDM 595 Workshop in Television Utilization. Two sem hours

For teachers: advanced problems in the use of television in the classroom.

EDM 596 Seminars in Selected Areas. Two sem hours

Please examine the current time schedule for specific seminar topics. Among those which have been offered in the past:

EDM 596 Seminar: The Administrator and the School Library.

Two sem hours

For administrators, supervisors, beginning audio specialists and beginning librarians: services, activities, materials and standards of a materials center in a school library.

EDM 596 Seminar: Instructional Materials. Two sem hours

A course designed to assist the individual student in detailed study of specific problems or topics in utilization, production, selection, or administration of instructional materials. Visits to actual service centers, use of resource persons, etc., will be employed. A sharing of solutions and problems will be used in a seminar setting during the course.

Prereq: 344 Audio-Visual Methods in Teaching, EDM 512 Audio-Visual Instruction or permission of the department.

EDM 596 Seminar: History and Appreciation of Motion Pictures and Photography. Two sem hours

A course designed to give the history of the photographic medium with the emphasis on important films and photographs and the people who created them.

Prereq: 344 Audio-Visual Methods in Teaching, EDM 512 Audio-Visual Instruction or permission of the department.

OTHER COURSES

The following upper division undergraduate courses may also be elected for graduate credit. Consult undergraduate catalog for course descriptions and prerequisites.

420 Advanced Instructor's Course in Driver Education. (3)

421 Seminar in Driver Education. (2)

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
RDG 500	X	X	X	X
RDG 501	X	X	X	X
RDG 502	X		X	
CUR 504	X		X	
CUR 523		X	X	X
CUR 524		X		X
CUR 530			X	
CUR 540	X	X	X	X
CUR 541	X	X	X	X
CUR 542	X	X	X	X
CUR 543	X			
CUR 545		X		
RDG 560	X	X	X	X
CUR 563		X		
CUR 564	X	X	X	X
CUR 565	X		X	X
CUR 567		X	X	X
CUR 568	X		X	X
CUR 569	X			
RDG 573	X	X	X	X
RDG 582	X	X	X	X
CUR 584		X		X
CUR 585	X			
CUR 586		X		
CUR 587			X	X
RDG 589			†	
RDG 594			X	
RDG 661	X	X	X	X
RDG 663	X	X	X	X
EDM 512	X		X	X
EDM 522	X			
EDM 524				X
EDM 525			X	
EDM 526	X			

† Courses offered on a two (2) year cycle.

EDUCATIONAL LEADERSHIP

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The Department of Educational Leadership offers programs leading to the Master of Arts degree and the Specialist in Arts degree, as well as individual courses which are of interest and assistance to professional educators generally. For prospective or practicing administrators the programs provide not only basic administrative course offerings, but opportunities to specialize in administration at the elementary, middle, secondary school and community college levels and the superintendency. In addition, persons preparing for leadership positions in the many other areas of education (e.g., adult education, business management, career education, community education, personnel, public relations, etc.) will find an appropriate selection of courses. Many courses offered by the department are excellent electives for students pursuing advanced degrees in other departments.

Program formats have been designed in order to provide flexibility in course selection to accommodate each student's unique experience and future career goals. Course selections should have a connection with the student's career aspirations. The program is usually planned to prepare the student for a specific educational administrative position. More complete information may be obtained from the coordinator of advising.

Master of Arts

ADMISSION REQUIREMENTS

1. Must meet degree admission requirements of the Graduate School.
2. A valid undergraduate degree from an accredited four-year institution of higher education. (Undergraduates may apply after final semester's registration is completed.)
3. A 2.5 undergraduate grade point average, or a 2.75 undergraduate grade point average for the last 60 hours, or a favorable Miller Analogies test score.
4. A valid teaching certificate. (See adviser for waiver provisions.)
5. Program planning interview with an adviser.

PROGRAM REQUIREMENTS

Following admission, and prior to initial registration for classes, the student should select and consult with a departmental adviser, who will assist in the development of an official program of study. The requirements for graduation are:

Candidates for the master's degree in educational leadership must satisfactorily complete all work of the program of study, including the following:

A minimum of 30 semester hours of graduate credit applicable to the program. The requirements outlined below provide the basic guidelines within which students' programs are developed.

1. Core requirements (16 semester hours)
 - EDP 592 Research Techniques
 - EDL 502 Educational Organization
 - EDL 562 Educational Leadership
 - EDL 671 Elementary School Principalship, or
 - EDL 672 Middle School/Junior High School Administration
 - EDL 673 Senior High School Principalship, or
 - EDL 674 Community Education Administration, or
 - EDL 675 Organization and Administration of the Community College.

Eight semester hours in educational leadership courses selected with approval of the adviser and reflecting the student's professional needs and objectives.

2. Supportive area (14 semester hours)

Supportive courses may be selected from educational leadership (limitation six semester hours), other College of Education courses, or courses outside the College of Education. (Limitation six semester hours) These courses should support the student's professional objectives and be approved by an adviser.

Specialist in Arts

ADMISSION REQUIREMENTS

Admission Requirements for Specialist Candidates Holding a Baccalaureate Degree

1. Must meet degree admission requirements of the Graduate School.
2. A valid undergraduate degree from an accredited four-year institution of higher education.
3. A 2.5 undergraduate grade point average or
A 2.75 undergraduate grade point average for the last 60 hours of the undergraduate degree, or a favorable Millers Analogies score.
4. A 6.0 (B+) grade point average in any graduate course work taken prior to current application.
5. A valid teaching certificate (see adviser for waiver provisions).
6. A year or more of successful teaching or educational administrative experience, or equivalent acceptable to the adviser.
7. Three favorable recommendations from supervisors in educational experience.
8. A program planning interview with an adviser.

Admission Requirements for Specialist Candidates Holding a Master's Degree

1. Must meet specialist degree admission requirements of the Graduate School.
2. A valid master's degree from an accredited graduate school.
3. A 6.0 (B+) graduate grade point average in the completed master's degree or
a favorable score on the Miller Analogies Test.
4. A valid teaching certificate (see adviser for waiver provisions).

5. A year or more of successful teaching or educational administrative experience, or equivalent acceptable to the adviser.
6. Three favorable recommendations from supervisors in educational experience.
7. A program planning interview with an adviser.

PROGRAM REQUIREMENTS

The specialist degree program requires a minimum of 32 semester hours beyond the master's degree. Students who have earned their master's degree from other departments at Eastern Michigan University or at other institutions will be required to remove master's degree level deficiencies. Students work closely with their adviser in developing a program which will prepare them for their career goal.

Candidates for the specialist degree in educational leadership must satisfactorily complete all work on the program of study, including the following:

A minimum of 62 semester hours of graduate credit applicable to the program (32 semester hours beyond the 30 semester hour Master's degree program). The requirements outlined below provide the basic guidelines within which the students' programs are developed:

1. Completion of a master's degree in educational administration or equivalent course work.
2. Core courses (six semester hours)
 - EDL 605 Leadership Theory
 - EDL 683 Behavioral Science in Administration and Supervision
 - EDL 693 Practicum
3. Concentration area (14 semester hours)

These courses in educational leadership are selected with approval of the adviser and reflect the student's professional needs and objectives.
4. Applied Research (six semester hours)

EDL 694 Internship or Thesis (EDL 690, 691 and 692) or statistical block (EDP 521 or EDP 551, and EDP 650).
5. Cognates (six semester hours)

These courses are elected from other university departments and should complement the program goal.
6. Residency Requirement

One semester as a full-time student, or two full-time summer sessions, are required.

ADDITIONAL PROGRAM INFORMATION

Course Substitutions/Program Changes

Changes in the student's official program and substitution of courses must be approved by the adviser prior to registration. With the approval of the student's adviser, one course may be substituted from another area for a course in the educational leadership core if the course is administrative in nature. Such a course cannot carry more than three hours of credit.

Courses outside the Department

A suggested list of courses has been prepared by the department. Other courses may be used in this area if they are approved by the student's adviser.

Internships

A program of on-the-job administrative training is available under the direction of experienced school administrators. Further information is available from the director of internship programs, Dr. Elven Duvall. Internship placements should be arranged at least one year in advance.

Advisers

Coordinator of advising—Bruce K. Nelson

Advisers: George Brower, Francis Daly, Elven Duvall, Kenneth Grinstead, Doris Kilanski, Jack Minzey, Bruce K. Nelson, Donna Schmitt

COURSE OFFERINGS

EDL 502 Educational Organization. Two sem hours

Organization of American public schools; authority, functions and relationships of federal, state and local governments to education. Methods of organization within school districts; non-graded organizational patterns.

Open to majors and non-majors.

EDL 515 Accounting for School Business Administrators. Two sem hours

Principles, theory and procedures of public school fund accounting; accounting principles as applied to various kinds of public school funds, financial statements and reports, internal accounting control, payroll accounting, business papers and procedures. *Not open to business administration majors.* Offered cooperatively with the College of Business.

EDL 540 Community Organization. Two sem hours

An understanding of the community as a social group. Emphasis on community analysis, leadership, criteria of a good community, principles of change and action. *Open to teachers and community leaders and majors.*

EDL 550 Adult Education. Two sem hours

Philosophy, organization and administration of adult education programs. *Open to non-majors and majors.*

EDL 553 Economics of Public Education. Two sem hours

Examines the basic economic, fiscal and legal theories of support for education tax structures, state aid formulas, federal aid and school budgets. *Open to majors and non-majors.*

EDL 556 Community Education. Two sem hours

The basic principles and philosophy of community education; its current status and relationship to education. *Open to non-majors and majors.*

EDL 560 School and Community Understanding. Two sem hours

Interpreting the school to the community with emphasis on improving relationships between the school and the community. Assessing community opinion on education and educators. *Open to non-majors and majors.*

EDL 562 Educational Leadership. Two sem hours

The process and function of various school leadership positions are explored including current practices, theories and concepts of educational administration. *Open to non-majors and majors.*

EDL 563 Philosophy and Purposes of the Community College. Two sem hours

An overview of the development of the two-year college, its origins, major characteristics and prospects with special emphasis on philosophy and purposes. Fundamental issues identified and conflicting positions investigated. *Open to non-majors and majors.*

EDL 566 Supervision of Instruction. Two sem hours

Development of those attitudes and skills necessary for school administrators as they plan and maintain effective, positive instructional programs. Designed to provide appropriate educational opportunities for all students. *Open to non-majors and majors.*

EDL 580 School Law for Teachers. Two sem hours

Legal principles underlying day-to-day teaching activities; how laws operate and legal principles develop. *Open to non-majors only.*

EDL 581 Law of Higher Education. Two sem hours

Examines the major legal aspects of the administration of institutions of higher learning.

Prereq: Six hours of educational leadership; not open to students with credit in EDL 680, Legal Aspects of Administration.

EDL 587 Evaluating Educational Services. Two sem hours

Problems, principles and procedures involving the evaluation of school facilities, curriculum, teachers and administrators. Evaluation instruments will be developed, applied and analyzed. *Open to non-majors and majors.*

EDL 594 Master's Internship in Educational Leadership. Two sem hours

Training in administration through actual supervised experience. Arrangements must be approved by adviser and director of intern program prior to registration. *Enrollments limited. Departmental permission. Majors only.*

EDL 595 Workshop in Educational Leadership. Two sem hours

Concerned with special topics of educational leadership. Designed to maximize student participation. Workshop method of teaching and learning emphasized. *Topics to be selected (see current schedule). Majors only.*

EDL 596 Seminar in Administration and Supervision or Selected Topics.

Two sem hours

Concerned with broad or special topics of educational leadership. (Students are limited to two EDL 596 seminars on Master's degree program.) *Topics to be selected (see current schedule).*

Prereq: Majors only.

EDL 597, 598, 599 Independent Studies. One, two and three sem hours

Prereq: Permission of the adviser and ten hours in Educational Leadership.

EDL 605 Leadership Theory. Two sem hours

Theories and models of administration and leadership; general theories and research in leader behavior.

Prereq: Open to majors and non-majors.

EDL 651 Collective Negotiations in Education. Two sem hours

An analysis of negotiations: issues which may be encountered by school administrators and teachers in collective negotiations in education. Open to non-majors and majors.

EDL 653 Advanced School Finance. Two sem hours

Designed to acquaint students with specific areas of school finance. Probable areas for study are (1) the capital outlay program, (2) the school bond market, (3) the bond prospectus, (4) model state foundation programs, (5) the development of sound debt management policies.

Prereq: EDL 553 Economics in Public Education.

EDL 655 School Plant Planning. Two sem hours

Problems and procedures, revealed through a plant-planning chronology which includes hiring the architect, the attorney's role, site acquisition, involving citizens, utilizing staff, the bond issue, designing and constructing the building.

Prereq: Six hours credit in administration.

EDL 658 School Personnel Administration. Two sem hours

For prospective and practicing administrators and classroom teachers. Assists in the development of an understanding of the issues, problems and practices involved in administration of the public school personnel program. Explores in depth the basic principles of staff relationships, legal requirements and policies necessary for effective personnel administration and high-level morale.

Prereq: Six hours in Educational Leadership.

EDL 671 Elementary School Principalship. Two sem hours

The examination of the elementary school principal's role in improving curriculum and instruction, in the establishment of effective, routine operations in an elementary school, in establishing avenues for change by an awareness of innovations, materials, technologies and research that are relevant to elementary school education.

Prereq: Six hours credit in administration.

EDL 672 Middle School/Junior High School Administration.

Two sem hours

An examination of the characteristics of the middle school/junior high school and the organization necessary to provide those experiences and instruction necessary to assist early adolescents in making the transition from childhood dependence to adult independence, including approaches to instruction, scheduling procedures, exploratory and enrichment studies, evaluation methods, student services and community relations.

Prereq: Six hours credit in administration.

EDL 673 Senior High School Principalship. Two sem hours

Educational leadership in the secondary school, including approaches to school-community relations, curriculum, instruction, special services, buildings and equipment, pupil relations, personnel relations, scheduling and innovative practices.

Prereq: Six hours credit in administration.

EDL 674 Community School Administration. Two sem hours

Principles and techniques of administering community education.

Prereq: EDL 556 Community Education.

EDL 675 Organization and Administration of the Community College.**Two sem hours**

An understanding of the two-year college: its legal bases, external and internal constraints, functional patterns, administrative staff roles and responsibilities, faculty organization and authority, student participation in organizational structure.

Prereq: Six hours credit in administration.

EDL 677 School Business Management. Two sem hours

School business procedures: budgeting, construction, purchasing, salary schedules, school indebtedness and insurance problems.

Prereq: 553 Economics of Public Education.

EDL 680 Legal Aspects of Administration. Two sem hours

Operation of laws; development of legal principles; federal and state relationships to education; authority and liability of school boards, administrators and teachers; negligence, discipline and control.

Prereq: Six hours of credit in administration. Majors only.

EDL 683 Behavioral Science in Administration and Supervision.**Two sem hours**

Emphasizes contributions of research in the behavioral sciences to educational leadership. Critical readings of the research of psychologists, sociologists, political scientists and others that have special meaning in understanding such concepts as leadership, organization, power, authority, communication, innovation and decision making.

Prereq: Six hours in administration and EDP 592 Research Techniques.

EDL 686 Special Topic Seminar. One sem hour

An intensive study of a topic of current relevancy.

EDL 690, 691 and 692 Thesis. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

Prereq: Approval of adviser.

EDL 693 Practicum. Two sem hours

Development of a study proposal for the thesis or the internship. EDL 693 must be taken prior to the Thesis (690, 691, 692) or Internship (694).

Prereq: EDP 592 Research Techniques, EDL 683 Behavioral Science in Administration and Supervision and permission of the adviser.

EDL 694 Internship in Educational Administration. Six sem hours

Provides an opportunity for the graduate student, teacher or administrator to develop his administrative skills by working under the direction of an experienced public school, intermediate district, community college or four-year institution administrator. Is completed in a system which has contracted with the University to conduct this program. Arrangements must be approved by adviser and director of Intern Program prior to registration.

Prereq: See course prereq. for internship (available from department).

EDL 696 Advanced Seminar in Administration and Supervision.**Two sem hours**

An intensive study of selected problems in administration and supervision. Students are limited to two EDL 696 seminars on Specialist degree program

Prereq: Six hours toward Specialist in Arts degree.

EDL 697, 698, 699 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

Prereq: Approval of adviser.

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
EDL 502	X	X	X	X
EDL 515	X			
EDL 540	X	X	X	X
EDL 550		X		X
EDL 553	X	X	X	X
EDL 556	X		X	X
EDL 560	X	X		X
EDL 562	X	X	X	X
EDL 563			X	X
EDL 566	X	X		X
EDL 580	X		X	X
EDL 581	X			
EDL 587	X		X	X
EDL 594	X		X	X
EDL 596	X	X	X	X
EDL 605	X		X	X
EDL 651	X			X
EDL 653	X			
EDL 655				X
EDL 658			X	X
EDL 671	X			X
EDL 672				X
EDL 673	X		X	
EDL 674	X		X	
EDL 675	X			
EDL 677				X
EDL 680	X		X	X

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
EDL 683	X		X	X
EDL 693	X	X		X
EDL 694	X		X	X
EDL 696	X	X	X	X

The above schedule is subject to modification because of personnel and enrollment changes. Consult the official class schedule for each term. Courses are also offered each term through Continuing Education as a supplement to the above schedule.

EDUCATIONAL PSYCHOLOGY

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OBJECTIVES

The Graduate Program in Educational Psychology offers two areas of concentration: (1) development and personality and (2) research and technology. Upon completion of the core courses students will:

- be familiar with major theories and principles of learning and their application to classroom management and instruction (EDP 503).
- understand the construction and use of teacher-made tests, rating scales, questionnaires, checklists and the administration and utilization of standardized tests (EDP 531).
- be able to organize data, apply and interpret descriptive statistics (EDP 521).
- develop skills in locating, reading, interpreting, summarizing and evaluating various types of research reports (EDP 592).
- integrate, synthesize and explore in-depth significant issues in educational psychology (EDP 596).

Students who select the development and personality concentration will become familiar with:

- theories, research and issues regarding the growth, development and learning of children, adolescents and adults and the application of this knowledge to classroom practice and everyday living (EDP 500, EDP 501, and EDP 510).
- theories, conditions and practices which promote mental, emotional and social well-being in the home, school and other social settings (EDP 505, and EDP 509).
- the body of knowledge and skills in their chosen areas of personal interest such as techniques for modifying behavior, the role of play in development, recognition and facilitation of the creative process, and identification of exceptional children and the use of appropriate classroom methodology (EDP 511, EDP 512, EDP 514, and EDP 518).

Students who select the research and technology concentration will become familiar with:

- a. parametric and non-parametric statistical techniques and the application of these tests to the verification of hypotheses (EDP 551).
- b. methods of conducting educational research which include problem formulation, review of related research, research designs, measurement procedures, data analyses and interpretations (EDP 650).
- c. the field of data processing, the use of computers and other technology in instruction (EDP 508).

In addition to the above, this program provides a foundation for the pursuit of advanced degrees in educational psychology or allied fields.

ADMISSION TO THE PROGRAM

Students must meet the degree admission requirements of the Graduate School of Eastern Michigan University.

Generally, students entering this program possess the teaching certificate. However, those with vocational objectives clearly of an educational nature but not centered in a public school setting may request that teacher certification be waived.

In addition, students must apply to the chairman of the Graduate Instruction Committee in Educational Psychology for admission to the program. The procedure for application for this program is as follows:

1. Submit the completed departmental application form obtainable from the secretary of the Department of Educational Psychology.
2. Submit transcripts of all undergraduate and graduate work to the Graduate School and complete Graduate School application form.
3. Submit Miller Analogies Test score to the Graduate School. Arrangements for the MAT may be made with the secretary of the Department of Educational Psychology.

Once this information has been received, it is reviewed by the Graduate Instruction Committee in Educational Psychology. The undergraduate grade point average (a 2.5 average on a 4.0 scale is required), satisfactory performance on the MAT, experience in related fields, and personal recommendations will be considered when determining readiness for graduate study in this degree program.

DEGREE REQUIREMENTS

Candidates for the master's degree in educational psychology must satisfactorily complete all work of the program of study, including the following:

1. A minimum of 30 semester hours of graduate credit applicable to the program.
2. The 30 semester hours must include six (6) hours of cognates, i.e., courses elected from departments other than Educational Psychology and approved by the adviser.
3. A "B" average for all work applicable to the degree.
4. The recommendations of the adviser, the Graduate Instruction Committee in Educational Psychology and the Graduate School.
5. All other requirements for a master's degree adopted by the Graduate School of Eastern Michigan University.

ADVISING

The Graduate Instruction Committee in Educational Psychology is responsible for the admission and advisement of graduate students in the program. The evaluation and recommendations for modification of the program are also the responsibilities of this committee. When a student is granted admission to the program an adviser is immediately assigned.

The responsibilities of the adviser include:

1. Assisting the student in the development of a program of study. This will include the selection of a concentration area and the choice of appropriate required and elective courses.
2. Determining the applicability of transfer credits to the student's program of study.
3. Confering with the advisee concerning the nature of academic progress.
4. Filing copies of the advisee's program of study with the Graduate School Office, the chairman of the Graduate Instruction Committee in Educational Psychology, and the adviser.

Upon admission to the program the student is expected to assume the following responsibilities:

1. Consulting with an adviser in the Department of Educational Psychology *before registration for the first session or semester in the degree program.*
2. Preparing a program of study with the assistance and approval of the adviser.
3. Obtaining permission of the adviser *before making substitutions or altering the program of study which has been previously approved.*
4. Applying for graduation. Forms are available in the Graduate School Office.

PROGRAM REQUIREMENTS

Each program of study must indicate which area of concentration (Development and Personality or Research and Technology) is being pursued.

The Core Courses (ten semester hours) are the same for both concentration areas. The first four courses (Principles of Classroom Learning, Statistics I, Measurement and Evaluation and Research Techniques) should be elected at the beginning of the program. The Seminar in Educational Psychology should come toward the end of the program.

The supportive courses may include Independent Study and Thesis credits. However, students seeking to gain admission to such must file an application (available in the office of the Department of Educational Psychology).

All students must complete a minimum of six semester hours of cognate work. These must be outside of the Educational Psychology Department and related to the area of concentration.

EDP 500 Human Development. Two sem hours

The study of social, emotional, physical and mental growth; processes and developmental stages throughout the life cycle and their implications for learning and teaching. Students are expected to pursue an in-depth analysis of research, theory and issues in the field commensurate with the experiential background which they bring to the course.

EDP 501 Psychology of Adolescence. Two sem hours

Study of the physical, cognitive, affective and social behavior and development of the adolescent; of his relation to family, peer group, school and society; and of youth here and abroad.

*** EDP 502 Basic Concepts in Educational Psychology. Two sem hours**

Review and critical assessment of major issues in the areas of human growth and development; learning and technology; personality and mental hygiene; and measurement and evaluation.

EDP 503 Principles of Classroom Learning. Two sem hours

Major principles of learning are examined for their applications in a classroom setting. Recent contributions are studied, and the value of learning theories for the teacher is discussed.

Prereq: At least one course in human growth and development or psychology.

*** EDP 504 Essentials of Programmed Instruction. Three sem hours**

Principles of programmed instruction are discussed and students examine programs and evaluate them. Students construct short programs in their areas of interest and revise and evaluate them. *This is not a course in computer programming.*

Prereq: At least one course in educational psychology, human growth and development or psychology.

*** EDP 505 Mental Hygiene. Two sem hours**

A study of the conditions and practices which promote mental, emotional and social well-being. Concepts are explored in terms of restoration, preservation and elevation of mental health goals. The course emphasizes introspection and self-awareness, techniques and skills relevant to interpersonal relationships, and the application of principles and concepts to home, school and other social settings.

EDP 506 Technology of Instruction. Two sem hours

Classroom management of learning and instruction; the tools of instruction. Educational technology is more than the study of machines used in education.

Prereq: At least one course in educational psychology, or human growth and development or psychology.

EDP 508 Computer Applications in Education. Two sem hours

An overview of the field of data processing in terms of computer hardware and computer languages (software); educational uses of the computer in instruction, guidance and counseling and school administration. *Permission of instructor required for students with background in computers.*

EDP 509 Problems in Child Psychology. Two sem hours

Deals theoretically and practically with the many concerns felt by teachers and parents in regard to the various problems children face. Includes home, family and school influences as creators of problems, and approaches for dealing with these problems.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

EDP 510 Personality Theories for Educators. Two sem hours

A study of cognitive, psychoanalytic and social learning personality theories primarily for graduate students in educational psychology. The focus of the course will be on implementation of these theoretical approaches for problems in the classroom.

Prereq: EDP 500 or equivalent or departmental permission.

EDP 511 Piaget for Educators. Two sem hours

A systematic analysis of Piagetian research and theories. Applications to curriculum from pre-school through secondary will be made. Students will conduct interviews and tests with children and adolescents and make recommendations for their teaching. Students will also evaluate educational materials and teaching strategies.

Prereq: EDP 500 Human Development or equivalent.

EDP 512 Behavior Modification Techniques for School Personnel.**Two sem hours**

This course is designed for school personnel who are desirous of developing skills in the use of behavior modification in their settings. Students will learn and apply the principles of behavior modification to projects conducted in their institutions. Students who enroll in this course should presently be teaching or employed in an instructional setting.

Prereq: Current employment in an instructional setting or permission of the instructor.

EDP 514 Psychology of Creativity for Educators. Two sem hours

A study of the various aspects of creativity: the person, the environment, the process, with emphasis on their implications for teaching. The course will also focus on teacher procedures and methods for facilitating student creative behavior in the classroom.

Prereq: EDP 500 or equivalent or departmental permission.

EDP 518 Play and Development. Two sem hours

The phenomena of play for all ages and their relationship to developmental processes will be investigated. Definitions, viewpoints, history and theories of play and play movements will be analyzed. Students will conduct interviews and observations with children, adolescents and adults.

Prereq: EDP 500 Human Development or equivalent.

***EDP 521 Statistics I: Descriptive Statistics. Two sem hours**

The organization of data, and application and interpretation of descriptive statistics. Includes levels of measurement, frequency distributions and graphs, measures of central tendency, dispersion, relative position, relationship and prediction.

EDP 531 Measurement and Evaluation. Two sem hours

A study of the construction and use of teacher-made tests, rating scales, ques-

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

tionnaires, check lists and similar measures. Also includes the administration of standardized tests and utilization of their results.

EDP 533 Systematic Observation, Checklists and Rating Scales.

Two sem hours

An introduction to the techniques and tools of systematic observation; uses and limitations of checklists and rating scales in educational settings; and methods of estimating and improving the reliability and validity of such techniques and tools.

Prereq: EDP 531 Measurement and Evaluation and/or statistics or departmental permission.

EDP 539 Experimental Course. Two sem hours

An experimental course designed to include specific topics of concern in Educational Psychology.

Prereq: Permission of the instructor.

EDP 551 Statistics II: Inferential Statistics. Two sem hours

Inferential statistics, both parametric and non-parametric; theory of hypothesis testing.

Prereq: EDP 521 Statistics I: Descriptive Statistics or equivalent.

EDP 584 Psychoanalytic Theory and Education. Two sem hours

Major psychoanalytic concepts will be discussed and compared. Applicability of psychoanalytic theories to problems of education will be explored.

Prereq: EDP 500 Human Development or equivalent.

*** EDP 592 Research Techniques. Two sem hours**

Basic concepts, procedures and language of research; facets of research, i.e., problem formulation, research design, data collection, data analysis and interpretation. Critical appraisal of published research.

EDP 596 Seminar in Educational Psychology. Two sem hours

This course provides students with the opportunity for in-depth exploration and examination of significant issues in educational psychology as they relate to their professional goals.

Prereq: Admission to the M.A. degree program in educational psychology and nearing completion of the program.

EDP 597, 598 and 599 Independent Study. One, two and three sem hours

Prereq: Permission of the graduate adviser.

EDP 631 Statistics III: Analysis of Variance. Two sem hours

Involves statistical principles in experimental design through the study of single and multi-factor analyses of variance.

Prereq: EDP 521 Statistics I: Descriptive Statistics and EDP 551 Statistics II: Inferential Statistics or equivalents.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

EDP 650 Empirical Methods for Educational Research. Three sem hours

Emphasis is on the understanding of advanced empirical methods in education. Topics included are measurement procedures, research designs, data analyses and interpretations, and the use of the computer terminal.

Prereq: EDP 521 Statistics I: Descriptive Statistics or EDP 551 Statistics II: Inferential Statistics and EDP 592 Research Techniques (or permission of instructor).

EDP 690, 691 and 692 Thesis. One, two and three sem hours

Prereq: Permission of the graduate adviser.

SPECIALIST IN SCHOOL PSYCHOLOGY

The Department of Educational Psychology is cooperating with the Departments of Psychology and Special Education in a program designed to prepare school psychologists. A complete description of this program is available in the Psychology Department section of this catalog.

Tentative Schedule of Regularly Offered Graduate Courses

Course	*Consult Class Schedule for Par.				
	Sem.	Winter	Spring	Summer	Fall
EDP 500		X	X	X	X
EDP 501		X	X	X	X
EDP 502	X				
EDP 503	X				
EDP 504	X				
EDP 505		X	X	X	X
EDP 506	X				
EDP 508	X				
EDP 509		X	X	X	X
EDP 510	X				
EDP 511					X
EDP 512		X			
EDP 514	X				
EDP 518		X			
EDP 521		X	X	X	X
EDP 531		X	X	X	X
EDP 539	X				
EDP 551		X			
EDP 584	X				
EDP 592		X	X	X	X
EDP 596				X	X
EDP 631	X				
EDP 650	X				

*These courses are not regularly offered, confer with adviser.

GUIDANCE, COUNSELING and PERSONNEL WORK

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Paul A. Nau,
Coordinator of Advising
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Tele. 487-3270

Graduate study in the Department of Guidance and Counseling consists of the Master of Arts degree program, the Specialist in Arts degree program, and service course offerings for classroom teachers and graduate students in related fields.

The master's degree program provides entry level competencies and proficiencies for such positions as elementary school counselors, secondary school counselors and college student personnel workers. In addition, counselors and personnel workers in non-education settings (e.g. employment counselors, vocational rehabilitation counselors, community/agency personnel and management/industry personnel) receive education and training which improves their effectiveness.

The specialist's degree program provides individuals with advanced competencies and proficiencies, enabling them to assume leadership positions in guidance and personnel programs. This advanced program of graduate study is directed to those persons aspiring to such positions as director of guidance, coordinator of pupil personnel services, director of student personnel services, director of testing, counseling supervisor, guidance consultant and similar positions in the helping professions.

Master of Arts

ADMISSION REQUIREMENTS

1. Meet Graduate School degree admission requirements.
2. A valid teaching certificate (elementary and/or secondary) for those students pursuing the school counselor endorsement program.
3. A 2.25 undergraduate grade point average or a 2.5 undergraduate grade point average for the last 60 semester hours.
4. Completion of Personal Data Form.
5. A personal interview with an assigned adviser.

A program adviser will be assigned to each student when records are received from the Graduate School. At this time, the student will be notified and should arrange for a personal interview. The adviser will assist the student in developing a planned program of graduate study. All courses and subsequent changes in the program must be approved by the adviser. Persons desiring further clarification of admission requirements or information related to alternative admission should contact **DR. PAUL A. NAU**, coordinator of advising, 13 Boone Hall.

PROGRAM REQUIREMENTS

A master's degree program consists of two major components, a major concentration in guidance and counseling and appropriate courses in cognate areas.

Students pursuing graduate study in school counseling and endorsement as elementary or secondary school counselors in Michigan follow the program outline, "School Counselor Endorsement Program." Students pursuing graduate study in college student personnel work or in areas of community counseling or personnel work follow the program outline, "College and Community Personnel Program."

SCHOOL COUNSELOR ENDORSEMENT PROGRAM

The following outline describes the general program requirements leading to a minimum of 32 semester hours of graduate study for those students seeking training and endorsement as elementary or secondary school counselors:

- A. Major Concentration in Guidance and Counseling 18-22 sem hours
1. Required Courses (16 sem hours)
- G&C 500 Introduction to Guidance and Counseling, or
501 Guidance in the Elementary School
 - G&C 505 Counselor Development: Basic Skills
 - G&C 510 Counselor Development: Counseling Process
 - G&C 520 Standardized Group Testing
 - G&C 540 Group Process I
 - G&C 611 The Elementary School Counselor, or
613 The Secondary School Counselor
 - G&C 630 Educational and Occupational Information
 - G&C 680 Counseling Practicum I
2. Elective Courses (2-6 sem hours)
- These guidance and counseling courses are selected with approval of the adviser and reflect the student's professional needs and objectives.
- B. Cognate Areas 10-14 sem hours
1. Required Courses
- a. EDP 521 Descriptive Statistics (2 sem hours)
or equivalent
 - b. Behavioral Sciences (4-6 sem hours)
- These courses are usually taken in departments such as Psychology, Sociology, Educational Psychology and Special Education; intended to strengthen the students' knowledge of human development and their understanding of humanistic approaches.
2. Elective Courses (4-6 sem hours)
- These courses are elected to provide knowledge and understanding of the educational setting in which the student will be employed and to meet career-related objectives.

Students seeking counselor endorsement of their teaching certificate must provide evidence of their valid Michigan teaching certificate at the time of admission. These students are eligible to apply for counselor endorsement of their teaching certificate at the completion of their graduate program of study.

COLLEGE AND COMMUNITY PERSONNEL PROGRAM

The following outline describes the general program requirements leading to a minimum of 32 semester hours of graduate study for those students seeking training and education as college student personnel workers or as counselors and personnel workers in community settings:

A. Major Concentration in Guidance and Counseling 18-22 sem hours

1. Required Courses (14 sem hours)

- G&C 500 Introduction to Guidance and Counseling
- G&C 505 Counselor Development: Basic Skills
- G&C 510 Counselor Development: Counseling Process
- G&C 520 Standardized Group Testing
- G&C 540 Group Process I
- G&C 680 Counseling Practicum I, or
681 Field Work Experience
- G&C 696 Seminar in Guidance

2. Elective Courses (4-8 sem hours)

These guidance and counseling courses are selected with approval of the adviser and reflect the student's professional needs and objectives.

B. Cognate Areas

1. Required Courses 10-14 sem hours

- a. EDP 521 Descriptive Statistics (2 sem hours)
or equivalent
- b. Behavioral Sciences (2-6 sem hours)

These courses are usually taken in departments such as Psychology, Sociology, Educational Psychology and Special Education; intended to strengthen the students' knowledge of human development and their understanding of humanistic approaches.

2. Elective Courses (6-10 sem hours)

These courses are elected from various departments to provide knowledge and understanding of the work setting in which the student will be employed and to meet career-related objectives.

Specialist in Arts

ADMISSION REQUIREMENTS

1. Must meet specialist degree requirements of the Graduate School.
2. A master's degree in guidance and counseling or its equivalent from an accredited institution.
3. A 6.0 graduate grade point average.
4. A valid teaching certificate or a waiver of this requirement by the department.
5. Evidence of successful experience in a helping profession.

6. Submission of score on the Miller Analogies Test.
7. Two letters of recommendation, one of which is from an immediate supervisor.
8. A personal interview with an assigned adviser.

The graduate admissions committee in the Department of Guidance and Counseling makes final admission decisions consistent with the needs of the profession and the ability of the department to effectively train its students at this advanced level of graduate study. Prior to application to this program, students should contact DR. PAUL A. NAU, coordinator of advising, or DR. JOHN G. PAPPAS, department head, 13 Boone.

PROGRAM REQUIREMENTS

The Specialist in Arts degree program requires a minimum of 33 semester hours beyond the master's degree. Students work closely with their assigned adviser in developing a program which will prepare them for their career goal. The following outline describes the program requirements of the specialist's degree program:

A. Foundation Courses 6 sem hours

This requirement is designed to provide counselors with greater ability to relate to the total functioning of their settings. It is also designed to insure that the counselor has sufficient research skills to successfully pursue the graduate study demanded by an advanced program. Therefore, all students are required to take EDP 592 Research Techniques for one of these experiences.

B. Area of Concentration 17-23 sem hours

1. Didactic Courses (10-14 sem hours)

- G&C 610 Theories of Counseling
- G&C 650 Organization and Administration of Guidance Services
- Electives-600 level graduate courses in Guidance and Counseling

2. Supervised Experiences (4-6 sem hours)

- G&C 681 Field Work in Guidance and Personnel Work
- G&C 685 Counseling Practicum II
- G&C 686 Supervision of Counseling Practicum

3. Specialist's Project (3 sem hours)

C. Cognate Courses 8-12 sem hours

These courses should be elected to strengthen the counselor's background and understanding in the social and behavioral sciences related to guidance and counseling. Courses in such areas as psychology, sociology, special education, educational leadership, economics and business management are of special value in this component of the program.

COURSE OFFERINGS

*G&C 500 Introduction to Guidance and Counseling. Two sem hours

A general course designed to present the philosophy, principles, and practices underlying guidance services in schools and other agencies. It is intended to provide an overview of the counseling and guidance field as well as an introduction to the counselor education program. Not open to students who have credit in G&C 501 Guidance in the Elementary School.

*G&C 501 Guidance in the Elementary School. Two sem hours

The unique contributions of guidance to the work of the classroom teacher and other staff in the elementary school are surveyed. Relationships between guidance, instruction and administration in the elementary school are explored. Not open to students who have credit in G&C 500 Introduction to Guidance and Counseling.

G&C 505 Counselor Development: Basic Skills. Two sem hours

Designed to train prospective counselors for competencies in beginning counseling skills. Individuals assess their potential for counseling. Expectations are clarified for program, professional and certification requirements; career opportunities are explored.

Prereq: G&C majors or departmental permission.

G&C 510 Counselor Development: Counseling Process. Two sem hours

The course is designed to assist counselor trainees in understanding the counseling process. Opportunities are provided for continued training and integration of counseling skills. Various counseling theories are examined. Consulting skills and processes are introduced.

Prereq: G&C 500 Introduction to Guidance and Counseling or G&C 501 Guidance in the Elementary School; G&C 505 Counselor Development: Basic Skills.

G&C 520 Standardized Group Testing. Two sem hours

This course is designed to familiarize students with various standardized group tests used in guidance and personnel programs. Emphasis is given to the development of school-wide testing programs and to the interpretation and use of test results.

Prereq: G&C 500 Introduction to Guidance and Counseling or G&C 501 Guidance in the Elementary School; EDP 521 Educational Statistics.

G&C 530 Career Education in the Guidance Program. Two sem hours

Students will learn to implement the guidance component of career education. Background, content and implications of the concept are presented. Class participants will develop action programs based upon the Michigan Guidance Infusion Model.

Prereq: G&C 500 Introduction to Guidance and Counseling or G&C 501 Guidance in the Elementary School; or permission of instructor.

*Open to graduate students and qualified seniors — see "Enrollment in Graduate Courses by Seniors."

G&C 540 Group Process I. Two sem hours

The course is designed to develop competencies in basic group facilitation skills, and to identify verbal and non-verbal behaviors and group interactive processes. Opportunities are provided for participation in a small group. Information is presented on the development and rationale of groups.

Prereq: G&C 500 Introduction to Guidance and Counseling or G&C 501 Guidance in the Elementary School; G&C 505 Counselor Development: Basic Skills.

G&C 542 Group Process II. Two sem hours

This course provides an experiential learning situation for students as they participate in and examine interpersonal relationships within a small group setting. Opportunities will be provided for participants to develop and assess group facilitation skills.

Prereq: G&C 540 Group Process I or equivalent.

G&C 595 Workshop in Selected Areas. Two sem hours

Workshops will be offered dealing with selected areas within the guidance and counseling field. Such workshops may include areas such as the self-concept, career education, psychological education and other relevant topics of interest.

Prereq: Open to Guidance and Counseling majors and graduate students in related fields.

G&C 596 Seminars in Counselor Development. Two sem hours

Seminars will be offered dealing with contemporary issues and problems in the guidance and counseling field. These counselor development seminars will be designed primarily for advanced graduate students in Guidance and Counseling and practitioners in the guidance and counseling profession.

Prereq: Permission of adviser or departmental approval.

G&C 601 Student Personnel Services in Higher Education. Two sem hours

Overview of student personnel services in higher education; their evolution and growth; educational significance; administrative aspects; and survey of the various student services. Major emphasis will be given to role of personnel work in the educative process of students in colleges and universities, including junior and community colleges.

Prereq: G&C 500 Introduction to Guidance and Counseling or G&C 501 Guidance in the Elementary School and G&C 510 Counselor Development: Counseling Process.

G&C 610 Theories of Counseling. Two sem hours

The rationale, historical development and research underlying selected theories of counseling, with emphasis on the implication of each theory for practice. Students are encouraged to develop a theoretical basis for their own counseling practice.

Prereq: Ten semester hours in G&C courses.

G&C 611 The Elementary School Counselor. Two sem hours

The function of elementary school counselors, their evolving role and relationship to students, teachers, parents and special service personnel. Emphasis will be placed on techniques for the early identification of pupil's intellectual, emo-

tional, social and physical characteristics; diagnosis of learning difficulties; and early use of available resources to meet student needs.

Prereq: *G&C 501 Guidance in the Elementary School* and *G&C 510 Counselor Development: Counseling Process*.

G&C 612 Case Studies in Counseling. Two sem hours

An opportunity for advanced students to make an intensive study of selected counseling cases. Analysis of these cases will enable students to develop competencies in case study techniques, appraisal of critical counseling areas and consultation with other professional staff.

Prereq: Ten semester hours in *G&C* courses.

G&C 613 The Secondary School Counselor. Two sem hours

Students will have the opportunity to further develop skills and techniques for working effectively with secondary school students. Consulting and coordinating skills for working with teachers, parents, administrators, referral agencies and pupil personnel staff will also be developed.

Prereq: Ten semester hours in *G&C* courses.

G&C 620 Individual Appraisal in Guidance and Counseling. Two sem hours

Testing and non-testing procedures, techniques and the processes of psycho-educational appraisal and their application to counseling, guidance and personnel work. Major emphasis is placed on the relevance of individual assessment to an increase in self-understanding.

Prereq: *G&C 510 Counselor Development: Counseling Process* and *G&C 520 Standardized Group Testing*.

G&C 621 Individual Mental Testing for Counselors. Two sem hours

An introduction to the administration, scoring and interpretation of Wechsler psychological scales. Special emphasis is placed on the use of these test results by the school counselor in elementary or secondary schools.

Prereq: *G&C 520 Standardized Group Testing* and *G&C 620 Individual Appraisal in Guidance and Counseling*.

G&C 630 Educational and Occupational Information. Two sem hours

An introduction to the psychology, sociology and economics of work and vocational development theory. Study of informational services in guidance including sources, organization and evaluation of educational and occupational information.

Prereq: Six semester hours in *G&C* courses.

G&C 631 Dynamics of Vocational Development. Two sem hours

An in-depth study will be made of the process of vocational development in educational and other settings as it relates to general human development and the economics and sociology of work. Theoretical constructs and significant research findings will be examined. Implications will be drawn for professional workers in guidance and counseling and related to manpower resources, locally and in the community at large.

Prereq: *G&C 630 Educational and Occupational Information*.

G&C 632 Vocational Rehabilitation Counseling. Two sem hours

Division of Vocational Rehabilitation: history, organization, legislation, role of the vocational rehabilitation counselor; principles and practices of vocational rehabilitation counseling; interviewing, referrals, establishing eligibility, determining vocational objectives, case reporting, adjustment counseling, selective placement and follow-up; counseling needs of physically and mentally handicapped clients; case studies and visits to rehabilitation agencies.

Prereq: G&C 630 Educational and Occupational Information.

G&C 650 Organization and Administration of Guidance Services.**Two sem hours**

A study of the philosophy and principles of guidance as implemented into practice. The organization and administration of the various guidance services and the guidance functions of various school staff members will be examined.

Prereq: Ten semester hours in G&C courses.

G&C 680 Counseling Practicum I. Two sem hours

An introduction to supervised counseling experiences. Students are involved in a variety of counseling relationships, assisting individuals with personal, educational and vocational goals and decisions. Systematic analysis of counseling effectiveness is facilitated through a process of self, peer, and supervisor evaluation.

Prereq: Permission of the Graduate Committee in Guidance and Counseling.

G&C 681 Field Work in Guidance, Counseling and Personnel Work.**Two sem hours**

On-the-job experiences under professional supervision that afford the student practical experiences in counseling and personnel work. Settings for the field work may include elementary and secondary schools, colleges and universities, social and community agencies, or other approved settings.

Prereq: Permission of the Graduate Committee in Guidance and Counseling.

G&C 685 Counseling Practicum II. Two sem hours

An advanced course in supervised counseling experiences.

Prereq: Permission of the Graduate Committee in Guidance and Counseling.

G&C 686 Supervision of Counseling Practicum. Two sem hours

Provides enrollees with the opportunity to supervise students in a counseling practicum experience. Includes the critiquing of tapes, leading group discussions and evaluating the growth of beginning counselors.

Prereq: Permission of the Graduate Committee in Guidance and Counseling.

G&C 696 Seminar in Guidance/College Personnel Work. Two sem hours

An integrating experience for the College and Community personnel program. Includes topics such as organization and administration of guidance and personnel programs, issues related to professional rights and responsibilities and other selected areas for intensive study.

Prereq: Ten semester hours in G&C courses.

G&C 697, 698 Independent Studies. One and two sem hours

An opportunity to explore topics of interest to the student in an intensive and

independent manner. Topics must be selected and an independent study pursued with the approval and supervision of a member of the faculty in guidance and counseling.

Prereq: Permission of the adviser.

G&C 699 Specialist in Arts Project. Three sem hours

A project required of each candidate for the Specialist in Arts degree. The project requirement can be satisfied by writing a descriptive report or review, developing informational materials or resources, or conducting a research or evaluation study in guidance and counseling. Each student will be supervised by a committee consisting of a chairman and one additional member of the Graduate Committee.

Prereq: Permission of the adviser.

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
G&C 500	X	X	X	X
G&C 501		X		X
G&C 505	X	X	X	X
G&C 510	X	X	X	X
G&C 520	X	X	X	X
G&C 530				X
G&C 540	X	X	X	X
G&C 542	X			
G&C 601	X			X
G&C 610	X			X
G&C 611	X			
G&C 612				†
G&C 613	X	X		X
G&C 620	X		X	X
G&C 630	X		X	X
G&C 631	X			
G&C 632				†
G&C 650				†
G&C 680	X	X	X	X
G&C 681	X	†	†	X
G&C 685	X			X
G&C 686	X			X
G&C 696 (Guid)	X	X		X
G&C 696 (Coll)	X			X

† Courses offered on a two (2) year cycle.

HEALTH, PHYSICAL EDUCATION, RECREATION and DANCE

Patric L. Cavanaugh,
Department Head
Warner Gymnasium,
Tele. 487-4338

John E. Sheard
Coordinator of Advising
233 Warner,
Tele. 487-0090

The primary aim of the master's degree in physical education is to assist graduates in the proper utilization of all their classroom and practical experiences in such a way as to afford optimum effectiveness in teaching/ coaching.

OBJECTIVES

Upon completion of the master's degree, students should be able to:

1. Utilize philosophy in establishing the objectives, methods, curricular activities and techniques of evaluation which they should use in the physical education program.
2. Develop a curriculum for either elementary school or secondary school physical education and utilize appropriate methods to achieve its goals.
3. Utilize current procedures for evaluating student progress in achieving the objectives of the physical education program.
4. Utilize sound administrative techniques in solving typical administrative problems in the area of physical education.
5. Interpret current research as it applies to their own teaching.
6. Acquire knowledge in greater depth in the areas of teaching selected by the individual student.
7. Acquire skills, knowledges and experiences in areas which extend beyond their undergraduate preparation that would enhance their abilities to teach more effectively.

ADMISSION REQUIREMENTS

1. Meet Graduate School degree admission requirements.
2. A baccalaureate degree from an accredited institution.
3. A major, minor or the equivalent in physical education or one of the associated areas.
4. A minimum of eight (8) semester hours in the basic sciences and one (1) course in evaluation.

DEGREE REQUIREMENTS

1. Must have earned a minimum of 30 semester hours of graduate credit applicable to the program.
2. Must have completed a minimum of 20 semester hours of acceptable graduate credit in H.P.E.R.&D. Each candidate must take 6 required classes in the core program and complete the total hours through electives.
3. Must receive the recommendation of the coordinator of advising and department head.

CURRICULUM REQUIREMENTS

Candidates will have the responsibility of scheduling conferences with their graduate H.P.E.R.&D. adviser to complete the following:

	Sem Hours
1. CORE COURSES	12
a. PED 585 Physical Education in Elementary Schools, or PED 586 Physical Education in Secondary Schools	
b. PED 587 Philosophy of Physical Education	
c. PED 588 Administrative Problems in Physical Education	
d. PED 589 Advanced Physical Testing	
e. PED 592 Research Techniques	
f. PED 598 Independent Study	
2. PROFESSIONAL COURSES (electives in H.P.E.R.&D.)	12-18
3. COGNATE COURSES	0-6

I. SERVICE COURSES

*** PED 505 Basic Statistics. Two sem hours**

Statistical procedures, distribution, measures of central tendency, measures of dispersion, and correlation.

*** PED 506 Test Construction. Two sem hours**

Types of written tests and examinations; construction, selection and interpretation of results.

II. ATHLETIC COURSES

*** PED 510 Administration of Athletics. Two sem hours**

Problems related to interscholastic and intercollegiate athletic programs; for administrators, supervisors, coaches and others having a part in the control of athletics.

*** PED 511 Advanced Techniques in Coaching Swimming: Stroke Technique. One sem hour**

A course to provide the scientific and technical background to coach and teach competitive swimming strokes.

*** PED 512 Advanced Techniques in Coaching Swimming: Training Methods. One sem hour**

A course to provide the practical and scientific background for a swimming coach to design a competitive training program, a physical educator to make aquatics a meaningful fitness tool.

PED 513 Coaching Women's Gymnastics. 2 Credit Hours

A lecture-demonstration course in the problems and techniques of advanced coaching theories of women's gymnastics.

Prereq: One course in gymnastics or permission of instructor.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

PED 514 Judging Women's Gymnastics. 2 Credit Hours

A lecture-demonstration course in the problems and techniques of judging women's gymnastics.

Prereq: One course in gymnastics or permission or instructor.

*** PED 515 Workshop in Athletics. Two sem hours**

A specialized workshop in the area of athletics with the central theme to be announced.

PED 611 Advanced Techniques of Coaching Football. One sem hour

A lecture-demonstration course in the problems and techniques of advanced coaching theories of football.

PED 612 Advanced Techniques of Coaching Track and Field. One sem hour

A lecture-demonstration course in the problems and techniques of advanced coaching theories of track and field.

PED 613 Advanced Techniques of Coaching Basketball. One sem hour

A lecture-demonstration course in the problems and techniques of advanced coaching theories of basketball.

PED 614 Advanced Techniques of Coaching Baseball. One sem hour

A lecture-demonstration course in the problems and techniques of advanced coaching theories of baseball.

PED 615 Officiating and Coaching Volleyball. Two sem hours

A course designed for the individual who plans to coach and/or officiate volleyball. The class is structured to identify volleyball techniques, strategies and coaching problems as well as officiating procedures, rule interpretation and responsibility of coach to official and vice versa.

PED 616 Advanced Techniques of Coaching Tennis. One sem hour

A course designed to identify and discuss tennis techniques, strategies and coaching problems.

PED 619 Problems in Training for Athletics. Two sem hours

Problems in the physical preparation of athletics for competition; treatment and rehabilitation following injuries.

III. RECREATION COURSES*** PED 520 Trends in Community Recreation. Two sem hours**

Recreation and the cultural aspects of communities.

*** PED 521 Park Management and Maintenance. Two sem hours**

A course in the practical problems of park maintenance, covering grounds care, maintenance of courts, ball diamonds, pools, and other athletic areas; training and supervising park maintenance staff; repair work, supplies, tools and equipment, record keeping and inventory.

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

***PED 522 Social Recreation. Two sem hours**

Planning and directing activities for family groups, church groups, senior citizens and school and community functions.

***PED 523 Park and Recreation Planning and Design. Two sem hours**

A course in planning and design of park and recreation facilities including golf courses, indoor and outdoor ice rinks, camping areas, recreation centers, community playfields and parks, indoor and outdoor swimming pools and lighted recreation facilities.

*** PED 535 Workshop in Recreation. Two sem hours**

A specialized workshop in the area of recreation, with the central theme to be announced.

IV. HEALTH COURSES

PED 545 Workshop in Sex Education. Two sem hours

Designed to provide a period of concentrated study and discussion about sex education for teachers, nurses, school administrators, clergy and interested representatives of community agencies.

*** PED 546 Seminar: Alcohol Use and Abuse. Two sem hours**

Designed to improve the quality of teaching in alcohol education and the quality of rehabilitative efforts by public and private agencies concerned with alcohol problems. Attempts to develop an understanding of the physiological, psychological and sociological factors related to the use of alcohol. Specifically it is concerned with developing constructive attitudes toward the alcohol problem and dispelling prejudices, misunderstandings and myths which obscure facts.

*** PED 554 Workshop and Health Education. One sem hour**

A specialized workshop in the area of health education with the central theme to be announced.

*** PED 555 Workshop in Health Education. Two sem hours**

A specialized workshop in the area of health education, with the central theme to be announced.

PED 640 Basic Concepts of the School Health Program. Two sem hours

To provide school personnel with an opportunity to study and understand the function of the total school health program with special emphasis upon the classroom teacher.

PED 643 Problems in Community Health. Two sem hours

Community health problems and the forces operative in their solution; the role of the educator dealing with the health problems of his environment.

Prereq: PED 640 Basic Concepts of the School Health Program.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

PED 645 Problems in Sex Education. Two sem hours

A course designed to help school personnel improve and implement comprehensive sex education programs in the schools. K-12. The focus is on improvement of skills and techniques in teaching and program development.

PED 647 School Health Trends. Two sem hours

Review of recent literature and research in the areas of health service and health instruction; national trends in school health.

Prereq: PED 640 Basic Concepts of the School Health Program.

PED 650 Administration of the School Health Program. Two sem hours

For principals, supervisors, coordinators, athletic directors and other personnel involved with the administration and leadership in school health programs. Current administrative theory in the implementation and improvement of school programs.

Prereq: PED 640 Basic Concepts of the School Health Program.

V. PHYSICAL EDUCATION COURSES**PED 561 Supervision in Physical Education. Two sem hours**

Problems, relationships and procedures in the supervision of physical education programs.

***PED 562 Facility Planning and Development. Two sem hours**

Terminology, standards for planning, construction, use and maintenance of facilities in health, physical education, recreation and athletics.

***PED 565 Problems in Intramural and Extramural Sports. Two sem hours**

Organization and administration of intramural and extramural sports in junior and senior high schools; practical aspects of programming for groups and individuals.

***PED 568 Workshop in Physical Fitness. Two sem hours**

Current theories and practices in the development of physical fitness in our society; evaluation of school programs.

***PED 570 Critical Analysis of Physical Education. Two sem hours**

The expanding of physical education and the physical educator; an analysis of research in the foundation sciences and in philosophy.

***PED 571 Seminar in Modern Dance. Two sem hours**

A concentrated study of the teaching of modern dance in the secondary school including technique and composition.

***PED 575 Workshop in Physical Education. Two sem hours**

A specialized workshop in the area of physical education with the central theme to be announced.

***PED 576 Workshop in Gymnastics. Two sem hours**

The development and improvement of gymnastics as a major area of physical education in the schools; the continuity and progression of gymnastic skills

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

from grades one through twelve and current trends in theory and practice. Lectures, demonstrations and discussions.

*** PED 577 Workshop in Movement Education. Two sem hours**

A period of concentrated study dealing with the British and the American approach to movement education. Emphasis is given to creativity and movement through study, observation and actual participation. Designed to meet the needs of classroom teachers and physical education specialists at the elementary school level.

*** PED 578 Motor Learning and Development. Two sem hours**

A study of the development of motor skills in children as related to their age and growth patterns with an investigation of major theories and research in learning as applied to motor skills.

PED 579 Physical Education for Mentally Impaired. Two sem hours

Physical Education curriculum and programming for the mentally impaired. Content includes program goals, assessment, prescription, teaching and program evaluation. Emphasis will be placed on adapting materials and utilizing alternative teaching strategies to individualize instruction.

*** PED 580 Comparative Physical Education. Two sem hours**

The historical heritage of physical education from early Greek civilization to the present. Comparative studies of aims, objectives and programs of ancient and modern cultures.

PED 581 Physical Education for Impaired Students. Two sem hours

Physical Education curriculum and programming for the impaired student. Content includes program goals, assessment, prescription teaching and program evaluation. Emphasis will be placed on adapting materials and utilizing alternative teaching styles to individualize instruction in both mainstreamed and segregated teaching situations.

PED 585 Physical Education in Elementary Schools. Two sem hours

Curriculum development, teaching methods, program planning and evaluation for the physical educator and the elementary school teacher; purposes and principles of organization and development of a physical education program for elementary schools.

PED 586 Physical Education in Secondary Schools. Two sem hours

Developing a physical education curriculum for secondary schools; problems involved in supervision.

*** PED 587 Philosophy of Physical Education. Two sem hours**

The development of concepts of physical education and their impact on the society in which we live.

Prereq: Major/Minor.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

PED 588 Administrative Problems in Physical Education. Two sem hours

The case study approach to the understanding of problems in physical education and athletics; planning, organizing, developing, staffing, coordinating and budgeting programs.

Prereq: Major/minor.

*** PED 589 Advanced Physical Testing. Two sem hours**

The application and interpretation of advanced physical tests in the areas of health, physical education, recreation and athletics.

Prereq: Major/minor.

PED 663 Seminar in Current Literature Analysis. Two sem hours

A critical analysis of recent literature and research in physical education and athletics. Emphasis is placed on the interpretation of practical data which are likely to have the greatest influence on programs, procedures and practices.

PED 665 Sport Psychology. Two sem hours

This course will attempt to familiarize the student, whether coach, athlete or teacher, with scientific psychology as it relates to sport. The complex nature of optimal performance requires that an integrated psychological and physiological approach be employed. Therefore, theoretical and empirical evidence from the fields of applied psychology, applied physiology and sports medicine will be used to help the teacher-coach be more effective.

PED 668 Seminar in Physical Fitness. Two sem hours

A study of the literature and materials pertinent to the teaching of fitness. Particular attention is given to the implementation of programs of fitness within the school and community.

PED 670 Current Problems in Physical Education. Two sem hours

Identification, discussion and analysis of current problems and issues which confront the physical educator.

PED 678 Seminar in Motor Skills. Two sem hours

An investigation of factors having a significant effect upon the acquisition of motor skills. Attention is directed in turn to the learner, the educational setting and the teacher.

PED 680 Seminar in International Physical Education. Two sem hours

A continuation of PED 580, studying additional selected countries. A comparative analysis of physical education, recreation and sports of each country in depth, using the seminar approach.

Prereq: PED 580 Comparative Physical Education.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

VI. RESEARCH COURSES

PED 592 Research Techniques. Two sem hours

Research in a variety of settings; reviewing published research, participating in research, presenting a plan for a research problem.

PED 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem under the direction of a University faculty member.

Prereq: PED 592 Research Techniques or equivalent.

OTHER COURSES

The following undergraduate courses in the Health, Physical Education, Recreation and Dance Department may be taken for graduate credit, with the adviser's approval:

350 History of Dance. (3)

355 Labnotation. (3)

410 Drug Overdose Aid. (2)

450 Advanced Dance Composition. (4)

480 Recreation Therapy. (2)

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
PED 505				X
PED 510		X		
PED 511			X	
PED 512			X	
PED 513		X		
PED 514				X
PED 520		X		
PED 521	X			
PED 522	X			X
PED 523				X
PED 545			X	
PED 561				X
PED 562	X		X	
PED 565	X			
PED 570		X		X
PED 576			X	
PED 577	X			
PED 578	X		X	X
PED 579			X	
PED 580			X	X
PED 585				X
PED 586	X	X		
PED 587			X	
PED 588			X	

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
PED 589	X			X
PED 592	X		X	X
PED 598	X	X	X	X
PED 611			X	
PED 612			X	
PED 613		X		
PED 614			X	
PED 615		X		
PED 616			X	
PED 619		X		
PED 640			X	
PED 643				
PED 645				
PED 647				X
PED 663		X		
PED 665	X			X
PED 668		X		
PED 670	X		X	
PED 680	X			

SOCIAL FOUNDATIONS OF EDUCATION

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Chairperson
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PHILOSOPHY AND OBJECTIVES

Courses in the social foundations of education are offered by the Social Foundations of Education Department for graduate students majoring in social foundations and for others enrolled in the graduate school who seek personal and/or professional development by study in educational social science. Historically, the social foundations of education were comprised of courses in historical, philosophical, socio-cultural and comparative aspects of education. Other educational social sciences have appeared, but the most significant developments currently are outgrowths of the move toward more integrated or interdisciplinary study in social foundations. The investigation of schooling in other societies clearly involves the use of both the content and methodology of the social sciences as they are integrated in education. The faculty of the social foundations program is thus committed to the kinds of scholarship, professional service and individual growth that lead to an understanding of the relationships of the social

and humanist disciplines to the education of man. In the master's degree program, that commitment is carried forward by service to teachers who choose to enroll in the program.

MASTER'S PROGRAM

This program has been designed to complement, extend and enrich the education a teacher receives at the undergraduate level. While in a strict sense this program does not prepare a student for a specific vocational position, study in the social foundations of education assists the person to become more aware of the complex dimensions of traditional and emergent relationships of formal and informal educational institutions in the American cultural context. With attention to all subjects and grades from pre-school through college, the program offers opportunities for professional educators to build better relationships with others in the school setting and to enhance the knowledge of and sensitivity to the community and society in which they live and work. Students who successfully complete the program of graduate study in social foundations receive the Master of Arts degree.

PROGRAM DESCRIPTION AND REQUIREMENTS

The master's degree program, which requires earning a minimum of thirty (30) semester hours credit, is so organized as to facilitate the development of an individual program for each major student which provides for concentration in one of four social foundations sub-fields and opportunity for relating such specialization to the integrative, interdisciplinary nature of the social foundations. Of the total of thirty hours, at least sixteen (16) hours must be in social foundations courses, two (2) hours in a curriculum foundations course, and a minimum of zero (0) to six (6) hours in cognate courses outside social foundations approved by the student's adviser. In the first semester following admission to the program, the student will enroll in SFD 500 Social Foundations of Education: An Introduction, a two semester hour initiatory course. Prior to, or during that semester, the student will consult with his adviser to determine which of four options for specialization will be selected. Each option requires a minimum of eight semester hours and all course selections require prior approval of the adviser.

Option A—will provide for depth of study in the history of education. The student may select from social foundations courses 501, 502, 571, 572 and 573 and appropriate courses from the Department of History.

Option B—provides similarly for depth of study in socio-cultural aspects of education by selection from social foundations courses 503, 504, 525, 526, 527, 560, 562, 573 and 580, and from appropriate courses in the Department of Sociology.

Option C—offers similar opportunities in philosophical study in courses 501, 502, 524, 550, 551, 552 and 553, and in courses in philosophy.

Option D—provides for depth of study in the comparative and international aspects of education by selection from social foundations courses 524, 525, 526, 527, 540, 541, 542, 560 and 562, and appropriate courses in economics, geography, history and political science.

When students have completed at least twenty (20) hours, including SFD 500 and at least eight (8) hours in Option A, B, C, or D, they will enroll in SFD 696 Advanced Seminar. During the seminar, or following it, the student and adviser will consult to determine what additional capstone experiences are desirable. It is anticipated that the student's experience in the conduct of an interdisciplinary study of substance and depth (in 696) will provide the substantive basis for deciding upon similar further studies.

The remaining hours will be devoted to additional cognates or electives and further SFD course work, seminars, independent study, or thesis which the student and adviser determine to be particularly integrative for that individual student's program.

ADMISSION REQUIREMENTS

Admission to the program will require that the applicant hold a baccalaureate degree from an accredited institution and meet the degree admission requirements of the Graduate School. This requires a 2.25 grade point average or alternate admission as specified on p. 14 of this catalog. For regular admission, the applicant must hold a valid teaching certificate or have successfully completed an education major or minor or equivalent. Further, the applicant must have completed fifteen (15) hours in the social sciences. This includes courses defined as social sciences in the EMU Undergraduate Catalog plus courses in philosophy and religion. For those teacher applicants who do not meet the requirements for regular admission, conditional admission (including a clear specification of actions necessary for regular admission status) may be granted. It is anticipated that, in a few instances, students who are not and do not intend to become teachers may wish to seek the master's degree in social foundations. In addition, some students may choose to combine study in the social foundations of education with completion of initial certification as teachers. When such intentions are based on clear understandings of the program, the teaching certificate requirement may be waived.

Students who wish to apply for admission to the program leading to the degree, Master of Arts in the social foundations of education, may make application in the Graduate School Office, 116 Pierce Hall. When the application has been processed by the Graduate School, the student is contacted by the Coordinator of Advising for the social foundations program to arrange for an adviser and to develop a schedule for completion of degree requirements. Recommendations concerning admission and the proposed course of study are reviewed and acted upon by the full faculty in social foundations.

COURSES IN SOCIAL FOUNDATIONS

In a recent reorganization, the department has attempted to provide a numbering of its courses in a rubric that will facilitate knowledge of the nature of a course from its number. Thus, courses numbered:

500-519 are interdisciplinary, integrating several sub-fields;

520-529 provide for interdisciplinary study in comparative education;

530-539 are experimental and/or interdisciplinary;

540-549 are field studies, principally in other nations;
 550-559 involve study in educational philosophy;
 560-569 deal basically with anthropology in education;
 570-579 view education from a history and political science basis;
 580-589 have an educational sociology orientation;
 590-599 are seminars, workshops, theses and independent studies.

Generally, the courses numbered 550, 560 and 580 are thought of as introductory courses in those series. Courses at the 600 level follow this same rubric.

*** SFD 500 Social Foundations of Education: An Introduction. Two sem hours**

An overview, presented by varied staff members, of the major areas of social foundations of education: educational sociology, educational anthropology, educational philosophy, educational history and comparative education.

*** SFD 501 History of Educational Thought. Two sem hours**

A study of the history of educational thought as a means of understanding the evolutionary process by which modern concepts of education developed.

Prereq: SFD 500 or an undergraduate course in Western history or philosophy.

*** SFD 502 Progressivism in American Education. Two sem hours**

The genesis and development of pragmatism; the special contributions of Pierce, James, Mead and Dewey; the progressive movement in America; the educational theories and practices of the Progressivists: Bode, Kilpatrick, Counts; present thought and new influences.

Prereq: SFD 500 or an undergraduate course in Western history or philosophy.

*** SFD 503 Groups in Schools. Two sem hours**

Examines schools and classrooms as social organizations; considers dynamics of interpersonal behavior in large and small settings; examines such phenomena as roles, statuses, communications and patterns of influence.

Prereq: SFD 580 for majors; for non-majors, SFD 580 or one course in psychology or sociology.

*** SFD 504 Delinquency and Schools. Two sem hours**

Nature, meaning, causal factors and conditions of delinquency in home, school and community; problems in personality and behavior; the juvenile court; delinquency prevention and control programs. Opportunity to study problems of particular individual interest. Not open to students who have credit in SFD 354 *Juvenile Delinquency*.

Prereq: SFD 580 for majors; for non-majors, SFD 580 or one course in psychology or sociology.

*** SFD 524 Education for What and Whom: A World View. Two sem hours**

Why should people be educated? Who should be educated? What should this education accomplish? What form should it take? What methods should we use? These questions, viewed in world perspective, may suggest some workable answers. A course in comparative education.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

* **SFD 525 Power and Influence in Education: A Cross-cultural View. Two sem hours**

Designed to increase participation and effectiveness of educators in the decision-making process, the course examines cross-culturally the structure and dynamics of power in education, emergence of pressure groups, and integrative mechanisms to minimize conflicts between power groups.

* **SFD 526 Schools, Poverty, Population: Selected Problems in Comparative Education. Two sem hours**

Education in various societies, e.g., agrarian, capitalist, totalitarian, preliterate, etc., is studied to discern how policies and practices of schools affect and are affected by the problems of poverty and population, e.g., fertility control, world food problems, education as capital, economic development as educational purpose, etc.

* **SFD 527 Social Problems and the Schools: International Perspectives. Two sem hours**

This course in comparative education addresses attention especially to the interactions of school and selected societies throughout the world and the problems of delinquency, mental health, multi-culturalism, racism and sexism, and institutional change.

* **SFD 539 Special Topics in Social Foundations. Two sem hours**

This number is used for an experimental offering of the department when a course is being given a trial run in a given semester.

* **SFD 540, 541, 542 Field Studies in Comparative Education. One, two, three sem hours**

A study of selected aspects of education and the envioning society by visits to and periods of residence in one or more other nations. Previously studied: East Africa, England, India, The Philippines, Scandinavia. Summers only typically.

* **SFD 550 Philosopy of Education. Two sem hours**

Philosophical study of educational questions; the nature of being human; what should be learned; who is educable; the ends of educations; personal meaning of philosophical questing.

Prereq: SFD 500 for majors; course in philosophy or religion for non-majors.

* **SFD 551 Analysis of Educational Concepts. Two sem hours**

Philosophical analysis of concepts central to the processes of education: learning by doing, teaching as telling and the curriculum as content, knowing "that" and knowing "how."

Prereq: SFD 500 for majors; course in philosophy or religion for non-majors.

* **SFD 552 Pragmatism and Education. Two sem hours**

Consideration of pragmatists' psychology, sociology, ethics, social philosophy and their influence upon educational philosophy and practices.

Prereq: SFD 500 for majors; course in philosophy or religion for non-majors.

* *Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

*** SFD 553 Existentialism and Education. Two sem hours**

An historical and comparative analysis of the relationship of pragmatism to existentialism: factors which affect theories and practices of American education.

Prereq: SFD 500 for majors; course in philosophy or religion for non-majors.

*** SFD 560 Anthropology of Education. Two sem hours**

An overview of the learning process in human societies, addressing universal problems of motivation, selectivity, thinking-remembering, forgetting, language and thought, value orientation and cultural sets.

Prereq: SFD 500 for majors; course in sociology or anthropology for non-majors.

*** SFD 562 Cultural Determinants of Learning. Two sem hours**

The educational theories and practices in literate and pre-literate societies as illustrative of various theories of cultural dynamics and change which relate to citizens who will be living in the twenty-first century; the relationship between culturally held values and the learning process.

Prereq: SFD 500 for majors; course in sociology or anthropology for non-majors.

*** SFD 571 Development of European Education. Two sem hours**

Consideration of ancient traditions as the Graeco-Roman and Hebraic-Christian and such modern forces as nationalism, democracy, science and industrialization in terms of their impact on educational development in selected European countries. Focus is upon organization, philosophy, curriculum, methods of instruction and evaluation.

Prereq: SFD 500 for majors; course in history of Western civilization or history of Europe for non-majors.

*** SFD 572 History of American Education. Two sem hours**

Historical precedents of present educational circumstances; the developmental background of modern school crises; a study of problems and answers, successes and failures in America's schools.

Prereq: SFD 500 for majors; course in American history for majors and non-majors.

*** SFD 573 Black Experience and American Education. Two sem hours**

The role of the Negro in the development of the United States. The course is designed to help teachers to understand the cultural, economic and political contributions of the Afro-Americans and to develop materials to be used in their courses at both elementary and secondary schools.

Prereq: SFD 500 for majors; course in American history for majors and non-majors.

*** SFD 580 Sociology of Education. Two sem hours**

Examined here are selected points of view and empirical studies on social organization, social change, policy-making, power and authority structures, social class system and social movements in relation to the school as an institution.

Prereq: SFD 500 for majors; course in sociology for majors and non-majors.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** SFD 595 Workshop. Two sem hours**

Designed each semester to consider particular themes or issues (e.g., Racism and Education; Human Relations in Schools) and providing a basic empirical orientation with attention to teaching resources and skills. Student-faculty planning; small group and discussions used extensively. *May be selected more than once.*
 Prereq: SFD 500 for majors; consent of adviser for non-majors.

SFD 596 Seminar. Two sem hours

Each semester different themes are selected for intensive study by advanced students, not restricted to SFD majors. Extensive student investigation and emphasis in seminar meetings on exchange among students and professors. Sample titles: Persistent Issues in Education, Radical School Reform, Alternative Education. *Open to non-majors and majors.*

Prereq: SFD 500 for majors; consent of adviser for non-majors.

SFD 597, 598, 599 Independent Study. One, two and three sem hours

An intensive study of a problem or group of problems in the field of social foundations of education under the direction of a University faculty member.
 Prereq: Departmental approval.

SFD 690, 691, 692 Thesis. One, two and three sem hours

Prereq: Departmental permission.

SFD 696 Advanced Seminar. Two sem hours

An intensive study of selected problems in social foundations of education.
Open to SFD majors only.

Prereq: Twenty (20) hours completed on M.A. program, including SFD 500 and eight hours in area of concentration.

OTHER COURSES

The following courses may also be elected for graduate credit and a course description may be found in the undergraduate catalog:

354 Juvenile Delinquency. (3)

402 Sexism and Education. (3)

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
SFD 500	X			X
SFD 501		X	X	
SFD 502	X		X	
SFD 503	X	X		
SFD 504	X		X	X
SFD 524				X
SFD 525				X
SFD 526	X			
SFD 527	X			
SFD 550	X	X	X	X
SFD 551	X			
SFD 552	X			

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
SFD 553		X		X
SFD 560			X	X
SFD 562	X	X		
SFD 571	X	X		
SFD 572	X	X	X	X
SFD 573	X			
SFD 580	X	X	X	X
SFD 696	X			X

SPECIAL EDUCATION

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The Graduate School at Eastern Michigan University offers a program leading to a master's degree, specialist's degree or state certification in most fields of specialization. Persons participating in this program may utilize a variety of approaches and experiences in fulfilling the needed requirements. These avenues of learning may include course work, field studies, workshops, independent studies, internships, seminars and/or research projects.

The objectives of the graduate program in special education are to develop added proficiency in classroom teaching; to acquire a more comprehensive understanding of children; to improve the students' knowledge of diagnostic procedures, enabling them to more readily recognize the problems and needs of exceptional children; to provide experiences in all areas of exceptionality; to provide foundations upon which to build administrative, supervisory and leadership skills for program development for exceptional children.

Master's degree students wishing to qualify for teaching in an area of special education (i.e., mentally impaired, orthopedically impaired, hearing impaired, emotionally impaired, visually impaired, speech and language impaired, or learning disabilities) and who already hold a state teaching certificate, may pursue a certification program on the graduate level. Those who have obtained certification on an undergraduate level are encouraged to further their under-

standing of a particular area of specialization, or obtain additional knowledge in one or more areas of specialization. The minimum degree requirements do not guarantee certification, and the meeting of certification standards should not be construed as the completion of degree requirements. Each student's program is planned on an individual basis, and should be arranged with the advice and help of a departmental counselor.

Since applicants for admission to a graduate program in special education must meet all degree admission requirements established by the Graduate School, the application for admission and transcripts should be sent directly to the Graduate Office for evaluation. The Graduate Office will forward copies of the applicants' records to the Special Education Department for review and recommendation regarding admission to the degree program. Applicants will be given an opportunity to meet with an adviser in the department at that time.

The specialist's program is open to qualified students who have met certification standards; have approved teaching experience in special education; possess a master's degree; and meet Graduate School minimum standards including the Millers Analogy Test or the Graduate Record Exam for admission to the specialist degree. Two general areas are emphasized at this level of study; administration and supervision or curriculum development. Curriculum requirements include a general core of theoretical and specialized courses, seminars, independent studies and an internship in the field of interest and specialty. The specialist degree curriculum is open to a maximum of 25 active enrollees at any one time during the academic year.

The Department of Special Education is also cooperating with the Departments of Psychology and Educational Psychology to prepare people to be school psychologists. This special program is described more completely under "Psychology."

The program requirements for attaining a master's degree in speech pathology and audiology differ in some aspects from those of the Graduate School in that in the speech pathology and audiology program only six semester hours of transfer credit will be accepted; all candidates must meet the requirements for certification by the American Speech and Hearing Association prior to receiving their degree, and all majors must complete an approved scholarly paper, ranging from one to six hours in credit.

Students who enroll in the graduate program and who do not have an undergraduate major in speech pathology and audiology must enroll as full-time graduate students. Also, they must consult a graduate adviser in speech pathology and audiology in planning their graduate program. Students will be expected to make up the undergraduate courses in which they are deficient. Because of the sequencing pattern, students should plan on two calendar years in acquiring their master's degree and certification by the American Speech and Hearing Association.

Please note that although the subject matter area is designated as speech pathology and audiology, the degree awarded is in speech pathology only.

In addition to the more specific courses that are offered for special education majors, the graduate program offers a number of general courses that are open to the regular classroom teacher and other non-majors. These courses are designed to provide a student with a better understanding of the child with problems who might be found in any classroom.

A. GENERAL COURSES

SGN 506 Education of Exceptional Children. Two sem hours

Problems and methods involved in the adjustment and training of exceptional children in the school. e.g., the mentally retarded, the gifted, the deaf, the blind, the learning disabled, the emotionally disturbed and the delinquent. Not open to students who have credit in 251 Education of Exceptional Children.

SGN 513 The Slow Learner in the Classroom. Two sem hours

Adjusting the curriculum for slow-learning children; problems of identification, methods and materials, curriculum modifications and remedial techniques. Not an equivalent of or a substitute for SMI 558 Education of the Mentally Impaired I and SMI 559 Education of the Mentally Impaired II.

*SGN 514 Measurement and Diagnosis in Special Education. Three sem hours

Psychological evaluation and assessment; the role of tests in the assessment of intellectual capacity, educability, emotional adjustment and visual and auditory limitations.

Prereq: SGN 506 Education of Exceptional Children. Not open to students who have credit in 390 Measurement and Diagnosis in Special Education.

SGN 515 Social Psychology of the Handicapped. Two sem hours

Principles of social psychology which influence handicapped individuals and their environment; society as it affects handicapped individuals; and individuals as they affect society.

Prereq: SGN 506 Education of Exceptional Children.

SGN 519 Administration and Supervision of Special Education.

Two sem hours

Organizing or improving a program for exceptional children; philosophical, legal and practical aspects.

Prereq: SGN 506 Education of Exceptional Children and six hours of credit in special education.

SGN 520 Family-School Relationship in Special Education. Two sem hours

Discovering and analyzing the home problems which have educational implications for the child.

Prereq: SGN 506 Education of Exceptional Children.

*SGN 539 Special Topics. Two sem hours

Prereq: Permission of the department.

SGN 541 Special Topics. Four sem hours

Psychoeducational diagnosis and assessment; methods and materials for educational programming.

Prereq: Permission of the department.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

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SGN 561 Education of Gifted Children. Two sem hours

The identification of gifted students; the use of test results, psychological services and cumulative records. Curricula stressing enrichment and acceleration and the use of community resources; of special value to classroom teachers.

SGN 569 Occupational Information in Special Education. Two sem hours

Experiences in securing information of cultural, social, educational and occupational opportunities in the community for exceptional children; visits to industry, community, service agencies and educational institutions.

Prereq: SGN 506 Education of Exceptional Children.

SGN 594 Supervised Internship with Handicapped Children. Four sem hours

Supervised student teaching with handicapped children in local schools and institutions.

Prereq: Permission of adviser.

SGN 595 Workshops. Two sem hours

Please check the current class schedules for specific offerings.

Rehabilitation in Special Education

Parent Child Counseling in Special Education

Application of New Teaching Materials in Special Education

The Gifted

SGN 597, 598, 599 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

Prereq: Permission of the department.

SGN 605 Rehabilitation Counseling in Special Education. Two sem hours

Designed to integrate the theories and practices of social psychology, physical reconstruction, special education and vocational guidance as they relate to life planning for the physically handicapped.

Prereq: Major/minor.

SGN 680 Internship in Special Education. One sem hour

Prereq: Permission of adviser.

SGN 681 Internship in Special Education. Two sem hours

Prereq: Permission of adviser.

SGN 682 Internship in Special Education. Three sem hours

Prereq: Permission of adviser.

SGN 696 Interdisciplinary Seminar in Special Education. Two sem hours

An intensive study of selected problems in special education. Open only to majors in special education.

SGN 697, 698, 699 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

Prereq: Permission of the department.

B. EMOTIONALLY IMPAIRED

***SEI 511 Methods and Curriculum for Emotionally Impaired. Two sem hours**
Curriculum materials methods and techniques for educating the emotionally impaired child.

Prereq: SEI 519 Emotionally Impaired Children. Not open to students who have credit in 401 Methods and Curriculum for Emotionally Impaired Children.

***SEI 512 Organization of Programs for the Emotionally Impaired. Two sem hours**

Program variations and their adaptations for the education of emotionally impaired children; the theoretical and philosophical foundations of programs; behavior management techniques, teacher role and professional relationships.
Prereq: SEI 519 Emotionally Impaired Children. Not open to students who have credit in 402 Organization of Programs for the Emotionally Impaired.

***SEI 519 Emotionally Impaired Children. Four sem hours**

Dynamics of individual behavior; theories of emotional behavior in children illustrated by case materials and excerpts from psychotherapy.
Prereq: 360 Abnormal Psychology. Not open to students who have credit in 301 Emotionally Impaired Children.

SEI 563 The Emotionally Impaired Child in the Regular Classroom.

Two sem hours

For regular classroom teachers who do not have training in dealing with the emotionally impaired child. The behavior of impaired children, techniques for dealing effectively with symptomatic behavior; a case study analysis of children being taught by individuals electing the course. This course does not apply toward certification to teach emotionally impaired children in special educational programs.

Prereq: Regular classroom teacher. Others with department permission.

SEI 583 Preclinical Experiences. Two sem hours

Provides 120 clock hours of contact with emotionally impaired, but those who have worked with impaired children may have this requirement waived by presenting a statement from a supervisor. Arrangements for this requirement are made through **Mr. Caputo**.

SEI 596 Seminar in the Emotionally Impaired Child. Two sem hours

All recipients of fellowships, as well as other graduate majors in the program for teachers of the emotionally impaired, are now required to elect this seminar during their graduate work. Course consists of a review and discussion of some contemporary issues in the education of the impaired, following which students elect areas for more intensive exploration through library study or actual data gathering. Students present their results and conclusions to the group in a discussion setting.

Prereq: Permission of the department.

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

SEI 603 Therapeutic Management of Emotionally Impaired Children.**Two sem hours**

Techniques in dealing with emotionally impaired children; surface manipulation of behavior and life space interview.

Prereq: SEI 519 Emotionally Impaired Children and presently working with children.

SEI 696 Psychological and Educational Techniques for Emotionally Impaired.**Two sem hours**

Advanced course for graduate students in the area of emotionally impaired. Variations in educational programming for the impaired and socially maladjusted are discussed. Each student is required to work individually with an impaired or maladjusted child to make an analytical, educational evaluation of the child's learning needs and to implement this analysis in a tutorial relationship with the child.

Prereq: SEI 511 Methods and Curriculum for Emotionally Impaired and SEI 512 Organization of Programs for the Emotionally Impaired.

C. HEARING IMPAIRED*** SHI 510 Survey of Education and Guidance for the Hearing Impaired.****Two sem hours**

A survey course covering the history of the education of the deaf; current educational programming; counseling, guidance and vocational habilitation.

SHI 514 Speech for the Hearing Impaired I. Two sem hours

Analysis of the particular problems of speech of the deaf; methods of analyzing and transcribing speech; techniques for the development of the young deaf child.

SHI 518 Speech for the Hearing Impaired II. Two sem hours

Speech development and improvement for the older deaf child; includes supervised speech tutoring.

Prereq: SHI 514 Speech for the Hearing Impaired I.

SHI 522 Language for the Hearing Impaired. Four sem hours

The effects of hearing loss on language development; the structure of the English language and principles of grammar; a survey of the varying language methods with emphasis on Fitzgerald Straight Language System. Activities include field trips, preparation of lesson plans and teaching materials.

Prereq: SHI 510 Survey of Education and Guidance for the Hearing Impaired.

SHI 530 School Subjects for the Hearing Impaired. Four sem hours

Principles and methods of teaching reading and school subjects to the hearing impaired and the adaptation of regular curriculums and materials to meet the needs of the hearing impaired.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** SHI 554 Auditory Training and Speechreading for the Hearing Impaired.**
Three sem hours

(1) Study of the avenues of receptive communication available to the acoustically handicapped; (2) methods of developing speech reading skills; (3) methods of training children with residual hearing; (4) the care and use of group and individual amplification equipment.

SHI 575 The Hard of Hearing Child. Two sem hours

A study of the diagnosis and educational planning considerations for the hard of hearing child as opposed to those for the deaf child. Educational innovations and technology as applied to the hard of hearing individual are studied.

SHI 593 Auditory Training and Speechreading Practicum. Two sem hours

Sixty clock hours of directed observation and practical work in the classroom with deaf children.

Prereq: SHI 554 Auditory Training and Speechreading for the Hearing Impaired.

SHI 594 Public School Internship. Four sem hours

Supervised teaching with deaf persons.

Prereq: Undergraduate major in deaf education; concurrent enrollment in SHI 596 Seminar Hearing Impaired Education.

SHI 596 Seminar Hearing Impaired Education. Two sem hours

A comparative study of the varying curriculums of hearing impaired education programs in Michigan. Includes educational programming, school organization, use of community resources and parent counseling.

Prereq: Concurrent enrollment in SHI 594 Public School Internship.

*** SHI 626 Visual Communication for the Hearing Impaired. Two sem hours**

A study of the rationale for manual communication systems with the hearing impaired involving the combined use of manual alphabet and language of signs. Developing fluency in manual communication skills will be a part of the course.

Prereq: Three years of teaching the deaf or permission of the department.

*** SHI 682 Evaluation and Training of Hearing Impaired Infants.**

Two sem hours

Management of deaf infants, with emphasis on early language development, parent counseling, observation of deaf infants and practice.

Prereq: Undergraduate major in deaf education or permission of the department.

SHI 686 Secondary School Subjects for the Hearing Impaired.

Four sem hours

Principles and methods of teaching secondary school subjects to the hearing impaired; the improvement of reading skills and written composition, techniques of correcting language errors and adapting the regular school curriculum to meet the demands of the hearing impaired.

Prereq: Undergraduate major in deaf and hard of hearing.

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

SHI 688 Advanced Speech for the Hearing Impaired. Two sem hours

Review of classical approaches, a study of recent research and practical application of findings to the development and improvement of speech for the deaf and hard of hearing. Includes supervised diagnostic and therapeutic practicum.
Prereq: Undergraduate major in deaf and hard of hearing or speech correction.

SHI 694 Clinical Internship in Hearing Impaired Education. Four sem hours

Opportunity to practice will be provided, as well as an opportunity to work as a part of a professional team in rehabilitation procedures.
Prereq: Undergraduate major in deaf education.

D. LEARNING DISABILITIES*** SLD 567 Education of Children With Learning Disabilities. Two sem hours**

Planning and effecting educational programs for brain-injured children who have disturbances in perception, thinking and emotional behavior. Pathology of the central nervous system; teaching techniques, classroom management, case studies, research and teacher-child and parent relationships.
Prereq: SGN 506 Education of Exceptional Children. Not open to students who have credit in 468 Education of Children with Learning Disabilities.

SLD 593 Diagnostic Practicum Learning Disabilities. Six sem hours

Intensive study of children referred for educational diagnosis. Study results in precise educational prescription to be implemented in child's school. Students must elect SLD 595 Diagnostic Procedures immediately prior to or following this course.

Prereq: SGN 596 Seminar Special Education I and department permission.

SLD 595 Workshops. Two sem hours

Please check the current class schedule for specific offerings.

- Language Problems of the Neurologically Impaired
- Sensory Training for Perceptually Impaired Children
- Diagnostic Procedures in Learning Disabilities

Prereq: Permission of department.

SLD 596 Seminar Special Education I. Two sem hours

Preparation for diagnostic practicum learning disabilities. Review of theories of learning disabilities, administration and interpretation of diagnostic materials, writing instructional objectives, writing educational prescriptions, survey of instructional materials.

Prereq: Permission of the department.

SLD 596 Seminar Special Education II. Two sem hours

Open only to students who have completed SLD 595 Diagnostic Practicum; follow-up of cases from diagnostic practicum.

Prereq: Permission of the department.

* Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

E. MENTALLY IMPAIRED

SMI 507 Contemporary Problems in Mental Impairment. Two sem hours

Contemporary issues and problems relating to the mentally impaired; institutionalization, sterilization, euthanasia, the parent movement, federal legislation, demonstration project and current research.

SMI 557 Mental Deficiency. Two sem hours

The nature and causes of mental deficiency; characteristics and social control of mental defectives. Opportunities are provided for observation and clinical studies. *Not open to students who have credit in 350 Mental Deficiency.*

*** SMI 558 Education of the Mentally Impaired. Two sem hours**

Selection and preparation of curriculum materials for mentally impaired children; the methods and devices used in presenting these materials. Opportunities provided for functional experiences.

Prereq: SGN 506 Education of Exceptional Children and SMI 557 Mental Deficiency. Not open to students who have credit in 357 Elementary Education of the Mentally Impaired.

*** SMI 559 Education of the Mentally Impaired II. Two sem hours**

Educating the mentally impaired in the junior-senior high school age group; vocational and occupational education.

Prereq: SGN 506 Education of Exceptional Children and SMI 557 Mental Deficiency. Not open to students who have credit in 358 Secondary Education of the Mentally Impaired.

SMI 565 Habilitation of the Trainable Mentally Impaired Child.

Two sem hours

Habilitation and education of the trainable impaired child; philosophy and objectives, classroom management and procedures, program coordination and evaluation, parent counseling, professional personnel, legislation, housing, transportation, sheltered workshop and other ancillary services.

Prereq: SMI 557 Mental Deficiency.

SMI 595 Workshops. Two sem hours

Please check the current schedule for specific offerings.

Pre-School Culturally Deprived Mentally Impaired Children

Physical Education and Recreation for the Mentally Impaired

Resource Room and Curriculum Construction

Prereq: SGN 506 Education of Exceptional Children.

SMI 596 Seminar in Mental Impairment. Two sem hours

Focuses on the various problems related to mental impairment and the sociological and psychological theory as applied to the field. Students are expected to propose, analyze and conduct research from reviews of the literature and applied field study problems.

Prereq: Eight graduate hours in special education.

* Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

SMI 597, 598, 599 Independent Studies. One, two and three sem hours

Prereq: Departmental permission.

F. PHYSICALLY AND OTHERWISE HEALTH IMPAIRED

SPI 510 Education and Treatment of Cerebral Palsied Children.

Two sem hours

An interpretation of the cerebral palsied child; types of cerebral palsy. The problems of education and treatment; opportunity is provided to observe children in the classroom and treatment room.

Prereq: SGN 506 Education of Exceptional Children.

*** SPI 536 Methods of Teaching Physically Impaired Children. Two sem hours**

Educational and psychological needs of crippled children; teaching techniques to meet these needs, and problems that arise in group adjustment. Observation and laboratory are required.

Prereq: SGN 506 Education of Exceptional Children.

*** SPI 537 Pathology of the Physically Impaired. Two sem hours**

Orthopedic disabilities, cardiac and other handicapping conditions of children; structure and function of the human body as it relates to these disabilities. Laboratory period and case studies are required.

Prereq: SGN 506 Education of Exceptional Children.

*** SPI 538 Therapeutic Care of the Physically Impaired Child. Two sem hours**

Medical and surgical aspects of the orthopedic and other impaired conditions of children; therapies and services used in their rehabilitation. Opportunity for observation of children is available.

Prereq: SGN 506 Education of Exceptional Children.

G. SPEECH AND LANGUAGE IMPAIRED

SLI 500 Introduction to Speech Pathology. Two sem hours

An overview of speech, language and hearing problems, their causes and the remedial procedures which the classroom teacher may employ. Disorders of articulation. Not open to students who have credit in 241 Introduction to Speech Pathology. Graduate credit to non-majors only.

*** SLI 508 Black Language in the Educational Process. Three sem hours**

Survey of black language and culture from historically descriptive and practical perspectives and the implications in education.

*** SLI 537 Clinical Practice in Hearing Testing. Two sem hours**

Supervised practice in hearing testing including air and bone conduction, special procedures and speech audiometry.

Prereq: SLI 478 Audiometric Testing and permission of the department.

*** Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."**

SLI 538 Clinical Practice in Hearing Therapy. Two sem hours

Supervised practice in auditory training and lip-reading with children and adults.

Prereq: SHI 554 Auditory Training and Speechreading for the Hearing Impaired and permission of the department.

***SLI 550 Articulation. Two sem hours**

A critical examination of the assumptions underlying the etiological, symptomatological and therapeutic rationales currently used in articulation therapy and research.

Prereq: Undergraduate major in speech pathology and audiology.

***SLI 556 Anatomy of the Head, Neck and Trunk. Two sem hours**

Detailed study of the skeletal, neurological, physiological and muscular system of the head, neck and trunk with special emphasis on the speech mechanism. Laboratory dissection will be a part of the course.

Prereq: 336 Anatomy of the Speech and Hearing Mechanisms or equivalent. Undergraduate major in speech pathology and audiology.

***SLI 558 Language Therapy. Two sem hours**

Incorporating newly acquired or recently modified speech patterns into communicative behavior. Patterns and codes of language; the development of therapeutic activities for individuals with speech, hearing or language impairments.

Prereq: Undergraduate major in speech pathology and audiology.

***SLI 562 Evaluation and Selection of Hearing Aids. Two sem hours**

Interpretation of audiograms, electroacoustic measurement of hearing aids; evaluation, selection and care of hearing aids for the hearing impaired.

Prereq: Permission of the department.

SLI 568 Diagnostic Methods in Speech, Language and Hearing.*Three sem hours**

The course will cover the diagnostic procedures and routines used in the evaluation of speech and language disorders. Emphasis will be placed on familiarization with available evaluative tools and practical experience in conducting actual diagnostic sessions. Consideration will also be given to client interview, interpretation of test results, relating of information to parents, and report writing.

Prereq: Undergraduate major in speech pathology and audiology.

SLI 578 Audiometric Testing. Three sem hours

Advance techniques of testing the auditory function. Consideration is given to interpretation of audiograms, hearing aid evaluations and use of differential hearing assessment techniques for children and adults with hearing disorders.

Prereq: 378 Introduction to Audiology; permission of department; lab required; no student on academic probation.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

SLI 594 Public School Internship in Speech Pathology. Four sem hours

Supervised clinical practice with speech impaired persons. The first internship is completed in a public school setting.

Prereq: Undergraduate major in speech correction and concurrent enrollment in SLI 596 Seminar in Public School Speech Pathology.

SLI 595 Workshops. Two sem hours

Please check the current class schedule for specific offerings.

Stuttering

Language Development

SLI 596 Seminar in Public School Speech Pathology. Two sem hours

Emphasizes professional ethics, organization and administration of speech pathology programs in all settings. Includes state laws governing special education, professional growth and development and employment practices and procedures.

Prereq: Concurrent enrollment in SLI 594 Public School Internship in Speech Pathology.

SLI 597, 598, 599 Independent Studies. One, two and three sem hours

Intensive study in speech pathology and/or audiology, which may or may not include research oriented tasks; to be taken at a master's level only. Resultant paper must be worthy of publication.

Prereq: Undergraduate major in speech pathology and audiology and department permission.

SLI 610 Cleft Palate. Two sem hours

Nature and etiology of palatal and facial deformities; surgical procedures and related therapy. Observation of dental, medical and social service agencies.

Prereq: Undergraduate major in speech pathology and audiology.

SLI 612 Cerebral Palsy. Two sem hours

Examines the nature, etiology and treatment of speech disorders resulting from cerebral palsy. Related intellectual, perceptual, social and emotional problems will be considered as well as the neuromuscular symptoms. Current speech therapy approaches will be emphasized within a total therapeutic program.

Prereq: Undergraduate major in speech pathology and audiology.

SLI 614 Aphasia. Two sem hours

Designed to provide a theoretical framework for understanding the symbolic language problems of aphasia as well as current therapeutic approaches to the problem. Discussion is concerned primarily with aphasia resulting from cerebral insult after language has been established. Consideration is given to related physical and behavioral disturbances.

Prereq: Undergraduate major in speech pathology and audiology.

SLI 616 Experimental Phonetics. Three sem hours

Theoretical consideration of speech as motor behavior and as an acoustical phenomenon; physiological and acoustical investigations of speech and voice. Principles and methods of measuring speech action and acoustical phenomena.

SLI 618 Language and Learning Theories. Two sem hours

An examination of the nature and function of language and communication via linguistics, semantics and phonetics, with special emphasis placed on learning theories and their relationship to language, speech and communication behavior.

Prereq: Undergraduate major in speech pathology and audiology.

SLI 620 Environmental Interventions in Language, Speech and Hearing. Three sem hours

This course is designed to provide instruction and experiences in preparing students to manage interviewing, consulting, and educational activities for families of speech and hearing handicapped and/or clients who are handicapped.

Prereq: Major in speech pathology, audiology, or hearing impaired.

SLI 652 Disorders of Voice. Two sem hours

An advanced course in disorders of voice, involving a study of current literature and laboratory experiences with clinical equipment and case centered video tape recordings. Special stress will be given to psychosomatic voice disorders and the voice problems of the laryngectomee.

Prereq: Major in speech pathology, audiology, or hearing impaired; graduate status.

SLI 654 Stuttering II Disorders of Fluency. Two sem hours

An advanced course in disorders of fluency, involving research and the development of rationale for treatment of stuttering, cluttering, and disruption of speech rate resulting from organic pathology.

Prereq: Major in speech pathology and audiology; graduate status.

SLI 694 Clinical Internship in Speech Pathology. Two sem hours

Opportunity to practice speech correction in a clinical setting. Experience with children and adults with multiple handicaps will be provided.

Prereq: Undergraduate major in speech pathology and audiology.

SLI 696 Seminar in Speech Pathology. Two sem hours

An examination of current research dealing with theoretical and therapeutic implications in the various pathologies of speech. Opportunity for individual investigation and study provided.

Prereq: Undergraduate major in speech pathology and audiology.

SLI 697, 698, 699 Independent Studies. One, two and three sem hours

An intensive study of a problem or group of problems under the direction of a University faculty member.

Prereq: Permission of the department.

OTHER COURSES

The following undergraduate courses in the Special Education Department may be taken for graduate credit, with the adviser's approval:

390 Measurement and Diagnosis in Special Education. (3)

- 301 Emotionally Impaired Child. (4)
 401 Methods and Curriculum Emotionally Impaired. (2)
 402 Programs Emotionally Impaired Child. (2)
 448 Seminar in Emotionally Impaired. (2)
- 378 Introduction to Audiology. (2)
 391 Language for Hearing Impaired. (4)
 394 Auditory Training for the Hearing Impaired. (3)
 395 Speech for Hearing Impaired I. (2)
 396 Speech for Hearing Impaired II. (2)
 397 School Subjects for Hearing Impaired. (4)
- 468 Education of Children with Learning Disabilities. (2)
- 350 Mental Deficiency. (2)
 357 Elementary Education of Mentally Impaired I. (2)
 358 Secondary Education of Mentally Impaired II. (2)
 444 Seminar in Mental Impairment. (2)
- 310 Developmental Aspects of Teaching Physically Impaired Children. (5)
 312 Applied Aspects Teaching Physically Impaired Children. (6)
 446 Seminar in Physically Impaired. (2)
- 336 Anatomy and Physiology—Speech and Hearing Mechanism. (3)
 338 Speech Pathology. (2)
 339 Speech Evaluation. (2)
 340 Speech Pathology Methods I. (3)
 341 Directed Observation in Speech Pathology. (1)
 342 Speech Pathology Methods II. (2)
 343 Clinical Practices I. (2)
 344 Clinical Practices II. (2)
 345 Clinical Practices III. (2)
 416 Experimental Phonetics. (3)
 452 Voice (2)
 454 Stuttering (2)
- 364 Methods Teaching Visually Impaired. (3)
 365 Braille. (3)
 366 Hygiene and Anatomy of the Eye. (2)
 367 Education of Children with Impaired Vision. (2)
 368 Mobility Training for Visually Impaired. (2)
 450 Seminar in Visually Impaired. (2)

Upper division undergraduate courses suitable for use as cognates by majors in other fields:

- 390 Measurement and Diagnosis in Special Education. (2)
 468 Education of Children with Learning Disabilities. (2)

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
SGN 506	X	X	X	X
SGN 513	X	X	X	

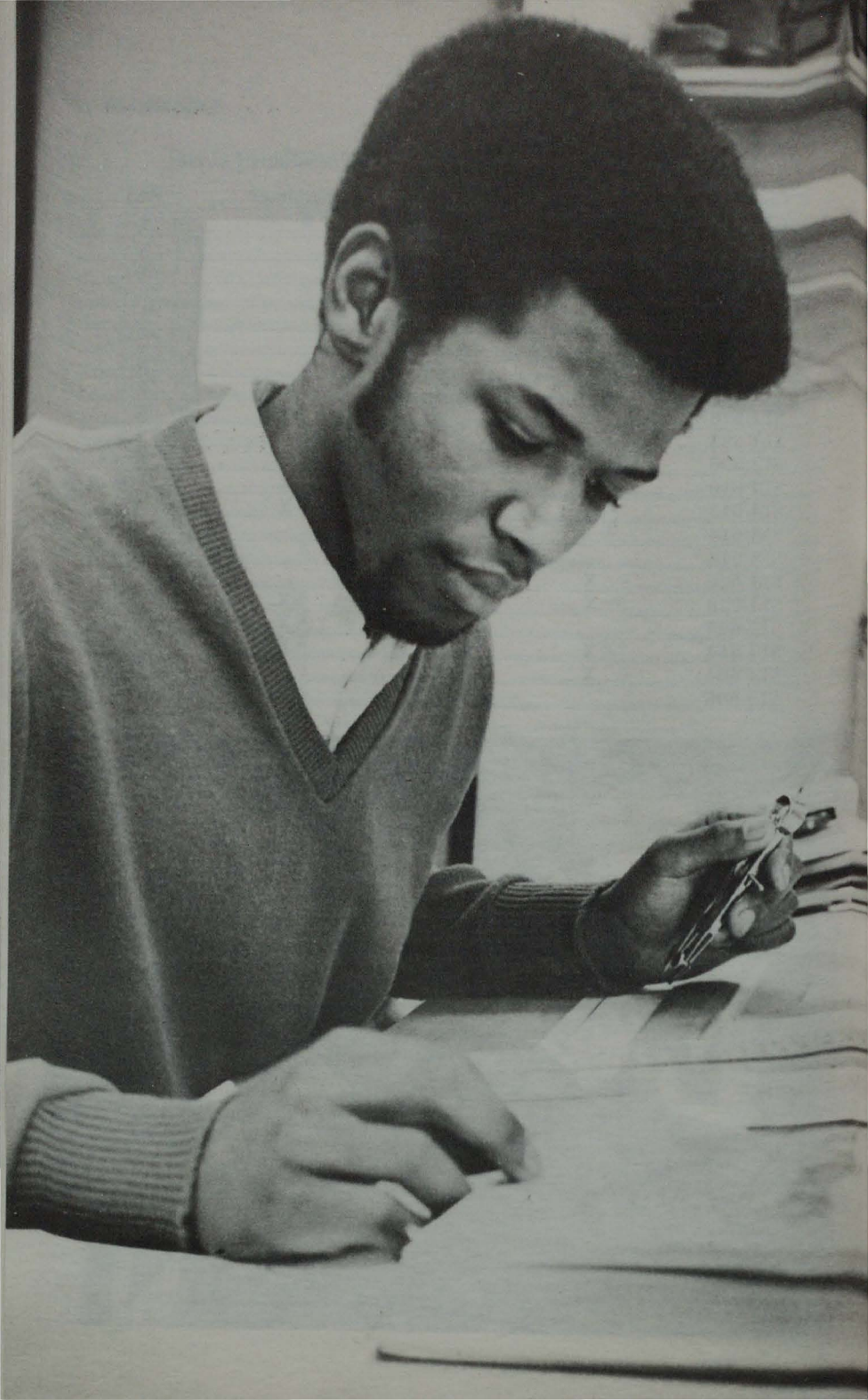
Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
SGN 514	X	X	X	X
SGN 515			X	X
SGN 519			X	X
SGN 520	X	X	X	X
SGN 539			X	
SGN 561		X		X
SGN 569			X	
SGN 594	X	X	X	X
SGN 605			X	
SGN 696	X	X	X	X
SEI 511	X		X	X
SEI 512	X		X	X
SEI 519	X	X	X	X
SEI 563			X	X
SEI 583	X			X
SEI 596				X
SEI 603	X			
SEI 696	X			
SHI 510	X		X	X
SHI 514	X			X
SHI 518	X			X
SHI 522	X			X
SHI 530	X			X
SHI 554	X	X		X
SHI 593				X
SHI 594	X			X
SHI 596	X			X
SHI 626			X	
SHI 682			X	
SHI 686			X	
SHI 688			X	
SHI 694	X	X	X	X
SLD 567	X	X	X	X
SLD 593	X		X	X
SLD 595	X	X	X	X
SLD 596 I	X			X
SLD 596 II	X	X		X
SMI 507		X		X
SMI 557	X	X	X	
SMI 558	X			
SMI 559		X		
SMI 565				X
SMI 596	X			
SPI 510				X
SPI 536			X	
SPI 537			X	
SPI 538			X	
SLI 500	X	X	X	X

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
SLI 508		X		X
SLI 537				X
SLI 538				X
SLI 550	X	X		
SLI 556	X			
SLI 558	X			X
SLI 562	X			X
SLI 568	X	X	X	X
SLI 578	X	X	X	X
SLI 594	X			X
SLI 596	X			X
SLI 610	X	X	X	
SLI 612			X	X
SLI 614		X		X
SLI 616		X		
SLI 618	X	X		
SLI 620	X	X	X	X
SLI 652		X	X	X
SLI 654	X	X	X	
SLI 694	X	X	X	X
SLI 696			X	X

EASTERN



COLLEGE OF HUMAN SERVICES

DEAN: Robert Boissoneau

DEPARTMENT

Home Economics

HOME ECONOMICS

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MASTER'S PROGRAMS AVAILABLE IN HOME ECONOMICS

A master's degree may be earned in:

1. general home economics—
 - a. a minimum of 24 hours in home economics (four-eight hours in four major areas of home economics);
 - b. minimum of zero to six hours of cognate courses (outside home economics);
 - c. minimum of 30 hours required for the master's degree;
 - d. recommended for the applicant who has a minor in general home economics.
2. specialized area of home economics—
 - a. minimum of 24 hours in a specialized area;
 - b. minimum of zero to six hours of cognate courses (outside home economics);
 - c. minimum of 30 hours required for the master's degree;
 - d. specializations available in clothing, textiles and related arts; family and child development; foods and nutrition; consumer affairs;
 - e. recommended for the applicant who has a minor in general home economics or the specialized area in home economics or can meet the prerequisite requirements of courses within the graduate program.

OBJECTIVES OF A PROGRAM LEADING TO A MASTER'S DEGREE

Graduate programs in home economics are designed to provide a broad philosophy of home economics from which students may proceed to their professional specializations. The interpretation of current research and theory as they apply to the selected professional role is an integral part of each program. The professional specialization enhances the student's ability to utilize knowledge and interpersonal skills in contributing to the psychological, physiological, social, and economic development of individuals and families. Specifically, the objectives are to:

1. provide a program of advanced study for certified teachers, other education personnel, dietitians, and for those in consumer, and child and family services;
2. provide the conceptual understandings, analytical, and research skills necessary for those students who plan to proceed to more advanced study or to professional activities that require such knowledge and skills.

REQUIREMENTS FOR ADMISSION TO A PROGRAM LEADING TO A MASTER'S DEGREE

An applicant for admission must:

1. must meet Graduate School degree admission requirements;
2. have completed the minimum number of hours or prerequisites for the general or specialization program;
- * * 3. have a 2.5 undergraduate grade point average;
4. submit two letters of recommendation, and evidence of competency in the program selected if requested by the adviser;
5. receive the recommendation of the graduate adviser in the Department of Home Economics.

* * Applicants who do not meet the 2.5 undergraduate point average may request a meeting before the graduate advising committee for the purpose of reviewing their applications. Appropriate guidelines will be established by the committee if the applicant is admitted to a program.

FACILITIES

The Home Economics Department is located in the Roosevelt Building. This facility has well-equipped spacious laboratories and classrooms, demonstration centers, counseling rooms, studios, multi-purpose rooms, an equipment laboratory with a special kitchen designed for handicapped homemakers, animal nutrition laboratory and auditorium. The latest equipment and materials are available for student use. The department maintains an instructional materials center and reading room, with carrels for individualized study purposes. The Children's Center, which houses a licensed nursery school and parent education program, is also available for observation and participation. Field experiences are included in many areas of graduate study, with community and state agencies, businesses and hospitals.

* HEC 500 The Disadvantaged Family. Two sem hours

Problems facing individuals in families that are socially, culturally and economically disadvantaged. Survey of resources for effective local and federal programs of assistance in social service, education and legislation; resource speakers and field trips.

* HEC 501 The Man-Woman Relationship in Modern Society. Two sem hours

Consideration of the changes and dynamics of interaction stimulated by emerging shifts in roles of men and women; implications of these changes for the family and society; impact of multiple roles upon various men-women relationships.

* Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** HEC 502 Methods and Materials in the Teaching of Consumer Education. Two sem hours**

Examination of methods and materials used in effective teaching of consumer education at secondary and advanced levels. Classroom procedures, organization of resources of evaluation.

Prereq: 370 Methods and Materials in Home Economics Education or equivalent and a basic course in consumer affairs or permission of the department.

HEC 503 Problems in Family Finance. Two sem hours

Principles of basic family financial planning, its relationship to economic conditions, social trends and the family life cycle. Special concern given to procedures in periods of financial emergency. Planning for security and protection against critical family distress.

*** HEC 504 Parent Education. Two sem hours**

Study of parental roles and competence in family life; analysis of methods and techniques for providing education for parents.

*** HEC 505 Social and Economic Problems in Housing. Two sem hours**

Concerns for adequate family housing with an evaluation on economics and social aspects. Local, state and federal legislation on housing and trends in social action.

*** HEC 506 Foods in Cultures of the World. Two sem hours**

An interdisciplinary approach to the study of cultures and food habits; the influence of attitudes and values in food selection.

*** HEC 507 Leisure and the Family. Two sem hours**

Impact of various aspects of modern life on availability and perception of leisure time; survey of variations in family recreation and resources for creative use of leisure time activities which are appropriate at various stages of the family life cycle. Materials related to leisure time uses, sources of vacation information, consideration of the family with special needs. Cooperative programs by departments of sociology, arts and crafts, recreation, music and others. Consultants from each special field.

*** HEC 508 Nutrition Problems of Low-Income Groups. Two sem hours**

Social, cultural and economic factors relative to dietary intakes of low-income families and groups. Survey of legislation and governmental food programs available to these groups.

*** HEC 510 Drug Abuse and Family Dynamics. Two sem hours**

Consideration of remedial and preventative aspects of drug abuse (alcohol and other drugs) in families. The focus will be upon family dynamics relating to drug use with minor emphasis on the pharmacology of drugs.

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

HEC 511 Curriculum Development in Home Economics Education.**Two sem hours**

Contributions of home economics at secondary level; techniques employed in curriculum planning and reconstruction. Clarification of student needs in terms of current social problems.

Prereq: 370 *Methods and Materials in Home Economics.*

HEC 512 Current Programs in Family Life Education. Two sem hours

Philosophy and objectives in family life education; teaching-learning procedures. Sources for teaching materials, professional consultations, resource persons in family life education and evaluation of sample materials.

Prereq: An undergraduate methods and materials course.

HEC 513 Methods and Materials in Teaching Foods and Nutrition.**Two sem hours**

Examination of the methods and materials used in the effective teaching of foods and nutrition at the elementary, middle, secondary and adult levels.

Prereq: A course in basic foods or nutrition or permission of the department.

HEC 514 Consumer Issues and Decisions in the Family. Two sem hours

Application of market structure and processes to family consumer decision making. Consideration of consumerism, rights and responsibilities, monetary and fiscal policy, consumer legislation and protection. Designed for all students interested in consumer affairs.

Prereq: 322 *Family Financial Management* or 503 *Problems in Family Finance* or permission of the department.

HEC 515 Home Management and Consumer Economics. Two sem hours

Managerial concepts and problems and consumer needs and roles of American families; analysis of consumer and managerial aids and services.

Prereq: 112 *Family Resources* and 285 *Home Management*, equivalent or permission of the department.

HEC 516 Cooperative Field Service in Occupational Home Economics.**Two sem hours**

Emphasis placed on developing curriculum for occupationally related home economics programs. Work experience will be arranged by the student to provide contact with all aspects of the related occupation.

Prereq: Provisional certificate in consumer and home economics education.

HEC 518 Special Problems in Home Economics Education. Two sem hours

Course developed to assist the in-service teacher with specific problems in homemaking programs. Major concerns are the child with learning disabilities and special needs. Resources for teachers facing such problems in their responsibilities.

Prereq: 370 *Methods and Materials in Home Economics Education* or equivalent.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

HEC 529 Values and Valuing in Family Systems. Two sem hours

Study of sources, characteristics, and development of societal and personal values; impact of values and valuing on family management and decision making. Prereq: 515 *Home Management and Consumer Economics*.

HEC 530 Decision Processing in the Family. Two sem hours

Study of integrated nature of decision-making in the family as a means to realization of family values and goals and their interdependence and interrelationship to the natural and social environment.

Prereq: 515 *Home Management and Consumer Economics*.

HEC 531 Recent Developments in Home Equipment. Two sem hours

Innovations in household appliances; mechanical principles involved in construction, use and methods of testing. Cost-quality factors, energy conservation and consumer protection.

*** HEC 532 Home Management for Disabled Homemakers. Two sem hours**

The principles of home management for the disabled homemaker or for the teacher who works with handicapped persons in the classroom/laboratory. Focuses on adaptive techniques and work simplification procedures. Emphasizes opportunities for rehabilitative services with the health team.

*** HEC 539 Special Topics in Home Economics. Two sem hours**

An experimental course designed to investigate specific topics of concern in the specialization areas of study in home economics.

Prereq: *Permission of the department*.

*** HEC 540 Family Development. Two sem hours**

Family growth patterns through predictable stages of development; processes of interaction and cooperation. Current research related to stages of development.

Prereq: 209 *Marriage and Interpersonal Competence*.

*** HEC 541 Child Guidance in the Family. Two sem hours**

Consideration of theoretical approaches to child guidance applicable for home or school. Practical application of child guidance principles at various developmental stages.

HEC 542 Family in Crisis. Two sem hours

Social, psychological and interpersonal aspects of crisis situations in families; educational and therapeutic resources available to families in crisis.

HEC 544 Family in the Middle and Later Years. Two sem hours

Individual, family and community planning for the later years of life; developing potentialities; maintaining health, providing reasonable security; building interpersonal relationships. Lectures, field trips and demonstrations.

Prereq: 540 *Family Development*.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

HEC 545 Laws Affecting the Family. Two sem hours

Laws related to the family; their historical development and application of various stages of the family life cycle. Family law from the viewpoints of family members and professional persons who work with families; legal assistance available to families.

HEC 561 Consumer Problems in Clothing and Textiles. Two sem hours

Investigation of the sociological, psychological, and economic facts involved in the selection and use of textiles and clothing.

Prereq: 235 *Textiles for Consumers*, 302 *Experimental Clothing* or permission of the department.

HEC 562 History of Costume. Two sem hours

The costume from ancient times to present day; major characteristics; social, economic and aesthetic influences; recurring styles; influence on present fashion.

Prereq: A course in history.

HEC 563 History of Furniture and Contemporary Trends. Two sem hours

A study of furniture of various periods of history and the relationships to contemporary styles.

HEC 564 Fabric Design for the Home. Two sem hours

Advanced work in experimental design with fabrics, with emphasis on use in the home.

Prereq: Permission of the department.

HEC 565 Clothing Design and Construction. Two sem hours

Principles of flat pattern design, with application to a variety of styles and fabrics. Special problems in fitting, adaptations of design and processes of construction.

Prereq: 235 *Textiles for Consumers*, 302 *Experimental Clothing* or permission of the department.

HEC 566 Consumer Problems in Home Furnishings. Two sem hours

Characteristics, cost, construction and range in quality of furniture, tableware and accessories, wall coverings, rugs and carpets, flooring, woods and fabrics; field trips. Purchasing problems are analyzed.

Prereq: 208 *Basic Interior Design* or equivalent, 285 *Home Management* or equivalent.

HEC 568 The Fashion Field. Two sem hours

The nature of fashion, the psychology of fashion, general definitions and background, fashion movements, the fashion centers, fashion trends and the major fashion designers.

HEC 569 Problems in Interior Design. Two sem hours

Analyzing and solving problems of interiors with regard to social, psychological and economic concerns of families.

Prereq: Permission of the department.

*Open to graduate students and qualified seniors —see "Enrollment in Graduate Courses by Seniors."

HEC 570 Methods and Materials in Teaching Clothing and Textiles.

Two sem hours

For the specialist in teaching clothing and textiles at secondary and advanced levels. Classroom procedures, organization of resources and methods of evaluation.

Prereq: 302 Experimental Clothing or permission of the department.

HEC 571 Methods and Materials in Teaching Related Arts. Two sem hours

The selection, organization and evaluation of instructional materials in related arts for teachers of secondary students and adults. Opportunities for laboratory experience.

Prereq: Four hours of credit in related arts.

HEC 580 Recent Developments in Foods. Two sem hours

Survey of recent research in food science, including the production, preservation, processing and distribution of food.

Prereq: 211 Food Science or equivalent.

HEC 581 Recent Developments in Food Systems Management.

Two sem hours

Evaluation of recent trends in food systems management, including food service systems, food and equipment innovations, and personnel relationships.

Prereq: A course in food service/meal management or permission of the department.

HEC 583 Vitamins and Minerals. Two sem hours

Emphasis on interrelationships of minerals and vitamins in human metabolism.

Prereq: 402 Nutrient Metabolism; physiology recommended.

HEC 584 Recent Developments in Nutrition. Two sem hours

Survey of recent research in nutrition, including issues on determination of nutrient requirements, regulation of government nutrition policies, and novel approaches for meeting nutrient needs.

Prereq: Six hours of credit in nutrition or permission of the department.

HEC 585 International Nutrition. Two sem hours

Study of world nutrition problems and possible solutions for meeting food crises on a worldwide basis.

Prereq: Six hours of credit in foods and nutrition or permission of the department.

HEC 592 Research Methods for Home Economics. Two sem hours

Orientation to the value of research; the research problem; basic research techniques applied to home economics. Location and identification of source materials.

Prereq: Open only to home economics majors on a planned graduate program. Required on all master's programs. Designed to be taken early in the program.

HEC 595 Workshops in Selected Areas. Two sem hours

Prereq: Permission of the department.

HEC 596 Seminar in Home Economics. Two sem hours

Consideration and investigation of special problems in the specialization areas of study in home economics.

Prereq: Permission of the department.

HEC 597, 598, 599 Independent Studies in Home Economics.

One, two and three sem hours

An intensive study of a selected professional problem under the direction of a staff adviser.

Prereq: Permission of the department.

HEC 611 Evaluation in Home Economics Education. Two sem hours

Experience in analyzing progress toward important objectives in home economics education. Development of classroom tests and evaluation materials. Evaluation instruments and statistical techniques useful to home economics.

Prereq: 370 *Methods and Materials in Home Economics Education.*

HEC 613 Supervision in Home Economics Education. Two sem hours

Study of current practices, theories and concepts of administration; analysis of leadership functions at the local, state and national level in home economics.

Prereq: Provisional certificate in consumer and homemaking education and one year of teaching.

HEC 660 Recent Developments in Textiles. Two sem hours

The nature of textile fibers; economic, chemical and physical problems related to their manufacture and use; technological advances to overcome these problems.

Prereq: 235 *Textiles for Consumers.*

HEC 661 Textile Analysis. Two sem hours

The chemical and physical analysis of fibers, yarns, fabrics and finishes; equipment and techniques used; interpretation of data; presentation of findings to the consumer; textile standards; current textile literature.

Prereq: HEC 660 *Recent Developments in Textiles* or permission of the department.

HEC 690, 691, 692 Thesis. One, two and three sem hours

Completion of research problems and writing of a thesis under the direction of a departmental adviser and committee.

Prereq: Permission of the department.

HEC 696 Advanced Seminar in Home Economics. Two sem hours

An intensive study of selected problems in home economics.

Prereq: Permission of the department.

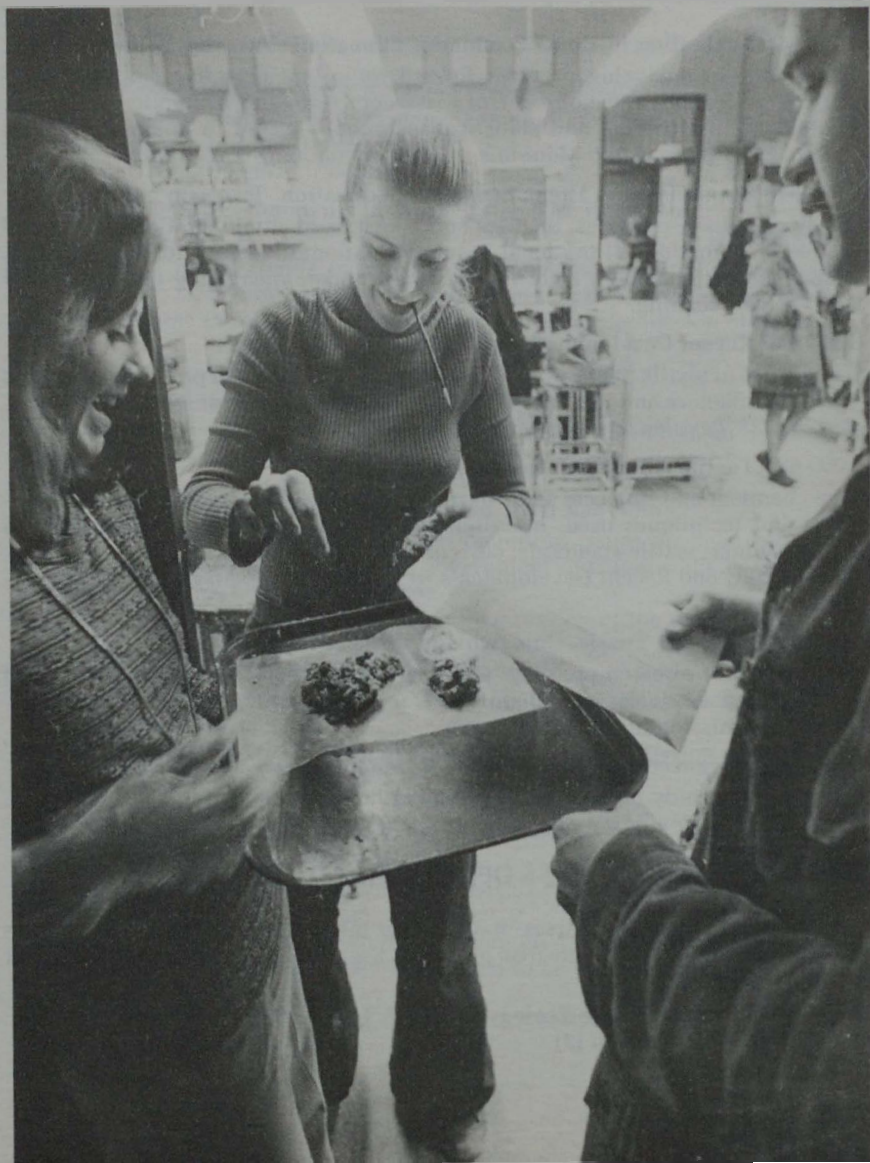
UPPER DIVISION COURSES OPEN TO GRADUATE STUDENTS

These upper division courses may also be taken for graduate credit and applied on the department's degree program. See the Undergraduate Catalog for course descriptions.

399 The Consumer in The Ecology (3)

402 Nutrient Metabolism (3)

- 409 Consumer Problems in the Family (3)
- 411 Food Investigation (3)
- 412 Nutrition of the Life Cycle (3)
- 415 Diet and Disease (3)
- 416 Contemporary Nutrition Issues (3)
- 420 Seminar in Consumer Issues (3)
- 422 Seminar in Child Development (1)
- 460 Tailoring (3)
- 461 Family Interaction (3)



APPLIED SCIENCE
DEPARTMENTS

DEPARTMENT

Industrial Technology
and
Industrial Education

INDUSTRIAL TECHNOLOGY AND INDUSTRIAL EDUCATION

H. James Rokusek,
Department Head
122 Sill Hall
Tele. 487-4330

Clois Kicklighter,
Coordinator of Advising—
Industrial Technology
122 Sill Hall,
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Delmar Larsen,
Coordinator of Advising—
Industrial Teacher Education
122 Sill Hall,
Tele. 487-4330

The Department of Industrial Technology and Industrial Education offers two master's degree programs with differing philosophies and objectives. The industrial teacher education program is primarily recommended for the further professional and technical development of the teacher, supervisor or administrator of industrial arts or vocational technical education. The industrial technology program is designed to assist in meeting the career goals of persons who are employed or who seek employment in industry. The essential difference between the two is that the former is education oriented while the latter is designed for industrial personnel.

MASTER'S DEGREE PROGRAM IN INDUSTRIAL TEACHER EDUCATION

The program leading to a Master of Arts degree in industrial teacher education provides advanced preparation in professional, technical, and related fields as a foundation for career advancement and personal upgrading. The curriculum consists of regular class work, field experiences in industry and education, research activities, technical laboratory work, cognate courses, and free electives. As a result of this advanced preparation, industrial educators should develop an understanding of the philosophical, social, psychological and economic foundations as a basis for developing and implementing industrial education programs.

The student's program of study is planned with a graduate adviser in the Department of Industrial Technology and Industrial Education. Each graduate program is customized to meet the needs, interests and abilities of the individual student.

NOTE: Students who register for classes in the Department of Industrial Technology and Industrial Education must have a departmental graduate adviser's signature. (Not required for IED 500/501/502.)

OBJECTIVES OF THE PROGRAM

The program in industrial teacher education is designed to:

1. provide advanced preparation in professional, technical and cognate areas;
2. increase the competency of a teacher, supervisor or administrator of industrial education in the areas of industry, foundations, curriculum, and research;
3. develop an awareness and understanding of the philosophical, social and economic foundations as bases for industrial education programs;
4. produce professional personnel who will have the appropriate knowledge and competencies to promote and develop comprehensive and viable industrial education programs;
5. provide considerable flexibility in the selection of courses to meet the needs of each student;
6. enable a student to acquire a broad knowledge of the literature in industrial education;
7. provide a strong foundation for professional advancement and personal upgrading.

REQUIREMENTS FOR ADMISSION

An applicant for admission must:

1. meet Graduate School degree admission requirements;
2. hold a valid teaching certificate;
3. have completed a minimum of 30 semester hours in industrial technology and industrial education courses;
4. have a 2.25 undergraduate grade point average;
5. receive the recommendation of the Graduate Committee in the Department of Industrial Technology and Industrial Education;

REQUIREMENTS FOR COMPLETION OF THE PROGRAM

An applicant for the master's degree must:

1. have earned a minimum of 30 semester hours of graduate credit applicable to the program;
2. have earned a minimum of 20 semester hours of 5.0 (B) average grade in industrial technology and industrial education courses;
3. have earned a minimum of eight semester hours of course work in selected areas of industrial education, including two hours in industry, two hours in foundations, two hours in curriculum and two hours in research;
4. hold a 5.0 (B) grade point average for all graduate credit applicable to the master's degree program;
5. have earned a minimum of six semester hours in cognate courses;
6. receive the recommendation of the student's adviser, the Graduate Committee in the Department of Industrial Technology and Industrial Education and the Graduate School of the University.

MASTER'S DEGREE PROGRAM IN INDUSTRIAL TECHNOLOGY

The Master of Science in industrial technology is a program designed to extend the undergraduate degree in industrial technology or related fields. These

related fields include such majors as industrial education, business or engineering. It is intended to increase the student's skills and understanding of industrial processes, production techniques, design, research and development, data processing, and management.

The program is designed for technical managers, production supervisors and related types of industrial personnel. It is also planned for individual upgrading, or providing advancement opportunities for employees already established with a company. These people generally have the function of serving in a liaison capacity between the practical orientation of the technician and the theoretical orientation of the engineer and/or scientist.

NOTE: Students who register for classes in the Department of Industrial Technology and Industrial Education must have a departmental graduate adviser signature. (Not required for IED 500/501/502.)

OBJECTIVES OF THE PROGRAM

The program in industrial technology is designed to:

1. develop advanced competencies associated with technical, supervisory and related positions in industry;
2. develop the competencies to serve as liaison personnel between management and the various functional areas of a company;
3. develop the "generalist" perspective needed by those employed, or those aspiring to mid-management industrial positions;
4. provide advanced preparation in construction or manufacturing technology in relating the technical and human components of industry;
5. broaden the career potential of individuals through experiences in manufacturing or construction technology.

REQUIREMENTS FOR ADMISSION

An applicant for admission must:

1. meet degree admission requirements of the Graduate School;
2. possess a minimum undergraduate grade point average of 2.25;
3. possess a baccalaureate degree in industrial technology or related degree, such as industrial education, business or engineering;
4. have completed the undergraduate basic technical sequence in industrial technology and industrial education consisting of twelve semester hours or the equivalent.

REQUIREMENTS FOR COMPLETION OF THE PROGRAM

An applicant for the master's degree must:

1. have earned a minimum of 30 semester hours of graduate credit applicable to the program;
2. have earned a minimum of 16 semester hours of 5.0 (B) average in the major;
3. hold a 5.0 (B) grade point average for all graduate credit used to fulfill degree requirements;
4. have completed the requirements for one of the two concentrations as follows:

	Sem Hours
Concentration in Manufacturing	
Industrial Technology Core	6
Business Core	9
Manufacturing Technology	10
Related Electives	<u>5</u>
	Total 30
Concentration in Construction	
Industrial Technology Core	6
Business Core	9
Construction Technology	10
Related Electives	<u>5</u>
	Total 30

5. receive the recommendation of the student's adviser, the Graduate Committee in the Department of Industrial Technology and Industrial Education and the Graduate School of the University.

I. COURSES FOR NON-MAJORS

* IED 500 Crafts. Two sem hours

Basic craft areas of wood, metal, graphics, plastics, leather and ceramics are explored. Additional elective areas are also available. *Not open to departmental majors.*

* IED 501 Crafts for Special Education. Two sem hours

The development of craft activities to supplement the curriculum, provide therapeutic manipulative experiences and leisure activities in the special education classroom. Emphasis is given to the identification of industrial employment opportunities. *Not open to departmental majors.*

* IED 502 Career Education for the Elementary Child. Two sem hours

A study of the concepts and methods used to develop an awareness of the careers of society with elementary school children. Emphasis is on individual and group activities relevant to integrated curriculum studies. *Also open to departmental majors.*

* IED 503 Teaching Aids in Secondary School Studies. Two sem hours

Selection, design and construction of three-dimensional teaching aids. Materials and procedures for making models, mock-ups, educational displays, dioramas and specialized learning equipment for social studies, science, mathematics, language arts and other subject areas. Principles and use of educational exhibits in junior and senior high school.

* IED 504 Recent Developments in Career Exploration and Preparation.

Two sem hours

Practical applications of experience based career education will be examined as they relate to secondary school industrial education. Field visitations and public school resource personnel will illustrate to the experienced teachers, practical applications of the exploratory and preparatory concepts of career education. *Also open to department majors.*

* Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

* **IED 505 Graphic Arts. Two sem hours**

General graphic arts including layout and design, composition, photo mechanics, offset and screen process reproduction.

II. INDUSTRY

* **IED 540 Contemporary American Industry. Two sem hours**

The structure of the industrial institution in American society; formal organization, production, financial structure, research and development, and union organization in industry. *Not open to students with credit in IED 217, Structure of Industry.*

* **IED 541 Materials of Industry. Two sem hours**

Selected industrial materials; sources, properties, characteristics, analysis and testing.

* **IED 545 Occupational Safety and Health. Two sem hours**

An exploration of occupational safety and health from a human behavior perspective. Attention will be given to the development of safety management systems. Legislative safety and health policies will be analyzed to determine their effectiveness.

* **IED 547 Industrial Research and Development. Two sem hours**

Laboratory experiences focusing on production problems utilizing various materials, processes, methods of measurement, and analysis techniques.

IED 640 Recent Technological Developments. Two sem hours

Innovations in materials and processes and their implications for industrial education and industrial technology. Industrial visitations and other means of investigation will be employed.

III. FOUNDATIONS

* **IED 550 Development of Industrial Education. Two sem hours**

The historical development of industrial education programs; the influence of industrial, technological and societal change, institutions, professional associations, movements and leaders in the field.

* **IED 551 Philosophy of Industrial Education. Two sem hours**

Philosophical viewpoints concerning industrial arts, vocational and technical education; historical development and philosophical justification of modern programs.

* **IED 552 Principles of Vocational and Technical Education. Two sem hours**

Vocational and technical education as a phase of the program of education in the United States; philosophy, principles, practices and current trends in a modern program of vocational and technical education.

IED 650 Industrial Education in Colleges and Universities. Two sem hours

The philosophy, history and development of industrial teacher education programs; current trends in selected institutions.

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

IED 652 Technical Programs in Community Colleges. Two sem hours

Nature, scope and functions of vocational and technical programs in community colleges; recent developments.

IED 662 Cooperative Programs in Industrial Education. Two sem hours

Cooperative vocational programs in the secondary school; organization and procedures for apprenticeship training, trades and industries, distributive education and diversified occupations.

IV. CURRICULUM*** IED 560 Middle/Junior High School Industrial Arts. Two sem hours**

The rationale for industrial arts programs in the middle or junior high school; program alternatives and contemporary models for instructional content and methods; course development and laboratory planning related to various program structures.

IED 660 Senior High School Industrial Arts/Vocational Education.**Two sem hours**

Development and current status of curriculum in industrial arts/vocational education; principles and procedures of curriculum development, criteria and state guidelines for content selection, contemporary curriculum patterns, factors involved in curriculum change.

IED 661 Evaluation in Industrial Education. Two sem hours

Principles and methods of evaluating student development in industrial education; experience in development and construction of effective evaluation devices.

IED 663 Instructional Media in Industrial Education. Two sem hours

Recent developments in instructional media and technology; the relationship of media to the psychology of learning. Implications for programs of industrial education.

IED 670 Laboratory Planning. Two sem hours

Analysis of space and equipment requirements of industrial education laboratories. Consideration of specific functions, safety, efficiency, location, and design as they relate to educational philosophy and objectives.

IED 680 Supervision of Industrial Education. Two sem hours

Principles and problems involved in the improvement of instruction in industrial education. *Open to majors in industrial education and to majors in administration.*

**Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."*

V. RESEARCH

* IED 592 Research in Industrial Education. Two sem hours

Basic research types, methods and procedures, extent and sources of studies, the development of investigations, consumption of reported studies and the role played in the improvement of industrial education programs.

IED 597, 598, 599 Independent Studies. One, two and three sem hours

Opportunities are provided for the selection and completion of an individual study under the direction of a University faculty member. An approved written proposal is required. Both "Independent Study" (technical study without the prerequisite of IED 592) and "Research Proposal Format" guideline sheets are available from the department.

Prereq: Department permission.

VI. SPECIAL COURSES—PRACTICUM, INTERNSHIP, WORKSHOPS, SEMINARS

* IED 539 Special Topics in Industrial Education. Two sem hours

* IED 593 Practicum in Industrial Education. Two sem hours

An examination and evaluation of a variety of instructional methods. Direct experiences are provided in developing and utilizing instructional materials.

IED 594 Internship in Industrial Education. Two sem hours

A supervised experience in education. Opportunities are provided for directing a variety of teaching-learning experiences contracted with a University faculty member.

* IED 595 Workshops in Selected Areas. Two sem hours

* IED 596 Seminar in Industrial Education. Two sem hours

A discussion of problems and issues in industrial education with emphasis on literature review and appraisal.

IED 694 Industrial Intership. Two sem hours

A field study of industrial theory and practice through directed internship experiences with cooperating industries. Designed for students desiring experiences beyond those obtained in their previous or present employment.

VII. COMMUNICATION—TECHNICAL DESIGN

* IED 513 Drafting Technology. Two sem hours

Drafting methods and materials; theory and application of multi-view drawing, auxiliaries, cams and gears, mechanisms, dimensioning, and geometric tolerancing.

Prereq: One industrial drawing course.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

* **IED 514 Graphic Presentation. Two sem hours**

The techniques, processes, and procedure of developing graphic presentation materials. Topics include designing, recording, reproducing, and storing and retrieving systems. Laboratory activities are required.

Prereq: One industrial drawing course.

* **IED 515 Product Design. Two sem hours**

Principles of product design; emphasis on the design process, basic elements of design, and the interdependence of design and human needs.

Prereq: One industrial drawing course.

* **IED 517 Visual Communication. Two sem hours**

Application of visual communication theories in the production of media including photography, photo mechanics, offset and screen processes.

* **IED 518 Computer Assisted Design. Two sem hours**

The use of the computer and FORTRAN programming to solve graphic design problems. Experiences are provided on computer terminals to enter data, preview a design and execute a program.

Prereq: IED 331 or a FORTRAN programming course.

VIII. CONSTRUCTION

* **IED 516 Architectural Drafting and Design. Two sem hours**

Contemporary architectural drafting and design; methods of presentation, site planning, perspective, rendering, and recent developments in drafting media.

Prereq: One instrument drawing course.

* **IED 530 Forest Products Industry. Two sem hours**

Processes and procedures involved in the derivation of chemical and physical products of the tree; materials and production of the primary and secondary woods industries, wood structure and analysis.

* **IED 548 Principles of Construction Technology. Two sem hours**

A study of the production system of the construction industries; a study of utility systems, housing construction, and city and regional planning practices.

IX. MANUFACTURING

* **IED 533 Plastics Technology. Two sem hours**

Sources and properties of plastics materials; testing, chemical production, molding and forming processes; the fabricating and finishing industry.

* **IED 534 Plastics Forming Processes. Two sem hours**

Selection of plastics resins for product design; application of resins to industrial production, molding, forming and fabricating techniques, including mold design and testing.

Prereq: IED 202 Plastics or IED 533 Plastics Technology.

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

*** IED 536 Metals Technology. Two sem hours**

A study of the metals industry; sources, characteristics and refining of metals, testing procedures, machining and processing applications, production methods.

*** IED 537 Numerical Control in Manufacturing. Two sem hours**

Study of the conversion of part descriptions to numerical control programs for mill and drill machining. Students write and execute NC programs using COM-PACT II language. Verification of programs is accomplished using computer graphics.

Prereq: A working knowledge of basic machine tools.

*** IED 549 Principles of Manufacturing Technology. Two sem hours**

A study of the production system of manufacturing; researching, designing, and engineering products and processes as well as the production of components, sub-assemblies and final assemblies.

X. POWER TECHNOLOGY*** IED 510 Electricity-Electronics. Two sem hours**

An investigation of basic theories combined with laboratory experiences and practical application of test equipment.

Prereq: Algebra or trigonometry.

*** IED 520 Power Systems. Two sem hours**

The technology involved in harnessing and controlling power, including its sources, generation, transmission and utilization; the machines and devices used to convert power in industrial applications.

*** IED 521 Energy Control Analysis. Two sem hours**

Fluid power and direct drive transfer systems are studied in relation to energy utilization in industry. Principles of hydraulics, pneumatics, fluidics, transmission systems and instrumentation related to control are included.

IED 610 Electronics Circuitry. Two sem hours

Electronic theories as related to solid state circuits. Solid state design, printed circuit board fabrication and circuit construction.

Prereq: IED 200 Industrial Electricity or IED 510 Electricity-Electronics.

OTHER COURSES FOR CREDIT TOWARD A MASTER'S DEGREE IN INDUSTRIAL TEACHER EDUCATION AND IN INDUSTRIAL TECHNOLOGY.

304 Advanced Photographic Communication. (3)

314 Integrated Circuits. (3)

315 Communication Circuits. (2)

316 Advanced Machining Processes. (3)

324 Industrial Drawing. (3)

*Open to graduate students and qualified seniors—see "Enrollment in Graduate Courses by Seniors."

- 331 Industrial Computer Graphics. (3)**
400 Site Planning and Development. (3)
401 Construction Estimating and Bidding. (2)
402 Construction Materials. (3)
420 Materials Handling. (3)
424 Industrial Plant Facilities and Planning. (3)

Tentative Schedule of Regularly Offered Graduate Courses

Course	Winter	Spring	Summer	Fall
IED 500	X	X	X	X
IED 501	X	X		
IED 502			X	X
IED 504	X			
IED 505	X			
IED 510	X			
IED 514		X		
IED 515	X			
IED 516				X
IED 517				X
IED 518	X			
IED 520				X
IED 521	X			
IED 530	X			
IED 533				X
IED 534	X			
IED 536		X		
IED 537		X		X
IED 540			X	X
IED 545	X			
IED 547	X			
IED 549				X
IED 551		X		X
IED 552		X		
IED 560	X			
IED 592	X		X	
IED 640			X	
IED 650	X			
IED 652	X			
IED 660				X
IED 661	X			
IED 662				X
IED 663		X		
IED 670			X	

GRADUATE FACULTY

ACCOUNTING AND FINANCE

- Clark, George S.** (1973) Associate Professor
 B.B.A., M.B.A., J.D., University of Michigan; L.L.M., Wayne State University; C.P.A., State of Michigan
- Collins, W. Oscar** (1975) Professor
 B.E.E., Southwest Missouri State College; M.E., University of Missouri; Ed.D., Indiana University
- Devine, Elton A.** (1976) Professor
 Department Head
 B.S., M.B.A., University of Southern Mississippi, Ph.D., Louisiana State University
- Hutchins, Ronald E.** (1977) Assistant Professor
 B.A., M.B.A., Michigan State University, Ph.D., University of Missouri-Columbia
- Jain, Tribhowan N.** (1976) Associate Professor
 B. Com., University of the Panjab; Certificate, Scottish College of Commerce; MBA, University of California; Ph.D., Michigan State University
- Kennedy, Herbert M.** (1967) Associate Professor
 B.S., Principia College; M.B.A., University of Michigan
- Keros, John W.** (1965) Associate Professor
 B.B.A., M.B.A., University of Michigan; C.P.A., State of Indiana
- Kimball, William L.** (1970) Professor
 B.S., Marquette University; M.B.A., University of Wisconsin; Ph.D., Northwestern University; C.P.A., State of Wisconsin
- Ramsay, Louis P.** (1977) Associate Professor
 B.S., University of California-Berkeley; M.S., San Jose State College; D.B.A., Kent State University

ADMINISTRATIVE SERVICES AND BUSINESS EDUCATION

- Belskus, Albert W.** (1969) Associate Professor
 B.S., M.S., Indiana State University; Ph.D., University of Michigan

- Duncan, Charles H. (1965)** Professor
B.S., Indiana State College; M.Ed., Ed.D., University of Pittsburgh
- Hislop, Robert I. (1970)** Professor
L.L.B., L.L.M., Brooklyn Law School; Ph.D., University of Colorado
- Johnson, Thomas M. (1971)** Professor
B.A., J.D., University of Chicago; Ph.D., Columbia University
- Ogden, Russell L. (1956)** Professor
B.S., Eastern Illinois University; M.A., Ed.D., Colorado State College
- Ristau, Robert A. (1973)** Professor
B.B.A., M.S., Ph.D., University of Wisconsin
- Robek, Mary F. (1958)** Professor
B.Ed., Wisconsin State College; M.A., Northwestern University; M.B.A.,
Ph.D., University of Michigan
- Wingo, Rosetta C. (1968)** Professor
Acting Director
B.S., Morgan State College; M.A., New York University; Ph.D., Michigan
State University

ART

- Anderson, Marvin C. (1963)** Associate Professor
B.F.A., Wayne State University; M.F.A., Cranbrook Academy of Art
- Avedon, Barry (1966)** Associate Professor
B.F.A., M.F.A., Rochester Institute of Technology
- Beginin, Igor (1968)** Associate Professor
A.B., M.A., Wayne State University
- Calkins, Kingsley M. (1950)** Professor
Department Head
B.S., Eastern Michigan University; M.A., University of Michigan
- Chew, Robert (1968)** Associate Professor
B.F.A., Maryland Institute; M.F.A., University of Illinois
- Fairfield, Richard T. (1963)** Professor
B.F.A., Bradley University; M.F.A., University of Illinois
- Fensch, Charles (1966)** Professor
B.A., Kent State University; M.A., Wayne State University
- Field, Jan M. (1965)** Associate Professor
B.F.A., M.F.A., School of the Art Institute of Chicago
- Freeman, Lawrence (1969)** Associate Professor
B.A., Mankato State College; M.F.A., University of Oregon
- Godfrey, Elaine C. (1962)** Associate Professor
B.S., Central Michigan University; M.A., University of Michigan
- Harrison, Sharon (1969)** Professor
B.S., University of Michigan; M.F.A., Cranbrook Academy of Art; M.A.,
New York University
- Hunter, Fredrick C. (1967)** Associate Professor
B.S., Wisconsin State University; M.F.A., University of Wisconsin

- Iden, Sheldon S. (1968)** Assistant Professor
B.F.A., Wayne State University; M.F.A., Cranbrook Academy of Arts
- Loeb, Judy (1969)** Associate Professor
B.F.A., Barnes Foundation; M.Ed., M.F.A., Temple University
- Loree, John (1962)** Professor
B.S., Fordham University; M.F.A., Alfred University
- Mayer, Roger R. (1967)** Associate Professor
B.F.A., Rhode Island School of Design; M.F.A., Syracuse University
- Pappas, John N. (1960)** Professor
B.F.A., M.A., Wayne State University
- Sandall, James (1974)** Assistant Professor
B.F.A., Univ. of Nebraska; M.F.A., Arizona State University
- Sharp, David W. (1962)** Professor
B.A., Arizona State University; M.F.A., State University of Iowa
- Smith, Doris A. (1961)** Associate Professor
B.D., M.S.D., University of Michigan
- Stephenson, Susanne G. (1963)** Professor
B.F.A., Carnegie Institute of Fine Arts; M.F.A., Cranbrook Academy of Art
- Tammany, David D. (1966)** Professor
B.F.A., University of Wichita; M.F.A., Tulane University
- Van Haren, John E. (1960)** Professor
B.S., M.A., University of Wisconsin
- Williams, Patricia (1976)** Assistant Professor
B.A., Carleton College; M.F.A., Indiana University
- Yager, Jay (1968)** Associate Professor
B.S., S.U.N.Y. College of Education, Buffalo, New York; M.F.A., M.S., University of Wisconsin
- Zahratka, Michael C. (1960)** Associate Professor
B.F.A., Cleveland Institute of Art; M.F.A., Syracuse University

BIOLOGY

- Belcher, Robert O. (1946)** Professor
B.A., Berea College; M.S., Ph.D., University of Michigan
- Booth, Howard D. (1967)** Associate Professor
B.S., M.S., Eastern Michigan University; Ph.D., Michigan State University
- Brown, Donald F.M. (1956)** Professor
B.A., M.S., Ph.D., University of Michigan
- Caswell, Herbert H., Jr. (1955)** Professor
Department Head
B.S., Harvard University; M.A., University of California at Los Angeles;
Ph.D., Cornell University
- Fennel, William E. (1970)** Professor
B.A., M.A., University of Missouri, Ph.D., University of Michigan
- Ghosheh, Najati S. (1965)** Professor
B.S., M.S. Kansas State University; Ph.D., University of Illinois
- Hurst, Edith M. (1973)** Associate Professor
B.S., Wayne State University; M.A., Ph.D., University of Michigan
- Jackson, Dennis C. (1967)** Associate Professor
B.S., Arizona State University; M.S., Ph.D., Michigan State University

- Johnson, Bert M. (1951)** Professor
B.S., M.A., Ph.D., University of Michigan
- Liu, Stephen C. (1965)** Professor
B.S., M.S., National Taiwan University; Ph.D., University of Minnesota
- Minick, Merlyn (1966)** Professor
B.S., Eastern Michigan University; M.S., University of Michigan; Ph.D., Wayne State University
- Richards, Lawrence P. (1965)** Professor
B.A., University of California at Berkeley; Ph.D., University of Illinois
- Simone, P. George (1977)** Assistant Professor
B.S., University of Chicago; Ph.D., University of New Mexico
- Volz, Paul A. (1969)** Professor
B.A., Heidelberg College; M.S., Ph.D., Michigan State University
- Waffle, Elizabeth L. (1968)** Associate Professor
B.A., Cornell College; M.S., State University of Iowa; Ph.D., Iowa State University
- Walker, Glenn K. (1976)** Assistant Professor
B.S., University of Massachusetts; M.S., Northern Arizona University; Ph.D., University of Maryland
- Wallace, Dale C. (1969)** Professor
B.A., Western Washington College; M.A., Colorado College; Ph.D., Cornell University
- Yu, Shih-An (1967)** Professor
B.S., National Taiwan University; M.S., Ph.D., University of New Hampshire

CHEMISTRY

- Brewer, Stephen (1969)** Associate Professor
B.S., University of Florida; Ph.D., University of Wisconsin
- Carter, Giles F. (1967)** Professor
B.S., Texas Tech; Ph.D., University of California
- Collins, Ronald W. (1965)** Professor
Interim Department Head
B.S., University of Dayton; Ph.D., Indiana University
- Compere, Edward L. Jr. (1964)** Professor
B.S., Beloit College; M.S., University of Chicago; Ph.D., University of Maryland
- Graves, Bruce B. (1968)** Professor
B.A., Swarthmore College; M.S., Ph.D., University of Louisville
- Hicks, Kenneth (1970)** Associate Professor
B.A., M.S., Miami University; Ph.D., Howard University
- Manning, Brenda (1976)** Assistant Professor
B.S., Antioch College; M.S., Ph.D., University of Michigan
- Moore, John W. (1971)** Professor
B.S., Franklin and Marshall College; Ph.D., Northwestern University
- Nicholson, Elva M. (1972)** Associate Professor
B.S., Bucknell University; M.S., Radcliffe College; Ph.D., Harvard University

- Phillips, Donald B. (1973)** Associate Professor
B.A., Concordia College; M.S., North Dakota State University; Ph.D., University of Georgia
- Powell, Ralph R. (1966)** Associate Professor
B.S., Marian College; Ph.D., Purdue University
- Ramsay, O. Bertrand (1965)** Professor
B.S., Washington and Lee University; Ph.D., University of Pennsylvania
- Rengan, Krishnaswamy (1970)** Associate Professor
B.S., University College Trivandrum; Ph.D., University of Michigan
- Robbins, Omer Jr. (1961)** Professor
Interim Dean, Graduate School
B.S., M.S., Ph.D., University of Michigan
- Schullery, Stephen E. (1970)** Associate Professor
B.A., Eastern Michigan University; Ph.D., Cornell University
- Scott, Ronald M. (1959)** Professor
B.S., Wayne State University; Ph.D., University of Illinois
- Spike, Clark G. (1958)** Professor
Interim Dean, College of Arts and Sciences
B.S., Eastern Michigan University; M.S., Ph.D., University of Michigan
- Sullivan, John M. (1958)** Professor
B.A., Dartmouth College; M.S., Ph.D., University of Michigan
- West, Bruce D. (1969)** Associate Professor
B.S., M.S., Ph.D., University of Wisconsin
- Williamson, Jerry R. (1967)** Associate Professor
B.A., University of Illinois; M.S., Ph.D., University of Iowa
- Work, Stewart D. (1964)** Professor
B.A., Oberlin College; Ph.D., Duke University
- Yamauchi, Masanobu (1965)** Professor
B.A., University of Hawaii; M.S., Ph.D., University of Michigan

CURRICULUM AND INSTRUCTION

- Adams, Leah (1969)** Associate Professor
B.S., Ohio State University; M.A., Wayne State University; Ph.D., University of Michigan
- Allen, Irene A. (1968)** Professor
B.S., Johnson Teachers College; M.A., Ed.D., Ball State University
- Bajwa, Ranjit S. (1963)** Professor
Acting Director, Office of International Studies
B.A., B.T., Punjab University; Ed.D., Wayne State University
- Belt, Gordon A. (1968)** Associate Professor
B.S., Central Michigan University; M.A., Michigan State University; Ed.D., Wayne State University
- Bigler, Mary G. (1977)** Assistant Professor
B.A., Aquinas College; M.A., M.A., Eastern Michigan University; Ph.D., University of Michigan
- Birleson, Clifford (1951)** Associate Professor
B.A., Western Michigan University; M.A., University of Michigan

- Borusch, Barbara J.** (1950) Professor
B.S., Eastern Michigan University; M.A., Ph.D., University of Michigan
- Fisher, Robert J.** (1955) Professor
B.A., M.A., Ed.D., Stanford University
- Garfield, Juanita M.** (1968) Associate Professor
B.A., M.A., Marshall University; Ed.D., University of Missouri
- Goldsmith, William E.** (1962) Assistant Professor
B.A., M.A., Michigan State University; Ed.D., Wayne State University
- Greene, Bert I.** (1963) Professor
B.S., Eastern Michigan University; M.A., Ph.D., University of Michigan
- Hoexter, Robert** (1964) Professor
B.S., M.A., University of Michigan; Ph.D., Michigan State University
- Irwin, Martha E.** (1964) Professor
B.A., M.Ed., Bowling Green State University; Ed.D., Western Reserve University
- Jones, Hebert M.** (1964) Associate Professor
B.S., M.A., Ball State University; Ed.D., Indiana University
- Krebs, Robert E.** (1968) Professor
B.S., Kent State University; M.A., Western Reserve University; Ed.D., Columbia University
- Levine-Hanes, Madelyn** (1977) Assistant Professor
B.A., M.A., Ph.D., University of Michigan
- Moore, N. Samuel** (1965) Associate Professor
B.A., Central Michigan University; M.A., University of Michigan; Ed.D., Wayne State University
- Neeb, Leon** (1966) Associate Professor
B.S., Huntington College; M.Ed., Bowling Green State University; Ed.D., Michigan State University
- Porretta, Louis P.** (1959) Professor
B.A., Eastern Michigan University; M.Ed., Ed.D., Wayne State University
- Street, Scott** (1961) Professor
B.S., Bowling Green State University; M.A., Ed.D., Wayne State University
- Weiser, Jerome A.** (1967) Professor
B.S., M.Ed., Ed.D., Wayne State University
- Westerman, W. Scott, Jr.** (1971) Professor
Department Head
B.S., Northwestern University; M.A., Ph.D., University of Michigan
- Zambito, Stephen** (1963) Professor
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ECONOMICS

- Anderson, John E.** (1977) Assistant Professor
B.A., Western Michigan University; M.A., Ph.D., Claremont Graduate School
- Anderson, Thomas C.** (1972) Associate Professor
B.S., M.S., Utah State University; Ph.D., University of California at Berkeley

- Bennett, Gordon** (1977) Assistant Professor
 B.S., Spring Hill College; Ph.D., Texas A&M University
- Chung, Young-Iob** (1966) Professor
 Department Head
 B.S., University of California at Los Angeles; M.A., Ph.D., Columbia University
- Gibbons, James R.** (1967) Associate Professor
 B.S., M.S., University of Illinois; Ph.D., Iowa State University
- Hanna, Raouf S.** (1977) Assistant Professor
 B.Com., Cairo University; Diploma, Institute of National Planning at Cairo;
 M.A., Ohio State University; Ph.D., Indiana University
- Hayworth, Steven C.** (1977) Assistant Professor
 B.A., Cornell University; Ph.D., Massachusetts Institute of Technology
- Pearson, Donald W.** (1969) Associate Professor
 B.A., Tulane University; M.A., Ph.D., University of Texas
- Snyder, Carl Dean** (1957) Professor
 B.S., Heidelberg College; M.A., Miami University; D.S.S., Syracuse University
- Voght, Michael G.** (1978) Assistant Professor
 B.A., Lawrence University; M.A., Ph.D., University of Wisconsin at Madison

EDUCATIONAL LEADERSHIP

- Brower, George** (1954) Professor
 B.S., Western Michigan University; M.A., University of Michigan; Ph.D., Cornell University
- Daly, Francis M., Jr.** (1964) Professor
 B.S., M.A., Ed.D., Wayne State University
- Deal, Kenneth L.** (1975) Assistant Professor
 B.A., Indiana State University; M.A., Ed.S., Western Michigan University;
 Ph.D., Michigan State University
- Duvall, Elven E.** (1968) Professor
 B.A., Eastern Michigan University; M.A., University of Michigan; Ed.D., Columbia University
- Grinstead, Kenneth L.** (1964) Professor
 B.A., Iowa Wesleyan College; M.A., Ph.D., University of Iowa
- Kilanski, Doris M.** (1970) Associate Professor
 B.A., Mount Mary College; M.A., Sp.A., Eastern Michigan University;
 Ph.D., University of Michigan
- Kromer, William F.** (1971) Associate Professor
 B.A., Central Michigan University; M.A., Ph.D., University of Michigan
- Minzey, Jack D.** (1968) Professor
 Department Head
 B.A., Eastern Michigan University; M.A., University of Michigan; Ed.D., Michigan State University
- Mulhern, John D.** Professor
 Dean, College of Education
 A.B., Boston College; M.Ed., Massachusetts State College; Ph.D., University of Wisconsin-Madison

- Nelson, Bruce K. (1954)** Professor
 A.B., Northern Michigan University; M.S., Ph.D., University of Michigan
- Schmitt, Donna M. (1975)** Assistant Professor
 Director, Community Education
 B.A., The College of Racine; M.A., Ed.D., Western Michigan University

EDUCATIONAL MEDIA

- Corbacho, Henry F. (1973)** Associate Professor
 B.A., University of Denver; M.S., Indiana University; M.A., University of Denver; Ed.D., Wayne State University

EDUCATIONAL PSYCHOLOGY

- Blair, John (1970)** Associate Professor
 B.S., M.S., Indiana University; Ph.D., University of Michigan
- Bushey, James T. (1969)** Associate Professor
 Ph.B., M.A., University of Detroit; Ed.D., Wayne State University
- Dellas, Marie (1969)** Associate Professor
 B.S., M.Ed., Ph.D., State University of New York at Buffalo
- Haddan, Eugene E. (1965)** Professor
 B.A., M.A., Ed.D., North Texas State College
- Jernigan, Louise F. (1970)** Associate Professor
 B.A., Valparaiso University; M.Ed., Ph.D., Kent State University
- LaBenne, Wallace D. (1967)** Professor
 B.S., Temple University; M.A., Ph.D., University of Michigan
- Lederman, Edward (1970)** Associate Professor
 B.S., Long Island University; M.A., Ph.D., Teachers College, Columbia University
- Marshall, Everett L. (1938)** Professor
 Dean, Academic Records and Teacher Certification
 B.Ed., Northern Illinois University; M.A., Ph.D., University of Iowa
- McKee, Judy A. (1971)** Associate Professor
 B.A., Central Michigan University; M.A., Ph.D., Columbia University
- Metler, John W. (1964)** Professor
 B.A., University of Western Ontario; B.D., Emmanuel College, Victoria University; M.A., Union Theological Seminary; Ed.D., Teachers College, Columbia University
- Wahi, Kishor (1967)** Associate Professor
 B.A., Punjab University; M.A., Ph.D., University of Michigan
- Williams, Warren S. (1969)** Associate Professor
 B.A., Hobart College; M.A., Ed.D., University of Rochester
- Williams, Wilbur A. (1948)** Professor
 Department Head
 B.S., M.A., Ph.D., University of Michigan
- Woronoff, Israel (1956)** Professor
 B.A., M.A., Ph.D., University of Michigan

ENGLISH LANGUAGE AND LITERATURE

- Andrews, Naomi Madgett** (1969) Professor
 A.B., Virginia State College; M.Ed., Wayne State University
- Angle, James B.** (1964) Associate Professor
 B.A., University of Michigan; M.A., Kansas State University
- Bishop, Nadeen** (1966) Associate Professor
 B.A., Baylor University; M.A., University of Louisville; Ph.D., University of Wisconsin, Madison
- Bruss, Paul S.** (1969) Associate Professor
 B.A., University of Wisconsin; M.A., Ph.D., University of Rochester
- Brylowski, Walter M.** (1955) Professor
 B.A., Kalamazoo College; M.A., University of Connecticut; Ph.D., Michigan State University
- Case, Franklin D.** (1962) Associate Professor
 A.B., University of Connecticut; A.M., University of Michigan
- Cross, B. Gilbert** (1966) Associate Professor
 B.A., Manchester University (England); Certificate of Education, London University; M.A., University of Louisville; Ph.D., University of Michigan
- Devers, James** (1968) Associate Professor
 B.A., M.A., Ph.D., University of California, Los Angeles
- Duncan, Jeffrey L.** (1971) Professor
 A.B., Long Beach State College; M.A., Ph.D., University of Virginia
- Evenhuis, Francis D.** (1969) Professor
 B.A., Western Michigan University; M.A., Ph.D., University of Iowa
- Foster, Milton P.** (1947) Professor
 Department Head
 B.A., Waynesburg College; M.A., University of Pittsburgh; Ph.D., University of Michigan
- Geherin, David J.** (1969) Associate Professor
 B.A., University of Toronto; M.A., Ph.D., Purdue University
- Gohn, Ernest S.** (1958) Professor
 B.A., Ph.D., Johns Hopkins University
- Harris, Arthur J.** (1967) Professor
 B.S., Central Michigan University; M.A., Ph.D., University of Birmingham (England)
- Haun, F. Eugene** (1966) Professor
 B.A., Hendrix College; M.A., Vanderbilt University; Ph.D., University of Pennsylvania
- Hebert, Catherine A.** (1947) Professor
 B.A., Eastern Michigan University; M.A., Ph.D., University of Michigan
- Helbig, Alethea** (1966) Associate Professor
 A.B., M.A., University of Michigan
- Hill, Helen M.** (1967) Associate Professor
 B.A., Wheaton College; M.A., Brown University
- Holkeboer, Robert** (1971) Associate Professor
 A.B., Calvin College; M.A., Ph.D., Ohio University
- Howard, Eunice L.** (1970) Associate Professor
 B.A., Mercy College; M.E., Ph.D., Wayne State University
- Ingram, Betty J.** (1967) Associate Professor
 B.A., M.A., University of Western Ontario; Ph.D., University of Pennsylvania

- Ingersoll, Sheila** (1971) Associate Professor
B.A., Eckerd College; M.A., Ph.D., Northwestern University
- Jernigan, E. Jay** (1965) Professor
B.S., B.A., Kansas State Teacher's College; M.S., Ph.D., Kansas State University
- Johnson, Judith A.** (1970) Associate Professor
B.A., Carleton College; M.A., North Dakota State University; Ph.D., University of Michigan
- Klaus, Meredith M.** (1966) Assistant Professor
B.A., M.A., Ph.D., University of Michigan
- Kornbluth, Martin** (1966) Professor
B.A., M.A., University of Missouri; Ph.D., Pennsylvania State University
- Kraft, Robert G.** (1969) Associate Professor
B.A., St. John's University (Minnesota); M.A., University of Minnesota; Ph.D., University of Washington
- Larson, Russell R.** (1970) Associate Professor
B.A., M.A., Ph.D., University of Michigan
- Lawniczak, Donald A.** (1967) Associate Professor
B.A., M.A., University of Toledo; Ph.D., Kent State University
- McGlynn, Paul D.** (1964) Professor
Ph.B., M.A., University of Detroit; Ph.D., Rice University
- Mohl, Ronald A.** (1968) Associate Professor
B.A., M.A., University of Nebraska; Ph.D., University of Connecticut
- Nelson, Alfred L.** (1970) Professor
A.B., A.M., Wayne State University; Ph.D., George Washington University
- Perkins, Agnes A.** (1964) Associate Professor
B.A., M.A., University of Montana
- Perkins, George B.** (1967) Professor
B.A., Tufts College; M.A., Duke University; Ph.D., Cornell University
- Pillsbury, Paul W.** (1960) Professor
B.A., Dartmouth College; M.A., Ph.D., University of Michigan
- Potter, Edward E.** (1950) Professor
B.A., Saint Ambrose College; M.A., University of Notre Dame; Ph.D., University of Michigan
- Reynolds, James A.** (1967) Associate Professor
B.S., Purdue University; M.A., Western Reserve University; Ph.D., University of Michigan
- Ross, Frank E.** (1966) Professor
B.S., Northern Illinois University; M.A., DePaul University
- Schreiber, O. Ivan** (1950) Professor
B.A., Wittenberg College; M.A., Ohio State University
- Shuter, William F.** (1968) Professor
B.A., Brooklyn College; M.A., Columbia University; Ph.D., University of Wisconsin
- Smith, Lawrence** (1970) Associate Professor
A.B., M.A., Ph.D., University of California, Berkeley
- Staal, Arie** (1968) Associate Professor
A.B., Calvin College; M.A., Ph.D., University of Michigan
- Stadtfeld, Curtis** (1971) Associate Professor
B.A., Michigan State University; M.A., Eastern Michigan University

- Trowbridge, Ronald L.** (1965) Professor
B.A., M.A., Ph.D., University of Michigan
- White, Patrick T.** (1967) Professor
B.S.S., M.A., George Washington University; Ph.D., University of Michigan

FOREIGN LANGUAGES AND LITERATURE

- Bidwell, Jean S.** (1962) Professor
Department Head
B.A., Brown University; M.A., Eastern Michigan University; M.A., Ph.D.,
University of Michigan
- Cline, William J.** (1970) Associate Professor
B.A., University of California; M.A., Ph.D., State University of New York at
Buffalo
- Dugan, J. Sanford** (1974) Assistant Professor
B.A., Yale University; M.A., Johns Hopkins University; Ph.D., Washington
University, St. Louis
- Gibson, Eugene M.** (1956) Professor
B.A., M.A., University of Oklahoma; Ph.D., University of California
- Hubbard, John R.** (1969) Associate Professor
B.A., Hope College; M.A., Ph.D., Michigan State University
- McCoy Ana Maria** (1972) Associate Professor
Licenciado en Filosofia y Letras, University of Valencia, Spain; M.A.,
Ph.D., University of Michigan
- Muller, Brigitte D.** (1967) Professor
B.A., Eastern Michigan University; M.A., University of Michigan; Doctor-
ate, University of Aix-Marseille
- Palmer, Benjamin** (1970) Associate Professor
B.A., University of Connecticut; M.A., Ph.D., Northwestern University
- Pisoni, John C.** (1969) Assistant Professor
B.A., University of Missouri; M.A., University of Oklahoma; Ph.D., Univer-
sity of Michigan
- Villegas, Francisco** (1950) Professor
B.A., University of Costa Rica; M.A., Ph.D., University of Michigan
- Voght, Geoffrey M.** (1971) Assistant Professor
B.A., Florida Presbyterian College; M.A., Ph.D., University of Michigan

GEOGRAPHY AND GEOLOGY

- Buckholts, Paul O.** (1961) Professor
B.A., M.A., Oklahoma University; Ph.D., Harvard University
- Hall, E. Lorene** (1960) Associate Professor
M.S., Eastern Michigan University
- Howe, George M.** (1969) Professor
B.S., California Institute of Technology; M.A., Oberlin College; Ph.D., Clark
University
- Jaworski, Eugene** (1971) Associate Professor
B.S., University of Wisconsin; Ph.D., Louisiana State University

- Kureth, Elwood J.C. (1968)** Associate Professor
Department Head
B.A., Eastern Michigan University; M.A., Ph.D., University of Michigan
- MacMahan, Horace A. (1969)** Professor
B.A., University of Maine; M.S., University of Utah; Ed.D., University of Colorado
- Mancell, Robert B. (1969)** Assistant Professor
B.A., M.A., Ph.D., University of Michigan
- McDonald, James R. (1965)** Professor
B.A., Antioch College; M.A., Ph.D., University of Illinois
- McLennan, Marshall S. (1970)** Associate Professor
B.A., University of California at Los Angeles; M.A., San Francisco State College; Ph.D., University of California at Berkeley
- Nazzaro, Andrew A. (1969)** Associate Professor
B.A., Jacksonville University; M.S., Florida State University; Ph.D., Michigan State University
- Ogden, Lawrence (1963)** Professor
B.S.Ed., Northwest Missouri State College; B. Geol., University of Tulsa; M.S., University of Wisconsin; D.Sc., Colorado School of Mines
- Ojala, Carl F. (1970)** Associate Professor
B.A., Kent State University; M.A., Ph.D., University of Georgia
- Pearson, Ross N. (1969)** Professor
B.Ed., Illinois State Normal University; M.S., University of Wisconsin; Ph.D., University of Michigan
- Raphael, C. Nicholas (1967)** Professor
B.A., Wayne State University; M.A., Eastern Michigan University; Ph.D., Louisiana State University
- Tirtha, Ranjit (1970)** Professor
B.A., M.A., Punjab University; Ph.D., University of North Carolina
- Turner, Daniel S. (1965)** Professor
Ph.B., Ph.M., Ph.D., University of Wisconsin
- Ward, Robert M. (1969)** Associate Professor
B.A., Earlham College; M.A., Indiana University; Ph.D., University of Michigan

GUIDANCE AND COUNSELING

- Beeler, Kent D. (1970)** Assistant Professor
B.S., M.A., Ball State University; Ed.D., Indiana University
- Kloosterman, Winton A. (1962)** Professor
B.A., Beloit College; M.A., Teachers College, Columbia University; Ed.D., Wayne State University
- Nau, Paul A. (1967)** Professor
B.S., M.Ed., Ph.D., Kent State University
- Pappas, John G. (1966)** Professor
Department Head
B.A., University of Akron; M.A., Ohio State University; Ph.D., Kent State University

- Stanley, Kenneth W.** (1961) Associate Professor
B. A., Northern Michigan University; M. A., Michigan State University
- Thayer, Louis C.** (1969) Professor
B.S., M.S., Nebraska State College at Kearney; Ph.D., University of Illinois
- Tohill, Herbert** (1960) Professor
B. A., University of Rochester, M. A., University of Hawaii; Ph.D., Syracuse University
- Van Riper, Benjamin W.** (1968) Professor
B.S., Adrian College; M.A., Ph.D., University of Michigan
- Waidley, John W.** (1968) Associate Professor
B. A., University of Michigan; M.Ed., Wayne State University; Ed.D., New York University

HEALTH, PHYSICAL EDUCATION, RECREATION and DANCE

- Adams, John R.** (1960) Professor
B.S., Eastern Illinois University; M.S., University of Illinois; Ph.D., University of Michigan
- Bell, Mary I.** (1949) Associate Professor
B.S., Eastern Michigan University; M.A., University of Michigan
- Cavanaugh, Patric L.** (1968) Professor
Department Head
B. A., Oberlin College; M.S., Ph.D., University of Michigan
- Green, Mary A.** (1961) Associate Professor
B.S., Eastern Michigan University; A.M., University of Michigan; Ph.D.; Michigan State University
- Grills, Marguerite E.** (1958) Associate Professor
B.S., Ohio State University; M.A., University of Michigan
- Johnson, Marvin J.** (1963) Professor
B.S., University of Michigan; B.S., P.E., McGill University; M.A., Ph.D., University of Michigan
- Menzi, Elizabeth A.** (1964) Professor
B. A., Oberlin College; M. A., Bowling Green State University; Ph.D., University of Michigan
- Pedersen, Erik I.** (1968) Associate Professor
B.S., M.S., Eastern Illinois University; P.E.D., Indiana University
- Sheard, John E.** (1963) Professor
B.S., M.S.Ed., Miami University; P.E.D., Indiana University
- Steig, Peggy A.** (1956) Professor
B.S., Miami University; M.A., Ph.D., Ohio State University
- Trosko, Fred** (1952) Associate Professor
B.S., A.M., University of Michigan
- Williams, Roger L.** (1968) Professor
B.S., Miami University; M.S., University of Illinois; Ed.D., University of Missouri
- Willoughby, Robert J.** (1956) Professor
B.S., M.A., University of Michigan

- Witten, Charles X. (1969)** Associate Professor
 B.S., M.A., University of Maryland; Ph.D., Ohio State University
- Yeakle, Myrna A. (1965)** Associate Professor
 B.A., Ohio State University; M.S.P.H., University of California, Ph.D., Ohio State University.

HISTORY AND PHILOSOPHY

- Abbott, Richard H. (1966)** Professor
 B.A., Grinnell College; M.A., University of Missouri; Ph.D., University of Wisconsin
- Boyer, Lee R. (1970)** Associate Professor
 B.A., Mount Union College; M.A., Ph.D., University of Notre Dame
- Briggs, W. Donald (1965)** Associate Professor
 B.A., University of California; M.A., Sacramento State College; Ph.D., University of Michigan
- Cassar, George H. (1968)** Professor
 B.A., M.A., University of New Brunswick; Ph.D., McGill University
- Dishrow, Donald W. (1956)** Professor
 B.A., Haverford College; Ph.D., University of Rochester
- Drummond, Donald F. (1958)** Professor
 Interim Vice President for Academic Affairs
 B.A., Western Michigan University; M.A., Ph.D., University of Michigan
- Fadiman, Jeffrey A. (1971)** Associate Professor
 B.A., Stanford University; M.A., American University; Ph.D., University of Wisconsin
- Fenz, Emanuel G. (1969)** Associate Professor
 B.A., Walla Walla College; M.A., Andrews University; Ph.D., University of Colorado
- Flusche, Della M. (1968)** Professor
 B.A., North Texas State University; M.A., Marquette University; Ph.D., Loyola University
- Gimelli, Louis B. (1966)** Professor
 B.S., State University of New York; M.A., Ph.D., New York University
- Goff, Richard D. (1964)** Professor
 B.A., Duke University; M.A., Cornell University; Ph.D., Duke University
- Green, James E. (1947)** Associate Professor
 B.A., M.A.L.S., M.A., University of Michigan
- Hafter, Daryl M. (1969)** Associate Professor
 B.A., Smith College; M.A., Ph.D., Yale University
- Homel, Michael W. (1970)** Associate Professor
 B.A., Grinnell College; M.A., Ph.D., University of Chicago
- King, H. Roger (1967)** Professor
 B.A., Bates College; M.A., University of Connecticut; Ph.D., Vanderbilt University
- May, George S. (1965)** Professor
 B.A., M.A., Ph.D., University of Michigan
- McLarty, R. Neil (1958)** Professor
 B.A., Eastern Michigan University; M.A., Ph.D., University of Michigan

- Moss, Walter** (1970) Associate Professor
B.S., Xavier University; Ph.D., Georgetown University
- Rossiter, Margaret L.** (1968) Associate Professor
B.A., Douglass College; M.A., Ph.D., Bryn Mawr College
- Scherer, Lester B.** (1969) Professor
B.A., Harvard University; B.D., Garrett Theological Seminary; Ph.D., Northwestern University
- Terry, Janice J.** (1968) Professor
B.A., College of Wooster; M.A., American University, Beirut; Ph.D., University of London
- Upshur, Jiu Hwa** (1971) Associate Professor
B.A., University of Sydney, Australia; M.A., Ph.D., University of Michigan
- Waltz, James C.** (1968) Professor
B.A., Michigan State University; B.D., Evangelical Theological Seminary; M.A., Ph.D., Michigan State University
- Wheatley, Ira M.** (1966) Professor
Department Head
B.A., University of the Pacific; M.Th., Drew Theological Seminary; Ph.D., University of Iowa
- Wittke, Reinhard** (1956) Professor
B.A., M.A., Ph.D., University of Michigan
- Zickgraf, P. Louis** (1948) Professor
B.A., M.A., Indiana University; Ph.D., University of Illinois

HOME ECONOMICS

- Bornemeier, Betty L.** (1965) Professor
B.S., M.A., Ph.D., Texas Woman's University
- DelCampo, Robert** (1975) Assistant Professor
B.S., State University of New York at Cortland; M.S., Virginia Polytechnic Institute & State University; Ph.D., Florida State University
- Felder, Anita L.** (1963) Professor
B.Ed., Eastern Illinois University; M.S., Ed.S., University of Illinois
- Found, R. Elaine** (1971) Associate Professor
B.A., University of Toronto; M.S., Ph.D., University of Wisconsin
- Kreiger, Mary L.** (1978) Associate Professor
B.S., Central Michigan University; M.S., Eastern Michigan University; Ph.D., University of Michigan
- Leinbach, Richard B.** (1978) Assistant Professor
B.S., Kutztown State College; M.Ed., Ed.D., Pennsylvania State University
- Laws, Duane M.** (1971) Professor
B.A., M.A., Brigham Young University; Ed.D., Columbia University
- Meis, Ruby L.** (1964) Professor
B.S., Central Michigan University; M.A., University of Michigan; Ed.D., Pennsylvania State University
- Sands, Billie Lou** (1974) Professor
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INDUSTRIAL TECHNOLOGY AND INDUSTRIAL EDUCATION

- Baird, Ronald J. (1966)** Professor
B.S., Bowling Green State University; M.Ed., University of Missouri; Ed.D., Michigan State University
- Cooksey, Robert C. (1973)** Associate Professor
B.S., M.A., Ball State University; Ed.D., University of Maryland
- Griess, Jerald A. (1967)** Professor
B.A., Wesleyan University, Nebraska; M.S., Oklahoma State University; Ed.D., Pennsylvania State University
- Jennings, Gerald L. (1963)** Professor
B.S., M.A., Ball State University; Ph.D., Michigan State University
- Kicklighter, Clois E. (1966)** Professor
B.S.E., University of Florida; M.S., Indiana State University; Ed.D., University of Maryland
- Kieft, Lewis D. (1971)** Assistant Professor
B.S., M.A., Eastern Michigan University; Ph.D., Ohio State University
- Kuwik, Paul (1970)** Associate Professor
B.S., M.S., State University of New York at Buffalo; Ph.D., Ohio State University
- LaBounty, Raymond A. (1945)** Professor
Assistant Vice-President for Academic Affairs
B.S., Eastern Michigan University; M.A., Ed.S., University of Michigan
- Larsen, Delmar L. (1964)** Professor
B.A., Iowa State Teachers College; M.A., Ball State University; Ph.D., Ohio State University
- Minton, Gene D. (1968)** Associate Professor
B.A., M.A., Ball State University; Ed.D., University of Maryland
- PaDelford, Harold E. (1969)** Associate Professor
B.S., Mankato State College; M.A., Ph.D., University of Minnesota
- Rokusek, H. James (1964)** Professor
Department Head
B.S., M.S., Stout State University; Ph.D., University of Maryland
- Weeks, John A. (1968)** Associate Professor
B.S., M.S., Bradley University
- Wescott, John T. (1951)** Associate Professor
B.S., Eastern Michigan University; M.A., Wayne State University

MANAGEMENT

- Brown, Leland (1964)** Professor
B.A., M.A., Indiana State University
- Cantrell, Douglas D. (1965)** Assistant Professor
B.S., University of North Carolina; B.D., M.A., Emory University; Ph.D., University of Michigan
- Conley, James H. (1969)** Associate Professor
B.A., Otterbein College; B.D., United Theological Seminary; Ph.D., Michigan State University

- Crowner, Robert P.** (1975) Assistant Professor
B.S.M.E., Purdue University; M.S., Butler University
- Danak, Jagdish** (1969) Associate Professor
B.S., University of Bombay; B.B.A., Lamar State College of Technology;
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- Eveland, John D.** (1977) Assistant Professor
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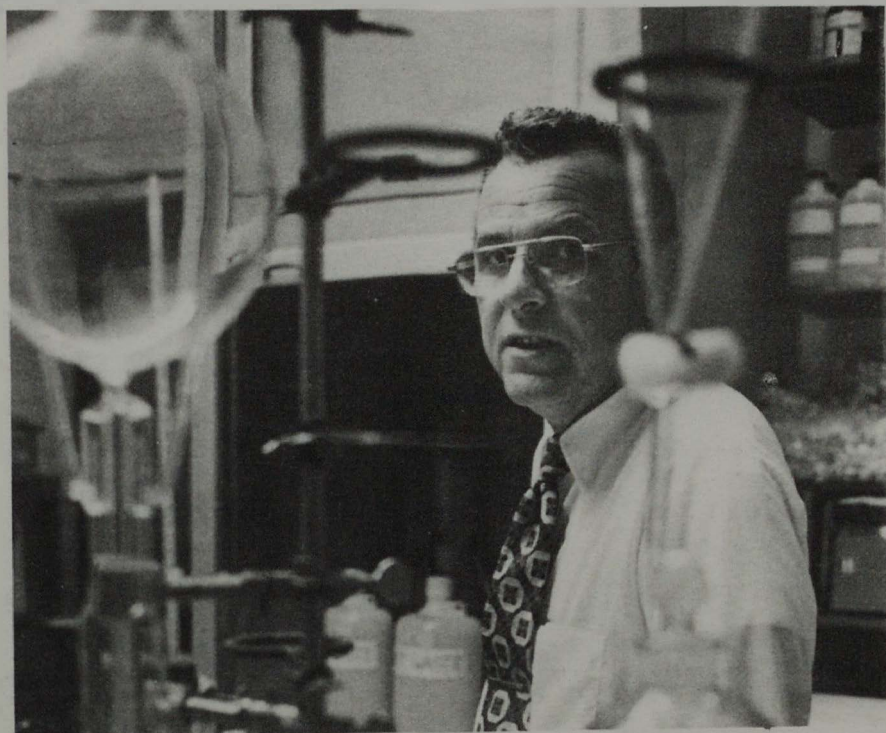
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