EASTERN MICHIGAN UNIVERSITY
BULLETIN
1980

GRADUATE CATALOG

Ypsilanti, Michigan 48197
DIRECTIONS
FOR
CORRESPONDENCE

Please address specific inquiries to the following offices:

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
323 Goodison 487-0407
Off-campus and in-service courses; speakers for special occasions; adult education; consultation services to schools

Student Accounting
Briggs Hall 487-3335
University fees and financial aids

Director of Academic Records and Teacher Certification
5 Pierce Hall 481-4111
Certification requirements and transcripts

Director of Admissions (undergraduate)
214 Pierce Hall 487-3060

Director of Financial Aids
212 Pierce Hall 487-0455
Loans and grants-in-aid

Director of Registration
Briggs Hall 487-2300
Registration of students for on/off campus classes

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
420 W. Forest 487-0400
Teaching vacancies; registration of applicants for teaching, business and industrial positions; opportunities for earning a portion of University expenses

International Studies
330 Goodison 487-2424

Graduate School Office
116 Pierce Hall
Gary D. Keller, Dean 487-0042
Charles Minneman, Assistant Dean 487-0048
Graduate Admissions 487-3400
Graduate Records 487-0093
Graduate Advising. See page 10 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
ATH Athletic
BED Business Education
BIO Biology
BOT Botany
CASIC Certificate of Advanced Studies in Curriculum and Instruction
CEN Courses in English
CHM Chemistry
CLEP College Level Examination Program
CUR Curriculum
CWS College Work Study
DAN Dance
ECO Economics
EDL Educational Leadership
EOM Educational Media
EDP Educational Psychology
ELI English Language Institute
ENG English
ESL English as a Second Language
FA Fine Art
FIN Finance
FLA Foreign Language
FRN French
G&C Guidance and Counseling
GEO Geography
GMAT Graduate Management Admission Test
GPA Grade Point Average
GRE Graduate Record Examination
HEC Home Economics
HED Health Education
HIS History
HPER&D Health, Physical Education, Recreation and Dance
IE Industrial Education
IT Industrial Technology
ITE 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
PED Physical Education
PHI Philosophy
PHY Physics
PLS Political Science
Prereq Prerequisite
PSY Psychology
RDG Reading
REC Recreation
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, 1980
- Classes begin: January 4
- Winter recess: February 16, 17, 18, 19, 20
- Easter recess: April 4, 5, 6
- Commencement: April 19
- Winter semester closes: April 23

Spring Session, 1980
- Classes begin: April 30
- Memorial Day (no classes): May 26
- Spring session closes: June 20
- Graduation date (no commencement exercises): June 20

Summer Session, 1980
- Classes begin: June 23
- Independence Day recess: July 4
- Six week session closes: August 1
- Summer session closes: August 15
- Graduation date (no commencement exercises): August 15

Fall Semester, 1980
- Calendar in progress (Consult class schedule for dates)

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
- Richard N. Robb, Chairman and Presiding Officer
- Beth Wharton Milford, Vice-Chairperson
- James T. Barnes, Jr., Grosse Pointe Woods
- Linda D. Bernard, Detroit
- Warren L. Board, Kalamazoo
- Timothy J. Dyer, Wayne
- Dolores A. Kinzel, Lansing
- Carleton K. Rush, Romulus
- Gary D. Hawks, Secretary
- Robert J. Romkema, Treasurer

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- John W. Porter, President
- Anthony H. Evans, Provost and Vice President for Academic Affairs
- Raymond A. LaBounty, (Acting) Vice President for Administration
- 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
- Clarke G. Spike, (Acting) Associate Vice President for Academic Affairs
- Gary D. Keller, Dean, Graduate School
- Donald F. Drummond, Dean, College of Arts and Science
- Robert C. McCoy, (Acting) Dean, College of Business
- W. Robert Sampson, Interim Associate Dean, College of Business
- W. Scott Westerman, (Acting) Dean, College of Education
- José R. Llanes, Associate Dean, College of Education
- Robert Boissonneau, Dean, College of Human Services
- George Melican, Dean, Division of Continuing Education
- Bette White, Dean of Students
DEPARTMENT HEADS

College of Arts and Sciences

Art (Acting) John E. Van Haren
Biology Herbert H. Caswell, Jr.
Chemistry Ronald W. Collins
Economics Young-lob Chung
English Language and Literature Milton P. Foster
Foreign Languages and Bilingual Studies Jean Bidwell
Geography and Geology Elwood J. C. Kureth
History and Philosophy Ira M. Wheatley
Mathematics James B. Hause
Music James B. Hause
Physics and Astronomy Robert Silver
Political Science Leonas Sabaliunas
Psychology Barry A. Fish
Sociology Marcello Truzzi
Speech and Dramatic Arts Thomas J. Murray

College of Business

Accounting and Finance Elton A. Devine
Administrative Services and Business Education Rosetta Wingo
Management (Acting) Floyd A. Patrick
Marketing (Acting) Robert J. Williams
Operations Research and Information Systems (Acting) Clayton Long

College of Education

Curriculum and Instruction (Acting) Leah Adams
Educational Leadership Jack D. Minzey
Educational Psychology Wilbur A. Williams
Guidance and Counseling John G. Pappas
Health, Physical Education, Recreation and Dance Patrick 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 and is 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 so 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.

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. Departments which offer more than one option within their degree programs are identified.

MASTER'S DEGREE

College of Arts and Sciences

Art Education
Biology
General Biology
Aquatic Biology
Community College Teaching
Physiology
Chemistry
Chemistry Education
Criminology and Criminal Justice
Economics
English
Literature
English Language and Composition
Children's Literature
Fine Arts (MFA)
General Science
Geography
Environmental Studies
Man and His Works
Historic Preservation Planning
History
Language and International Trade
Mathematics
Music
Music Education

Music Literature
Music Theory-Literature
Performance
Choral Conducting
Physics
Physics Education
Psychology
General Psychology
Clinical Psychology
Social Science
Sociology
Spanish (Bilingual-Bicultural Education)
Speech and Dramatic Arts
Communication-Public Address
Dramatic Arts
Drama for the Young

College of Business

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

College of Education

Early Childhood Education
Educational Leadership
Educational Psychology
Development and Personality
Research and Technology
Elementary Education
General Elementary
Language Arts
Open Education
Educational Media
Guidance and Counseling
School Counselor Endorsement
College and Community Personnel
K-12 Curriculum
Middle School Education
Physical Education
Reading
Secondary School Teaching
Social Foundations
Special Education
Mentally Impaired
Orthopedically Impaired
Hearing Impaired
Emotionally Impaired
Visually Impaired
Speech and Language Impaired
Learning Impaired

College of Human Services

Home Economics
General Home Economics
Clothing, Textiles and Related Arts
Family and Child Development
Foods and Nutrition
Consumer Affairs
Applied Science Department
Industrial Teacher Education
Industrial Technology

Individualized Studies

Certificate of Advanced Studies in Curriculum and Instruction (CASCi)

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, please contact the Graduate School Office, 116 Pierce Hall.

The Certificate of Advanced Studies in Curriculum and Instruction (CASCi)

The Certificate of Advanced Studies in Curriculum and Instruction (CASCi), a thirty hour post-master’s program, offers an opportunity for post-master’s teachers to select study experiences which are specifically related to their current professional needs. There are no pre-determined course requirements. Advisers approve program choices which teachers make in accordance with their individual desires for professional growth.

CASCi is offered in response to the need for relevant, flexible, individualized programs which will enable career teachers to keep abreast of new developments and to respond to the professional challenges in their classrooms and in their school districts.

A teaching certificate, a master’s degree from an accredited university and a minimum of one year’s teaching experience are prerequisites to acceptance in the program.

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 contact the Graduate School Office, 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.

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. Effective with admission for fall 1980, these averages will be 2.5 and 2.75, respectively. Applicants who do not meet these criteria may be considered for admission by some departments after completing ten hours of selected graduate work at EMU and achieving a grade point average of 3.3 (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’s Degree

A minimum grade point average of 3.3 (B+) in the master’s degree program is required for admission to the specialist’s degree. For those departments admitting students into the specialist’s 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. Courses reserved for departmental majors are generally not open to students holding this type of admission.
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 and evidence of a bachelor’s degree 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.

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.

Students completing their degree work at the close of the summer session should expect to receive their DEGREE
VERIFICATION letter two or three weeks after the close of the session.

SPECIAL REQUESTS FOR ADVANCE VERIFICATION CANNOT BE HONORED. The student's degree recommendation letter documents the University's degree verification process and can be used to inform any employer of the date when the student's degree verification can be expected.

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 3.0 (B grade). Some specialist's degree programs require a 3.3 or B+ average for graduation. See Grading System, page 12.

The grade point average requirement for graduation applies to:

all graduate credit earned at Eastern Michigan University; and
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.

With the revised grade point scale that was instituted in fall 1979, most students graduating in the near future will have grade points on the permanent record and averages consisting of a mix of the old A = 8.0 and the new A = 4.0 systems. Questions with respect to calculation and interpretation should be directed to the records supervisor in the Graduate School Office, 116 Pierce Hall.

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 complementary 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 Education:
Charles Fensch
15 Sill Hall, (487-0258)

MFA:
David Sharp
116 Sill Hall, (487-0392)

Biology:
Howard D. Booth
308 Mark Jefferson, (487-0321)

Chemistry:
John M. Sullivan
239-B Mark Jefferson, (487-2057)

Criminology and Criminal Justice:
S. Joseph Fauman
712-C Pray-Harrold, (487-2330)

Economics:
Raouf S. Hanna
703-D Pray-Harrold, (487-0003)

English:
Paul D. McGlynn
613-B Pray-Harrold, (487-2075)

General Science:
Jean R. Moore
302 Strong Hall, (487-4144)

Geography:
Robert Ward
213 Strong Hall, (487-3140)

Historic Preservation Planning:
Marshall McLennan
219 Strong Hall, (487-0218)

History and Philosophy:
Louis B. Gimelli
702-H Pray-Harrold, (487-0347)

Language and International Trade:
John R. Hubbard
205 Ford Hall, (487-4448)

Mathematics:
Enoch Tse
601-T Pray-Harrold, (487-2140)

Music:
Mary I. Yost
204 Alexander, (487-1314)

Physics:
Walter Gessert
333 Strong Hall, (487-4144)

Physics Education:
Walter Gessert
333 Strong Hall, (487-4144)

Psychology, Clinical/General:
Francis Canter
537-N Mark Jefferson, (487-0044)

School Psychology:
Robert L. Anderson
537-R Mark Jefferson, (487-0047)

Social Science:
Louis B. Gimelli
702-H Pray-Harrold, (487-0347)

Sociology:
Ronald Westrum
712-S Pray-Harrold, (487-1073)

Spanish (Bilingual-Bicultural Education):
Raymond Padilla
106 Ford Hall, (487-1035)

Speech and Dramatic Arts:
Parker R. Zellers
102 Quirk, (487-1220)

College of Business

Accounting and Finance:
Tribhowan N. Jain
516-D Pray-Harrold, (487-1261)

Business Administration:
W. Robert Sampson
517 Pray-Harrold, (487-4444)

Business Education:
Charles Duncan
515-B Pray-Harrold, (487-0121)

Computer-Based Information Systems:
W. Robert Sampson
517 Pray-Harrold, (487-4444)

Organizational Behavior and Development:
W. Robert Sampson
517 Pray-Harrold, (487-4444)

College of Education

Elementary Education, Early Childhood Education, K-12 Curriculum, Middle School Education, Reading, Secondary School Teaching:
Robert Tibbals
305 Pierce Hall, (487-4441)

Certificate of Advanced Studies in Curriculum & Instruction:
W. Scott Westerman
325 Pierce Hall, (487-3216)

Educational Leadership:
Bruce K. Nelson
101-C Boone Hall, (487-0255)

Educational Psychology:
N. Kishor Wahi
228-G Boone Hall, (487-0219)

Guidance and Counseling:
Benjamin W. Van Riper
13 Boone Hall, (487-3270)

Physical Education:
John E. Sheard
233 Warner, (487-0090)

Social Foundations:
Calvin Michael
345 Pierce Hall, (487-1128)

Special Education, General:
Nancy Halmhuber
230 Rackham, (487-3302)

Special Education, Speech and Language Impaired:
C. Wayne Fulton
231-A Rackham, (487-4413)

Special Education, Hearing Impaired:
Garl E. Garber
121 Rackham, (487-4330)

College of Human Services

Home Economics:
Richard B. Leinbach
202-K Roosevelt, (487-2490)

Applied Sciences

Industrial Teacher Education:
Delmar Larsen
122 Sill Hall, (487-4330)

Industrial Technology:
Clois Kicklighter
122 Sill Hall, (487-4330)
REGISTRATION INFORMATION

Students may not attend classes unless they are properly registered and have 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. Students on degree programs who do not obtain the adviser’s signature assume full responsibility for their registrations. 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—Some upper division 400 level 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. Selected 300 level courses also are available for graduate credit. See Graduate Office.

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 their 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 |
| half-time student: 8–12 hours |
| half-time student: 4–6 hours |
| less than half-time student: less than 4 hours |

| Spring sessions (7 1/2 weeks) | maximum load: 8 sem hours |
| full-time student: 6 hours |
| half-time student: 4 and 5 hours |
| less than half-time student: less than 4 hours |

| Summer sessions (6 1/2 & 7 weeks) | maximum load: 6 sem hours |
| full-time student: 4–6 hours |
| half-time student: 3 hours |
| less than half-time student: less than 3 hours |

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.

REPEATING COURSES

For a variety of reasons, students sometimes find it desirable to repeat a course. When this occurs, the grade received in the second attempt is substituted for the first in the computation of the student’s grade point average. However, the first grade remains on the record. A course may be repeated only once, and then only those courses in which grades of E, C–, C or C+ were received the first time.

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 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 19-22 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 POINT PER SEMESTER HOUR

<table>
<thead>
<tr>
<th>Grade</th>
<th>Fall 1979</th>
<th>Fall 1979</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8.0</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>7.0</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>6.0</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>5.0</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>4.0</td>
<td>2.7</td>
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<tr>
<td>C+</td>
<td>3.0</td>
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<tr>
<td>C</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>1.0</td>
<td>1.7</td>
</tr>
<tr>
<td>E</td>
<td>0.0</td>
<td></td>
</tr>
</tbody>
</table>

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 certain 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 3.0 (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.

With the termination of the dismissal from Graduate School for academic reasons, effective in mid 1979, some departments are considering replacing that policy with dismissal from their degree program, again for academic reasons. Consult the coordinator of advising for information on the status of development of such a dismissal policy.

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;

be viable in terms of the six year time limitation for completion of degree requirements;

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 ten 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 discipline different from the previous master's degree;  
- not more than six (6) semester hours of appropriate credit may be applied.

COURSE NUMBERING SYSTEM  

300: Some departments have selected junior level courses for graduate credit. The Graduate Office or the department's coordinator of advising may be contacted for information.  

400-500: For advanced undergraduates and graduate students. Lists of senior level courses available for graduate credit are to be found towards the end of the departmental sections in this catalog. The 500 numbered courses are open to qualified seniors under existing policies; see page 14.  

600: For graduate students only.  

700: Courses that are utilized on specialist's degree programs and master's in fine arts.

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 Director  
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)  
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.  

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.

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.

**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.

1. **Minor:** A minimum of 20 hours in courses appropriate to the pure minor or 24 hours in a group minor.

2. **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 work must be placed on file in the Graduate Office.

**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 ten 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 ten semester hours following the provisional certificate as part of the 18 hour planned program for a Continuing Certificate.

**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 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 director 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 ten. See Course Numbering System, page 12, for courses available to advanced undergraduates.

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 Bilingual Studies 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-Harrold 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 and also, houses Information Services, Sports Information, Office of Research Development (ORD) and Child Care Center.

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 gymsnasiums, 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, in 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

Today, more than ever before, Eastern Michigan University is realizing its responsibility to offer its services and facilities to the community at large and to the non-traditional student. For many years, the Office of Continuing Education, formerly the Division of Field Services, at Eastern Michigan University, has maintained extensive in-service programs for students unable to complete their education on Eastern’s campus and for employed teachers desiring to further their education. The program is expanding greatly at this time. In addition, the campus is open to the public for conferences, both academic and non-academic, for adult education courses, for lecture series and for training programs. Faculty members and other trained personnel are available for lectures and consultation services to clubs, organizations and school systems.

The Office of Continuing Education welcomes inquiries about its program as well as suggestions for other services it might offer. Interested persons should write to the dean of Continuing Education, 319 Goodison Hall, Eastern Michigan University, Ypsilanti (481-0407).

IN-SERVICE COURSES

The Office of Continuing Education offers credit courses at 17 centers in 14 counties throughout southeastern Michigan. These classes are undergraduate and graduate courses conducted usually by regular instructors of Eastern Michigan University. At present, the classes are in practically any field connected with education, but an increasing number of courses in other fields are being offered to meet students’ needs. A list of the courses offered for fall and winter semesters, spring and summer sessions may be acquired from the Office of Continuing Education.

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

Eastern Michigan University Graduate Student—a student who has been admitted to the Graduate School at EMU as a degree or non-degree student.

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.

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 continued enrollment.

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 1979–80 range from $150 to $185 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 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 1979–80 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 $135–$165 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 the qualifications of the applicant. Each appointment requires considerable research time and precludes other employment. The academic year stipend ranges from about $3,150–$3,350. In addition, the University pays full tuition for 16 credit hours for each fiscal year of the assistantship, as well as registration and health service fees. The total package approximates $4,800, depending on whether you are a resident or non-resident of Michigan. Graduate students interested in applying for such positions should write to their major area department head.

Residence Hall Grants are available through the Housing Office, Dining Commons 1, 487-1300. Graduate students may be considered for the grant after one term in residence halls at Eastern Michigan. The grants pay from $50–$850 per year toward residence hall costs. Awards are made on the basis of demonstrated financial need. Students must complete the Family Financial Statement or Financial Aid Form. Final awards are made by the Housing Office.

Residence Hall Leadership Awards are available from the Housing Office, Dining Commons 1, 487-1300. Graduate students may be considered for awards after one term at Eastern Michigan University in residence hall. The awards pay up to $850 per year toward residence hall costs. Awards are made by a committee which considers evidence of leadership ability. Award recipients are expected to provide leadership in the residence hall program.

College Work-Study (CWS) is an employment program which allows students demonstrating financial need to work up to 20 hours per week on-campus or at participating off-campus agencies. Student wages are paid 80% from federal funds and 20% from University funds. Hourly pay generally ranges from $3.00 to $4.10 for graduate students.

Student Employment listings for on and off-campus employment are maintained by the Eastern Michigan University Student Employment Office, Career Planning and Placement Center. Many non-College Work-Study jobs are available. Students do not have to demonstrate financial need to work at non-College Work-study jobs.

National Direct Student Loans (NDSL) are long-term educational loans funded by 90% federal and 10% University contributions made to students demonstrating financial need. Graduate students may borrow up to $2500 per academic year. Repayment of the loan at 3% simple annual interest begins 9 months after the student leaves school. Loan repayment terms (minimum of $90 every three months beginning one year after the student leaves school) must be arranged with the Student Loan Accounting Office before the student leaves Eastern Michigan University.

Michigan Guaranteed Student Loans (GSL) are available for Michigan residents who cannot get guaranteed loans from commercial lenders and obtain a letter of denial. Graduate students can borrow up to $5,000 or one-half of costs (whichever is less). Students must have an adjusted family income under $25,000 in order to receive a State Direct Loan. Applications and further information are available from the Office of Financial Aid. Normal application processing is 10–12 weeks.

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 Teacher Certification, room 5, Pierce Hall, upon paying the transcript fee as stated on page 22.

Center of Educational Resources

The Center of Educational Resources includes the University Library, Audiovisual 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, 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 videotape 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, 600 and 700 level courses.

Tuition rates per credit hour for 1979–80 are:

Michigan Resident

<table>
<thead>
<tr>
<th>Undergraduate Courses</th>
<th>(100–400 level)</th>
<th>$26.00</th>
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</thead>
<tbody>
<tr>
<td>Graduate Courses</td>
<td>(500–700 level)</td>
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Non-Resident

<table>
<thead>
<tr>
<th>Undergraduate Courses</th>
<th>(100–400 level)</th>
<th>$65.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Courses</td>
<td>(500–700 level)</td>
<td>$95.00</td>
</tr>
</tbody>
</table>

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.
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 to provide 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 are printed on the invoice from Student Accounting and are published in the Class Schedule Bulletin for each semester. To assure 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 registrations will be automatically cancelled; their registration fees will be forfeited; and those classes will be made available to other students. Students whose registrations have 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% 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% 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% 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 payment 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 $13.50 per semester for fall and winters, and $5.00 per session for the spring and summer sessions. Payment of this fee entitles 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 1979–80 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.
- **HPER&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 Bilingual Studies
Geography and Geology
History and Philosophy
Mathematics
Music
Physics and Astronomy
Political Science
Psychology
Sociology
Speech and Dramatic Arts

ART

John E. Van Haren
Acting Department Head
118 Sill Hall,
487-1268

Charles Fensch
Coordinator of Advising
Art Education
15 Sill Hall,
487-0258

David Sharp
Coordinator of Advising
Fine Arts
116 Sill Hall,
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).

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

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)
The 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.

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:
   - FA 630 Graduate Studio (8)
   - FA 631 Graduate Studio (8)
   - FA 695 Seminar in Contemporary Ideas in Art (3)
   - FA 696 Seminar in Contemporary Ideas in Art (3)
   - FA 732 Graduate Studio (8)
   - FA 733 M.F.A. Exhibition (9)
   - Electives in Art (3)
   - Cognate Courses (6) (Chosen in consultation with the adviser.)
Total (48)

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 (Formerly 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, 506 Two-D Studio (Formerly Two-D Media Workshop). Four sem hours each
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 507, 508 Crafts Studio (Formerly Crafts Workshop). Four sem hours each
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 printmaking. Prereq: Art majors only.

FA 555 Textiles. Two sem hours
Advanced studio course in textiles. Prereq: Art majors only.

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 596 Workshop in Art. Three sem hours (Formerly FA 595)
A workshop in art history focusing on personal observation of the visual arts of a particular area.
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 by 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. Instruction to be selected by the student from the MFA faculty.
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. 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 665, 666, 667, 668 Painting. One, two, three and four sem hours
Advanced studio courses in oil painting. 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 the student. Open only to graduate majors.

FA 679, 680, 681 Special Topics. One, two and three sem hours

FA 694 Seminar in Art Education. Two sem hours (Formerly FA 596)
Art Education seminar will be concerned with the literature and research in art education.
Prereq: Department permission.

FA 695, 696 Seminar in Contemporary Ideas. Three sem hours each (Formerly FA 634, 635)
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 697, 698, 699 Independent Studies. One, two and three sem hours
(Formerly FA 597, 598, 599)
Prereq: Written permission.

FA 732 Graduate Studio. Eight sem hours (Formerly FA 632)
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 733 Graduate Thesis and Exhibition. Nine sem hours
(Formerly FA 633)
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.

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

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
<th>Fall</th>
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<tbody>
<tr>
<td>FA 504</td>
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<td>FA 505</td>
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BIOLOGY

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

Howard D. Booth
Coordinator of Advising
308 Mark Jefferson, 487-0321

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.
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 five or six 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, ten hours in zoology and ten 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. Additional members may be added from inside or outside the department by agreement between the chairperson and the student.

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 the 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
COMMUNITY COLLEGE BIOLOGY:
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 613 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 background, 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, 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 both seminars 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:
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 613 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 background, 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, 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 both seminars must be in aquatic biology. For those selecting Plan B, three hours of Independent Study will be required. Principal adviser: Dr. Dale C. Wallace.

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 subsiences 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 Loesell 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 66.

COURSES FOR THE BIOLOGY DEGREE PROGRAM

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 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
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 (1 JO)

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 ronales 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 529 Water Pollution Biology. Three sem hours
A study of the physiological and ecological consequences of water pollution as bases for defining water quality criteria and setting water quality standards.
Prereq: A taxonomic field course or department permission.

BIO 590, 591, 592 Special Topics in Biology. One, two and three sem hours (Formerly BIO 537, 538, 539)
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 594, 595, 596 Workshop in Biology. One, two and three sem hours (Formerly BIO 537, 538, 539)
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 601 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 612 Electron Microscopy Laboratory. Three sem hours
A specialized course in techniques of electron micrography 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 679, 680, 681 Special Topics in Advanced Biology. One, two and three sem hours
Prereq: Botany, zoology, some concept of ecological principles and some familiarity with use of taxonomic keys.

BIO 682, 683, 684 Workshop in Advanced Biology. One, two and three sem hours (Formerly BIO 695)

BIO 686, 687, 688 Practicum in Biology. One, two and three sem hours (Formerly BIO 590, 591, 592)
Practical experience in a particular field study, with each student responsible for 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 689 Internship in Community College Biology Teaching. Six sem hours (Formerly BIO 697)
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.

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

BIO 693 Seminar in Biology. One sem hour (Formerly BIO 596)
Presentation of special reports and group discussions of selected topics.
Offered on Credit/No Credit basis.
Prereq: Approval to a graduate assistantship.

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: Approval to a graduate assistantship.

BIO 697, 698, 699 Independent Studies. One, two and three sem hours (Formerly BIO 597, 598, 599)
An intensive study of a problem or group of problems under the direction of a University faculty member.
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 industry; plants as the source of technical materials; the dependence of man upon the plant kingdom. Not open to students who have credit in 215 Economic Botany.
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: 442 Plant Physiology desirable.

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 importance. 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, including 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 Botany.

BOT 590, 591, 592 Special Topics in Botany. One, two and three sem hours (Formerly BOT 537, 538, 539)
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 594, 595, 596 Workshop in Botany. One, two and three sem hours (Formerly BOT 593, 594, 595)

BOT 620 Virology. Two sem hours
The biological, physical and chemical nature and pathological activities of viruses as found in bacteria, insects, plants and animals. Laboratory methods for propagation of virus 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.

BOT 679, 680, 681 Special Topics in Advanced Botany. One, two and three sem hours

BOT 693 Seminar in Botany. One sem hour (Formerly BOT 596)
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 697, 698, 699 Independent Studies. One, two and three sem hours (Formerly BOT 597, 598, 599)
An intensive study of a problem or group of problems under the direction of a University faculty member.
ZOOLOGY

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, 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
Birds 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 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: 583 (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.

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 590, 591, 592 Special Topics in Zoology. One, two and three sem hours (Formerly ZOO 537, 538, 539)
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 594, 595, 596 Workshop in Zoology. One, two and three sem hours (Formerly ZOO 593, 594, 595)

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 ontogenetic and adaptive significance of behavioral patterns. Prereq: Two courses in zoology.

ZOO 671 Comparative Vertebrate Physiology. Four sem hours
A study of physiological and biochemical control systems which are utilized to maintain endogenous homeostasis in a series of vertebrate 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.

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.

ZOO 679, 680, 681 Special Topics in Advanced Zoology. One, two and three sem hours

ZOO 693 Seminar in Zoology. One sem hour (Formerly ZOO 596)
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 697, 698, 699 Independent Studies. One, two and three sem hours (Formerly ZOO 597, 598, 599)
An intensive study of a problem or group of problems under the direction of a University faculty member.

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.

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.

BIO 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

BIO 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 DESIGNED 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 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 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.

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.

ESC 594, 595, 596 Workshop in Elementary Science Teaching. One, two and three sem hours

ESC 693, 694 Seminar in Science Education. One and two sem hours. Offered on credit/no credit basis.

OTHER COURSES

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

Biology

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)

442 Plant Physiology. (3)
444 Microbial Physiology. (3)
445 Food Microbiology. (3)

Zoology

404 Mammalian Histology. (3)
427 Vertebrate Physiology. (3)
430 Invertebrate Zoology. (4)
437 Invertebrate Physiology. (3)
460 Economic Zoology. (2)

427 Vertebrate Physiology. (3)
437 Invertebrate Physiology. (3)
460 Economic Zoology. (2)

TENTATIVE SCHEDULE

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† Courses offered on a two (2) year cycle.
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: (1–2)
   - CHM 361 Fundamentals of Physical Chemistry (3)
   - CHM 362 Physicochemical Measurements (Lab) (1)
   - CHM 639 Inorganic-Analytical Chemistry for Teachers (1)
   - CHM 659 Organic-Biochemistry for Teachers (3)
   - One laboratory course from among 352, 373, 433, 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:
     - CHM 503 Modern Approaches to Teaching Chemistry (2)
     - CHM 693 Seminar in Chemistry (two separate enrollments) (2)
     - CHM 692 Independent Study in Chemistry Education (4)
     - (Satisfactory completion of CHM 692 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 or 600 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 certificates 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 371-3 (Organic), 461-3 (Physical) and 481 (Instrumental Analysis), along with
Thesis Plan:
All M.S. in chemistry degree candidates are encouraged to follow the thesis plan.

1. Satisfactory completion of a minimum of thirty (30) semester hours of graduate credit, at least fifteen (15) of which must consist of 500 or 600 numbered courses.
2. Two semester hours, i.e., two enrollments in CHM 693 Seminar.
3. Zero to 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:

1. General program
   a. Twelve semester hours or demonstrated proficiency* in four of the following five courses: CHM 451, CHM 571, CHM 632, CHM 641, CHM 661.
   b. Ten semester hours of research (i.e., enrollments in CHM 697-9) 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).

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.

1. Dual major program—two areas of specialization are designated by the student from among analytical, biochemistry, inorganic, nuclear, organic, physical, and polymer chemistry.
   a. Sixteen semester hours of approved courses in the two areas selected for the dual major, with a minimum of two courses in each area.
   b. Six semester hours of electives in approved advanced courses.
   c. Satisfactory performance on a comprehensive exam (details regarding the exam are available from the graduate adviser).

2. General program
   a. Fifteen semester hours or demonstrated proficiency* in the five courses CHM 451, CHM 571, CHM 632, CHM 641, CHM 661.
   b. Seven semester hours of electives in approved advanced courses.
   c. 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 in which the Chemistry Department participates, see page 66.

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 audio-visual materials.
Prereq: Three courses in chemistry.

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 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.

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

CHM 591 Special Topics in Chemistry. Two sem hours
(Formerly CHM 594)
An in-depth study of a specialized area of chemistry.
Prereq: Graduate standing or permission of the department.

CHM 632 Structural Inorganic Chemistry. Three sem hours
(Formerly CHM 532)
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 639 Inorganic Analytical Chemistry for Teachers. Three sem hours
(Formerly CHM 589)
A course for secondary school teachers which covers two major areas of chemistry: (1) the theory of selected modern analytical techniques, and (2) the descriptive inorganic chemistry of a variety of metals and non metals. The inorganic portion of the course emphasizes knowledge derived from chemical periodicity and bonding/structure correlations, as opposed to an encyclopedic approach to knowing the reactions and properties of the elements and their compounds.
Prereq: One year of general chemistry.
CHM 641 Analytical Chemistry.
Three sem hours (Formerly CHM 581)
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 659 Organic-Biochemistry for Teachers. Three sem hours (Formerly CHM 579)
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.

CHM 661 Advanced Physical Chemistry. Three sem hours (Formerly CHM 561)
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 690 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. Student may elect this course several times as long as different topics are covered.

CHM 692 Independent Study in Chemistry Education. Four sem hours (Formerly CHM 592)
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 693 Seminar in Chemistry.
One sem hour (Formerly CHM 596)
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 697, 698, 699 Research in Chemistry. One, two and three sem hours (Formerly CHM 597, 598, 599)
The student performs original research under direction. Thesis is submitted.

OTHER COURSES FOR CREDIT TOWARD THE MASTER'S DEGREE

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

410 Scientific Glassworking. (1)
415 Environmental Chemistry. (3)
432 Advanced Inorganic Chemistry. (3)
433 Inorganic-Organic Synthesis Laboratory. (2)
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
Course Winter Spring Summer Fall
CHM 503
CHM 530
CHM 553
CHM 554 X
CHM 555
CHM 565
CHM 571 X
CHM 572
CHM 575
CHM 576
CHM 632
CHM 639
CHM 641
CHM 659
CHM 661
CHM 692 X X X X
CHM 693 X X X X
CHM 697 X X X X
CHM 698 X X X X
CHM 699 X X X X
† Courses offered on a two (2) year cycle.
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 zero to six 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; or
   c. the graduate research seminar, one research paper approved by departmental faculty, and an oral examination.
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 55.

**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 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: One course in economics or permission of the department. Not open to economics majors.

**COURSES FOR DEGREE PROGRAM**

**ECO 504 Introduction to Research Methods in Economics (Formerly 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, including 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, housing, 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.

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).

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 equivalent).

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 592 Special Topics. Three sem hours (Formerly ECO 594)
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 594 Workshop in Economics. Two sem hours (Formerly ECO 595)
Selected principles of economics presented by visiting consultants. Class discussion on phases of contemporary economics.
Prereq: Intermediate Macroeconomic Analysis and Intermediate Microeconomic Analysis (ECO 301 and 302 or equivalent).

ECO 596 Economic Growth and Development. 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.

OTHER COURSES
These upper division undergraduate 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.

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

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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

Milton P. Foster
Department Head
612 Pray-Harrold,
487-4220

Paul D. McGlynn
Coordinator of Advising
613-B Pray-Harrold,
487-2075

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:
In addition to the Graduate School degree admission requirements set forth in the early pages of this catalog, the Department of English requires:
1. for admission to the program, at least 24 semester hours of undergraduate English, excluding freshman composition,
2. 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:
1. by presenting two years (or the equivalent) of undergraduate foreign language credit.
2. by passing French 616, 617 Reading French for Graduate Students with a grade of B or better (recommended for students planning to do Ph.D. work in English).
3. by taking six 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 Busch, Gilbert Cross, Judith Johnson, Donald Jaworski, 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 one of four major areas of study:
1. Medieval and Renaissance
2. Seventeenth and Eighteenth Century British Literature
3. Nineteenth and Twentieth Century British Literature
4. American Literature

(See following list of courses in each field.)

Cognates or Additional Electives (6 credit hours):
Candidates will take up to six hours of cognate courses in other departments or up to six hours of additional electives in the English Department. These cognates or additional electives must be approved by a graduate adviser in the English Department.

Language Requirement:
Candidates are referred to the “Guidelines for Language Requirements for the M.A. in English.”

Note:
No more than nine hours of approved undergraduate courses may be applied on this program.

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 Chaucerian 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.
Prereq: Fifteen hours of credit in literature.

**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 545 Studies in Renaissance Literature.** Three sem hours
A specialized study of major non-dramatic poetry and prose of the English Renaissance (exclusive of the works of John Milton). Specific major authors to be studied may include Shakespeare, More, Sidney, Spenser, Marlowe, Bacon, Jonson, Donne, and Herbert.
Prereq: Fifteen hours of credit in literature.

**SEVENTEENTH AND EIGHTEENTH CENTURY BRITISH LITERATURE**

**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 Fiction.** Three sem hours
A specialized study of major authors, genres and themes of eighteenth-century fiction. The fiction studied will include works by such authors as Defoe, Swift, Fielding, Richardson, Sterne, Goldsmith, Walpole, and Smollett.
Prereq: Fifteen hours of credit in literature.

**LIT 565 Studies in Nineteenth-Century British Literature.** Three sem hours
An intensive study of the poetry and critical essays of Wordsworth.
Prereq: Fifteen hours of credit in literature.

**LIT 571 Byron and 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 and 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.

**AMERICAN 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.

**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 1920s 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.

**LIT 568 Whitman and Dickinson.** Three sem hours
The work of Whitman and Dickinson.
examined for its intrinsic value as poetry and as illustrative of the power of isolated poetic genius.  
Prereq: Fifteen hours of credit in literature.

**LIT 569** The American Renaissance: 1830–1860. Three sem hours  
Specialized study of the work of three or four of the following writers: Cooper, Poe, Emerson, Thoreau, Hawthorne, Melville.  
Prereq: Fifteen hours of credit in literature.

**LIT 576** Studies in Twentieth Century American Fiction. Three sem hours  
Specialized study of two or three major twentieth-century American novelists, such as Hemingway, Fitzgerald, Faulkner, Nabokov, and Bellow.  
Prereq: Fifteen hours of credit in literature.

**LIT 577** Studies in Twentieth-Century American Poetry. Three sem hours  
Specialized study of the work of two or three major twentieth-century poets, such as Pound, Eliot, Stevens, Williams, Roethke, Robinson, Frost, e.e. cummings, Hart, Crane, Robert Lowell.  
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 592** Special Topics. Three sem hours (Formerly LIT 596 Seminar in Special Topics)  
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 697, 698, 699** Independent Studies. One, two and three sem hours (Formerly LIT 597, 598, 599)  
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.

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<tr>
<th>Course Title</th>
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<td>430 History of Literary Criticism</td>
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<td>434 English Literature in Transition, 1880–1914</td>
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**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:**

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 43 under Courses in English Language, Linguistics, and Composition and on page 43 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 40–42, and Other Courses for Credit Toward M.A. in English with concentration in literature, page 42).

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 635 Developmental Reading—Secondary is strongly recommended as a cognate course for students without this type of background.
Cognates may be taken in the English Department or in another department.

Language Requirement:
Candidates are referred to the language requirements printed as part of the general requirements for the master's degree in the Department of English Language and Literature on page 40.

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. 
Pre: 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. 
Pre: 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 literary texts of the medieval period, with an investigation of their contributions to standard Modern English. 
Pre: 321 History of the English Language. 
Rec: 315 The Poetry of Chaucer.

ENG 596 Teaching Composition on the College Level. Three sem hours (Formerly ENG 594)
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.

420 Old English Poetry. (3)
422 Writer's Workshop. (3)
424 Technical Writing. (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.

Requirements:
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 592 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 40 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 580 is a course not credited toward an M.A. in the Department of English Language and Literature. This course is 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 this course; they may take any graduate courses in English for which they have the prerequisites.

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.
FOREIGN LANGUAGES and BILINGUAL STUDIES

Jean Bidwell
Department Head
218 Ford Hall,
487-0130

Raymond Padilla
Director,
Spanish (Bilingual-Bicultural Education)
106 Ford Hall,
487-1035

John R. Hubbard
Coordinator of Advising
Language and International Trade
205 Ford Hall,
487-4448

The Department of Foreign Languages and Bilingual Studies 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:

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.

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.

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 622 Teaching Hispanic Culture and Language (3)
   FLA 695 Seminar in Bilingual Education (3)
4. Electives and cognates from the following (12 sem hours):
   CUR 512 Enriching the Early Elementary Classroom Program (2)
   RDG 554 Reading Problems of the Disadvantaged (2)
   CUR 600 Early Childhood Education (2)
   CUR 616 Curriculum-Elementary School (2)
   RDG 618 Developmental Reading-Elementary (2)
   RDG 619 Programs in Language Arts (2)
   CUR 630 Curriculum-Secondary School (2)
   CUR 632 Individualizing Instruction in the Secondary School (2)
   CUR 634 The Dropout Problem (2)
RDG 635 Development
Reading-Secondary (2)
CUR 657 The Open Classroom (4)
CUR 658 The Community-centered Classroom (4)
SPN 519 Spanish Phonology (2)
SPN 524 The Spanish Language in the New World (2)
SFD 580 Sociology of Education (2)
SPN 620 Spanish Grammar and Syntax (2)
SFD 662 Cultural Determinants of Learning (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 requirements. These students will be expected to take courses for undergraduate credit to make up this deficiency.

PROGRAM REQUIREMENTS

Business Area Core: (15–18 semester hours.) At least one course from Management and one course from Marketing.

MKT 491 Marketing (3)
MGT 580 Management of Organizational Behavior (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 575 The Economics of Socialism (3)
ECO 580 International Trade: Theory and Policy (3)
ECO 581 The International Monetary System (3)
ECO 587 Case Studies in Economic Development (3)

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:

1. 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, or begin a second foreign language (501 and 502).
2. 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.
3. 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 210, 211, and/or 212 (3–9 hours) in addition to completing 10–12 semester hours in a third language area.

Internship or Independent Study

Project: (3 semester hours.) FLA 688 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 699.

COURSE DESCRIPTIONS

IN ENGLISH

CEN 511 Practical Application of Linguistics to ESL. Two sem hours

The linguistic principles and theories of adult ESL with discussion sessions on their practical application. This course provides the ESL teacher with a basic introduction to linguistics as a precursor to the solution of practical problems.

FLA 590, 591, 592 Special Topics. One, two and three sem hours

(Formerly FLA 539, 540, 541)

An intensive study of a specific topic to be determined by the instructor's field of specialization and student interest. Special Topics courses may be repeated for credit with department permission.

PreReq: Departmental permission.

FLA 611 Methods of Teaching Modern Language. Two sem hours (Formerly FLA 511)

The history, theory and techniques of modern language teaching.
PreReq: Permission of the department.

FLA 622 Teaching Hispanic Culture and Language. Three sem hours (Formerly FLA 522)

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 688 Internship in Language and International Trade. Three sem hours (Formerly FLA 590)

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 695 Seminar in Bilingual Education. Three sem hours** *(Formerly FLA 596)*

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 697, 698, 699 Independent Study. One, two and three sem hours** *(Formerly 597, 598, 599)* 

Intensive study of a problem under the direction of a member of the graduate staff. 

**Prereq:** Departmental permission.

**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 develop 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.

**Prereq:** Departmental permission.

**FRN 620 French Grammar and Syntax. Two sem hours** *(Formerly FRN 520)*

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:** French Syntax or equivalent.

**FRN 621 Advanced Conversation in French. Two sem hours** *(Formerly FRN 521)*

Acquisition of an active vocabulary for daily life and greater oral facility. Oral reports. 

**Prereq:** Advanced French Conversation or equivalent.

**FRN 663 Medieval French Literature. Three Sem hours** *(Formerly FRN 563)*

A study of the chief literary movements of the Old and Middle French periods with representative texts in modern French versions. In French. 

**Prereq:** Two courses in French literature at the 400 level or permission of the department.

**FRN 664 Sixteenth-Century French Literature. Three sem hours** *(Formerly FRN 564)*

A study of the chief literary movements and representative authors of the French Renaissance. In French. 

**Prereq:** Two courses in French literature at the 400 level or permission of the department.

**FRN 697, 698, 699 Independent Study.**

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:** Advanced French Conversation or its equivalent.

**FRN 592 Special Topics. Three sem hours** *(Formerly FRN 594)*

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 664 Sixteenth-Century French Literature. Three sem hours** *(Formerly FRN 564)*

A study of the chief literary movements and representative authors of the French Renaissance. In French. 

**Prereq:** Two courses in French literature at the 400 level or permission of the department.

**FRN 697, 698, 699 Independent Study.**

One, two and three sem hours *(Formerly FRN 597, 598, 599)*

Intensive study of a problem under the direction of a member of the graduate staff. 

**Prereq:** Departmental permission.

**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.

**GER 502 Intensive German. Five sem hours**

A continuation of GER 501. 

**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:** 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:** 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 620 Spanish Grammar and Syntax.

SPN 620 Spanish Grammar and Syntax. Two sem hours
(Formerly SPN 520)
The morphological and syntactical structure of Spanish.
Prereq: 443 Advanced Spanish Composition or equivalent.

SPN 621 Graduate Spanish Conversation. Two sem hours
(Formerly SPN 521)
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 663, 664 Old Spanish. Two sem hours each (Formerly SPN 585, 586)
Development of Old Spanish from its Latin roots, with major emphasis on changes. Readings in medieval literature from the Poema del Cid to the end of the fifteenth-century.
Prereq: 481 History of the Spanish Language or equivalent and two courses in Spanish literature at the 400 level or department permission.

SPN 697, 698, 699 Independent Study. One, two and three sem hours (Formerly SPN 597, 598, 599)
Intensive study of a problem under the direction of a member of the graduate staff.
Prereq: Departmental permission.

OTHER COURSES

These upper division undergraduate courses may also be taken for graduate credit in consultation with graduate adviser.

CEN 410 Teaching English to Speakers of Other Languages. (3)
FLA 421 History and Theory of Bilingual Education. (3)
FLA 496 Special Topics. (3)
FRN 431 Studies in French Theatre. (3)
FRN 432 Studies in French Poetry. (3)
FRN 433 Studies in French Prose. (3)
FRN 441, 442 Nineteenth Century French Literature. (3) each
FRN 443 French Syntax. (2)
FRN 444 Advanced French Conversation. (3)
FRN 446, 447 Business French. (3) each
FRN 451, 452 Readings in French. (1 and 2)
FRN 461, 462 Twentieth Century French Literature. (3) each
FRN 471, 472 Eighteenth Century French Literature. (3) each
FRN 481 History of the French Language. (3)
FRN 491, 492 Seventeenth Century French Literature. (3) each
GER 425 German Classicism. (3)
GER 426 German Romanticism. (3)
GER 427, 428 Modern German Authors. (3) each
GER 443 German Syntax and Advanced Composition. (2)
GER 444 Advanced German Conversation. (3)
GER 451, 452 Readings in German. (1 and 2)
SPN 443 Advanced Spanish Composition. (2)
SPN 444 Advanced Spanish Conversation. (3)
SPN 445 Spanish-American Prose. (3)
SPN 446 Spanish-American Theatre. (3)
SPN 447 Modern Novel. (3)
SPN 448 Modern Drama. (3)
SPN 449 Romanticism. (3)
SPN 451, 452, 453 Readings in Spanish. (1, 2 and 3)
SPN 454 Modernism in Spanish America. (3)
SPN 455 The Generation of 1898. (3)
SPN 456 Drama of the Golden Age. (3)
SPN 463 Don Quixote. (3)
SPN 471 Culture and Literature of the Hispanic Groups in the U.S.. (3)
SPN 481 History of Spanish Language. (2)
SPN 482 Language of Hispanic Groups in the U.S.. (3)
GEOGRAPHY and GEOLOGY

Elwood J. Kureth
Department Head
203 Strong, 487-0128

Robert Ward
Coordinator of Advising
213 Strong, 487-3140

Marshall McLennan
Historic Preservation Planning Adviser
219 Strong, 487-0218

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 main objectives of the master's program in geography are to train individuals in the systematic, regional, and technical aspects of the discipline. In addition, the program offers opportunities for candidates to experience and participate in geographic research and its possible applications in the service of mankind and his environment. Upon completion of the master's degree, students in geography should be able: to participate in further study toward a doctoral degree; to apply geographic methods to various professional research and development occupations; or, to teach in community colleges as well as secondary and elementary schools. Geographers are also often employed by public and private agencies concerned with such problems as: urban and regional planning, foreign area analysis, resource assessment and management, agricultural, population, and transportation surveys, cartographic research and design, recreational planning, marketing surveys, and environmental impact assessment.

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 2.75 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 44 semester hours of undergraduate and graduate work in geography for the master's degree.

DEGREE REQUIREMENTS:

The master's degree in geography may be completed by choosing option one (30 semester hours) or option two (32 semester hours). The differences between these options are discussed below.

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 (i.e. historical, human, or urban) 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 677, 694, and 695 are required of all master's candidates. GEO 500, 501, and 502 may not ordinarily 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, he must formally declare to the graduate coordinator which of the options, identified below, he plans to pursue.

The student who selects an option 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 the option is subject to approval by the graduate coordinator. A student may, with the approval of the graduate coordinator, change from one option 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.

EXPLANATION OF MASTER'S OPTIONS:

Option One

Students whose life/career goals include research activity may elect to complete a thesis (representing six semester hours credit). The thesis topic and design are developed by the master's candidate with the advice of a
departmental graduate faculty member. The completion of a thesis is especially recommended as a valid learning experience for those who intend to pursue further advanced degrees, but is also useful for those who seek employment with organizations that perform research functions.

Option one requires the completion of 30 semester hours broken down as follows: 18–24 hours in geography, 0–6 hours in approved cognates, and the remaining 6 hours in thesis credit.

Option Two
This option is designed to serve individuals who may prefer additional course work and/or work experience as a substitute for thesis research and would benefit from an off-campus internship experience. It also offers scope to in-service individuals (e.g., planners, soil scientists, or teachers) to reorganize and apply the subject matter of their work experience to an E.M.U. course under the supervision of a departmental graduate faculty member who evaluates the student’s performance. Either of these supervised experiences may be accomplished by enrolling in GEO 689, with approval of the graduate coordinator.

Of the 32 hours total a maximum of six hours may be taken as cognate hours outside the department. A requirement of this option is the successful completion, while in residence at E.M.U., of two hours achieved through the composition of a paper of publishable quality. Graduate faculty in the department must be consulted in the initiation, design, and completion of the paper. A graduate faculty member will also assess the completed paper.

HISTORIC PRESERVATION PLANNING PROGRAM

The program includes a thirty-six hour Master of Science curriculum in historic preservation planning, and an eleven to fourteen hour non-degree curriculum granting a certification of completion and satisfactory academic performance. Both courses of study are interdisciplinary though they are administered by the Department of Geography. The master's curriculum emphasizes preparation for careers in historic preservation in a planning, administrative, or consulting capacity, while the certification curriculum is designed primarily for in-service planners desiring to expand their understanding of the preservation field.

For further information concerning either curriculum, contact the Graduate School or the Department of Geography (Marshall McLennan, program director).

For information regarding the Master of Arts in social science see page 55.

GEOGRAPHY FOR NON-SPECIALIZING STUDENTS

GEO 500 Resources and Nations.
Two sem hours (Formerly GEO 507)

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. Applicable to the master’s degree by petition only.

GEO 501 Earth Science I. Two sem hours (Formerly GEO 508)

An introduction to the structure and composition of the earth, including volcanism, earthquakes, and landforming processes. Applicable to the master’s degree by petition only.

GEO 502 Earth Science II. Two sem hours (Formerly GEO 509)

Weather and climate and related phenomena such as natural vegetation and soils. Applicable to the master’s degree by petition only.

REGIONAL GEOGRAPHY

GEO 510 The American Midwest. Two sem hours (Formerly GEO 569)

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: A course in the geography of the U.S. or North America or the approval of the department.

GEO 512 Middle America and the Caribbean World. Two sem hours (Formerly GEO 542)

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: A course in the geography of Latin America or approval of the department.

GEO 513 South American Lands. Two sem hours (Formerly GEO 541)

A regional study of the countries of South America; resources, people and national cultures are stressed. Prereq: A course in the geography of Latin America or approval of the department. by the department.

GEO 515 Environmental Problems and Strategies in Europe. Two sem hours (Formerly GEO 555)

Causes and consequences of environmental degradation in Europe. Human landscape modification, dense population, and political fragmentation as factors in creating serious pollution problems. European efforts to preserve and restore the environment. Prereq: A course in the geography of Europe or approval of the department.

GEO 516 Problems in Soviet Geography. Two sem hours (Formerly GEO 559)

Individual and group research in selected problems in the geography of the Soviet Union. Prereq: A course in Soviet geography or approval of the department.

GEO 518 Problems of Sub-Saharan Africa. Two sem hours (Formerly GEO 574)

Individual research in selected problems in the geography of Sub-Saharan Africa. Prereq: A course in the geography of Africa or approval of the department.

HISTORICAL GEOGRAPHY

GEO 530 Principles of Historic Preservation Planning. Two sem hours (Formerly GEO 527)

Introduction to values and objectives of historic preservation including evaluation of economic, legal and social issues associated with planning for preservation. Federal and state preservation legislation and local historic district ordinances; design of a preservation plan, techniques of documenting the built environment, and final report.

GEO 531 American Cultural Landscapes. Three sem hours

The diversity of the human geography
of the United States will be explored in terms of representative cultural landscapes of selected regions. Historic characteristics of urban and suburban landscapes in America will be examined, and the principles of townscape analysis introduced.

GEO 532 Historical Geography of Michigan. Two sem hours
(Formerly GEO 552)
Geographical changes and developments in Michigan from pre-colonial times 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 or approval of the department.

HUMAN GEOGRAPHY

GEO 544 Problems in Economic Geography. Two sem hours
(Formerly GEO 649)
Research problems and techniques dealing with the production, distribution and consumption aspects of economic geography.
Prereq: A course in economic geography or approval of 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: A course in the geography of Europe or approval of 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 548 American Folk Architecture. Two sem hours
Folk structures such as rural houses, barns, fences, and covered bridges, are analyzed as aspects of material culture and cultural landscape contributing to regional personality within the United States. Attention is given to old world antecedents, colonial development, and diffusion of regional forms from their colonial hearths.
Prereq. GEO 531 or departmental permission.

GEO 549 Cultural Landscape Interpretation. Two sem hours
Principles of cultural landscape interpretation as well as the development of local interpretation keys are investigated. Analysis of cultural landscapes is carried out in lectures, field practice, discussion sessions, and some student reports.

URBAN GEOGRAPHY

GEO 550 Problems in Urban Geography. Two sem hours
(Formerly GEO 544)
Selected geographic problems: urban sprawl, deterioration of the urban environment, changing urban functions and others. Acquisition of analytical techniques and geographical insights.
Prereq: A course in urban geography or approval of the department.

GEO 552 Processes of Suburban Development. Two sem hours
(Formerly GEO 586)
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: An urban or regional planning course or approval of the department.

GEO 553 City and Regional Planning. Two sem hours
(Formerly GEO 585)
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: An urban or regional planning course or approval of the department.

GEO 554 Urban and Regional Planning in Europe. Two sem hours
Historical background, current problems, and future strategies of urban and regional planning efforts in Europe, political, economic, and cultural aspects of the planning process are considered.
Prereq: 205 Geography of Europe, an equivalent course, or approval of the department.

PHYSICAL GEOGRAPHY

GEO 560 Processes of Landform Development. Two sem hours
(Formerly GEO 522)
Interrelations of climate, microclimate, vegetation, near-surface materials, soil formation and types of landforms in Michigan, emphasizing direct observation in the field and aerial photographs.

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 of 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 a weather and climate course.

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: A course in weather or approval of department.

GEO 564 Common Rocks and Minerals. Two sem hours  
(Formerly GEO 529)  
Materials and processes in the formation and distribution of important minerals and rocks. Not open to students who have had GEO 229, or its equivalent.

GEO 565 Principles of Earth History. Two sem hours  
(Formerly GEO 530)  
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 had GEO 230 or its equivalent.

GEO 566 The New Earth Science.  
Two sem hours (Formerly GEO 510)  
Study of planet Earth— its interior and surface, atmosphere— emphasizing the new theories of continental drift and sea floor spreading.  
Prereq: A course in earth science or approval of the department.

GEO 567 Introduction to Coastal Environments. Two sem hours  
(Formerly GEO 531)  
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 568 Biogeography. Two sem hours (Formerly GEO 528)  
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.

GEOGRAPHICAL METHODS  
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 3+4 Teaching of Social Studies in Elementary Schools.

GEO 580 Urban Environmental Management. Two sem hours  
(formerly GEO 587)  
Survey and evaluation of geologic, topographic, geomorphologic, hydrologic and atmospheric factors which potentially and actually have impact on urban development and environmental management.  
Prereq: An urban or regional planning course or approval of the department.

GEO 581 Environmental Impact Statements. Two sem hours  
(Formerly GEO 532)  
Interrelationships of physical and cultural ecosystems, and environmental policies particularly in the Great Lakes region 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 582 Remote Sensing of Earth Resources. Three sem hours  
(Formerly GEO 505)  
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.

GEO 590 Special Topics in Earth Science for Elementary Teachers. One sem hour (Formerly GEO 537)  
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 590 Special Topics in Teaching College Earth Science. One sem hour (Formerly GEO 595)
A seminar for students teaching or preparing to teach freshman Earth Science at the college level.

ADVANCED GRADUATE STUDY IN GEOGRAPHY

GEO 630 Cultural Resource Assessments. Three sem hours (Formerly GEO 547)
A planning course dealing with the purposes, objectives, and techniques of cultural resource inventories and surveys. Assessment of historic, architectural, archeological and recreational resources and their integration into the planning decision making process. Lecture, guest speakers, and audiovisual presentations will be supplemented by field trips to Marshall, Greenfield Village and other appropriate locations. Prereq: GEO 530 Principles of Historic Preservation Planning or approval of the department.

GEO 675 History of Geographic Thought. Two sem hours (Formerly GEO 670)
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 676 Area Analysis. Two sem hours (Formerly GEO 660)
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 a course in field geography, or approval by the department.

GEO 677 Seminar in Methods and Research. Two sem hours (Formerly GEO 696)
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.

GEO 680 Special Topics in Geography. Two sem hours (Formerly GEO 539)
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 681 Special Topics in Geography. 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. Information on content can be obtained at department office.

GEO 683 Field Studies in Michigan. Two sem hours (Formerly GEO 655)
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 685 Geography Field Trips. Four sem hours (Formerly GEO 568)
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 687, 688, 689 Internship in Geography-Geology. Four, five and six 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 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 Seminar in Geography. Two sem hours (Formerly GEO 596)
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 697, 698, 699 Independent Studies. One, two and three sem hours (Formerly GEO 597, 598, 599)
An intensive study of a problem or group of problems under the direction of a University faculty member. Prereq: Approval of the department.

OTHER COURSES
These upper division undergraduate courses may also be taken for graduate credit:
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 Geography. (3)
440 World Food Systems. (3)
441 Transportation Geography. (3)
448 Ground Water. (3)
450 Shorelands Management Analysis. (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)
The Department of History and Philosophy offers a Master of Arts degree in history and coordinates an interdisciplinary Master of Arts in social science.

MAJOR REQUIREMENTS

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.

PROGRAM OBJECTIVES

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 nine 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
U.S. to 1877
U.S. since 1877

Area 2
Europe 1500-1815
Europe since 1815

Area 3
Asia
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)

Twenty-four to thirty hours of history courses carrying graduate credit, including:
1. a course in historical method (students entering the program without such credit will register for HIS 505 during their first semester);
2. six hours in each of two fields, each of which must be selected from a different area,*
3. a course in historiography;
4. electives.

An examination, oral or written at the student's option, in each of the two fields of concentration.

Zero to six 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)

Eighteen to twenty-four hours of history courses carrying graduate credit, including:
1. a course in historical method (students entering the program without such credit will register for HIS 505 during their first semester);
2. six hours in each of two fields, each of which must be selected from a different area,*
3. a course in historiography;
4. electives.

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.

Zero to six 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 career or professional considerations. The program offers still 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 nine 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.

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.

HIS 534 Studies in 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.

HIS 535 Studies in the History of the Family in the United States. Two sem hours

The study of a significant issue or problem in the history of the family in the United States. The topic will vary from semester to semester.

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.

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

Classical Greek and Roman history.

Prereq: 313 Michigan History or permission of the department.

HIS 536 The United States, 1860–2005. Three 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 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. Prereq: 338 German History since 1815 or permission of the department.

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 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

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.

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.

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 556 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 relations.

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 550 Twentieth Century Russia. Two sem hours
Political, diplomatic, social, and cultural developments in Russia from 1894 to the present.
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 591, 592 Special Topics in History. Two or three sem hours**  
(Formerly HIS 593, 594)  
Subject matter will change from semester to semester. Course may be repeated for credit, up to a limit of six hours.

**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. One, two and three sem hours**  
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 697, 698, 699 Independent Studies. One, two or three sem hours**  
(Formerly HIS 597, 598, 599)  
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.*

**Other Courses for Credit toward the Master's Degree**  
Upper division undergraduate courses in history and philosophy may also be taken for graduate credit and applied towards the degree program in history and social science. Note that a maximum of nine hours of such credit may be used in any one degree program. For information about undergraduate courses which may be taken for graduate credit please consult the coordinator of advising.
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:

1. Meet Graduate School degree admission requirements.
2. 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.
3. Acceptance by the Graduate Advisory Committee.

DEGREE PROGRAM DESCRIPTION AND GRADUATION REQUIREMENTS

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;
   b) MTH 524 Complex Analysis;
   c) MTH 471 Probability and Statistics II;
   d) 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, 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 six of these 24 hours be in mathematics education courses.

   Thesis hours in mathematics education are not to be counted as part of this six hour limitation.

5. Cognate hours: zero to six 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.

   Approval by the Graduate Advisory Committee of each semester's courses. 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 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 subgroups; practical problems in teaching mathematics in grades K–8. Not applicable to program M.A. in Mathematics.
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 Theory of Numbers. Two sem hours (Formerly MTH 516)
Divisibility theory of integers, primes, theory of congruences, Fermat’s theorem, Wilson’s Theorem, number theoretic functions, multiplicity, Mobius 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 514 Theory of Fields. Two sem hours (Formerly MTH 614)
Finite fields, prime fields and their extensions, splitting fields, separability, ineducibility and Fundamental Theorem of Algebra.
Prereq: MTH 411 Modern Algebra with Applications or equivalent. (Will allow MTH 518 Group Theory I during transition period.)

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 420 Introduction to Analysis 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 Numerical 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 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 traversibility. 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 General Topology. Two sem hours (Formerly MTH 528)
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 Probability and Statistics. Two sem hours (Formerly MTH 574)
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 Applied Statistics. Two sem hours (Formerly MTH 577)
Point and interval estimation, hypothesis testing, sample mean and sample 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 I.
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 contemporary ways of using materials and strategies to present the content. Topics include algebra, geometry, probability and statistics, number theory, logic and other general mathematical 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 360 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 mathematics, 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 Geometry for Secondary Teachers. Two sem hours
(Formerly MTH 547)
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 595 Workshop.** Two sem hours Usually not applicable to M.A. program in mathematics.

*Prereq:* Permission of the department.

**MTH 601 The Teaching of Junior College Mathematics.** Two sem hours (Formerly MTH 681)

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 recommendations for a college program. (Not offered currently.)

*Prereq:* 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 611 Linear Algebra II.** Two sem hours (Formerly MTH 512)

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 679, 680, 681 Special Topics in Mathematics.** One, two and three sem hours (Formerly MTH 591)

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 3.3 or above, and 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.

**MTH 697, 698, 699 Independent Studies.** One, two and three sem hours (Formerly MTH 597, 598, 599)

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 3.3 or above, and permission of the department.

**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 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)
- **477 Special Topics in Mathematics.** (2)
- **478 Special Topics in Computer Science.** (2)
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 601 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 3.0 (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 1980 on the following dates:

Winter Semester
February 7, 1980

Spring Session
June 25, 1980

Fall Semester
November 4, 1980

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.

OPEN TO GRADUATE MUSIC MAJORS

MUS 601 Introduction to Graduate Studies. Two sem hours (Formerly MUS 501)
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 617 Music Composition II. Two sem hours (Formerly MUS 517)
Original composition based upon techniques of the twentieth century; composition works of moderate length
Prereq: MUS 517 Music Composition I or equivalent.

MUS 618 Music Composition III. Two sem hours (Formerly MUS 519)
Original composition in larger forms with the intent of performance.
Prereq: MUS 517 Music Composition I or MUS 617 Music Composition II or equivalent.

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 651 The General Music Class.
Two sem hours (Formerly MUS 551)
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 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 658 Administration and Supervision in Music Education.
Two sem hours (Formerly MUS 558)
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 691 Thesis. Two 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 692 Final Project. Two sem hours (Formerly MUS 694)
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.

MUS 697, 698 Independent Studies.
One and two sem hours
(Formerly MUS 597, 598)
An intensive study of a program or a group of problems under the direction of a University faculty member.

Prereq: Permission of adviser and study director.

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 687 Graduate Recital. Two sem hours (Formerly MUS 689)
Required in partial fulfillment of the Master of Arts degree for those students 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.

OPEN TO GRADUATE STUDENTS AND QUALIFIED SENIORS

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.

Prereq: Music major or department permission.

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 516 Music Composition II. Two sem hours
The creative process in music through analysis of traditional and new music; original composition in large forms illustrating various techniques and media.
Prereq: Consent of instructor.

MUS 521 Music in the Baroque Era. Two sem hours
The development of musical style and form in the baroque era. Intensive study of selected compositions.
Prereq: Music major or department permission.

MUS 522 Music in the Classical Era. Two sem hours
The development of musical style and form in the classical era. Intensive study of selected compositions.
Prereq: Music major or department permission.

MUS 523 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 524 Music in the 20th Century. Two sem hours
The development of musical style and form in the 20th century. Intensive study of selected compositions.
Prereq: Music major or department permission.

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. 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 miscellaneous compositions. Emphasis will be on listening, stylistic
features and historical background.
Pre req: Music major or department permission.

MUS 551 Vocal and Instrumental Accompanying. Two sem hours (Formerly MUS 451 Studies in Performance Literature)
Provides pianists with experience in accompanying singers and instrumentalists through acquisition of basic skills and repertoire. Course may be repeated for credit.
Pre req: Audition.

MUS 560 Studies in Pedagogy. Two sem hours (Formerly MUS 460)
Topics may be selected from the following: piano, organ, voice, vocal diction, brass, woodwinds, strings, theory, literature, percussion or similar subjects. Topics to be offered will be announced in the schedule of classes. May be repeated for credit with permission of adviser.

MUS 561 Studies in Literature. Two sem hours (Formerly MUS 461)
Topics to be selected from the following: piano, organ, voice, 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.

MUS 567 Advanced Instrumental Conducting. Two sem hours
Interpretative factors and more subtle baton techniques; greater understanding of style and form through analysis of representative scores.
Pre req: 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.
Pre req: 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.

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. May be repeated for credit.
Pre req: Department permission.

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. May be repeated for credit.
Pre req: Department 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 501, 502 Applied Music Secondary Performance. One and two sem hours
Open to majors and non-majors. May be repeated for credit.
Pre req: Audition.

UPPER DIVISION
UNDERGRADUATE COURSES OPEN TO GRADUATE STUDENTS

MUS 413 Orchestration. Two sem hours
Practical work in setting compositions for full orchestra and various other instrumental ensembles.
Pre req: 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.
Pre req: 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 performances of opera scenes and, when feasible, complete works. The musical, technical and dramatic aspects of production will be stressed.
Pre req: Permission of the department.

TENTATIVE SCHEDULE
Course Winter Spring Summer Fall
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AMU 603 X X X X
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† Courses offered on a two (2) year cycle.
ADMISSION REQUIREMENTS

Applicants must meet degree admission requirements of the Graduate School.

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:

- Phy 430 Intermediate Mechanics I
- Phy 431 Intermediate Mechanics II
- Phy 450 Electricity and Magnetism
- Phy 475 Introduction to Quantum Mechanics
- Phy 662 Advanced Mechanics
- *Phy 671 Electromagnetic Theory or Phy 440 Optics and
- Phy 441 Modern Optics
- *Phy 675 Quantum Mechanics or Phy 460 Heat and Thermodynamics
- Phy 462 Kinetic Theory and Statistical Mechanics
- Phy 690-2 Thesis/Final Report

*Substitution of the 400 level courses may be made for 671 or 675, but not for both.

Further information may be obtained from Dr. Walter Gessert or Dr. Robert Silver, graduate advisers, Department of Physics and Astronomy.

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:

1. 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. 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 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 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 or astronomy (one may be taken concurrently).

PHY 590, 591, 592 Special Topics. One, two and three sem hours
(Formerly PHY 537, 594)
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 594, 595, 596 Workshop. One, two and three sem hours
Laboratory and/or field experience guided toward problems and new curricula in physics and physical science. Prereq: Departmental permission.

PHY 622 New Approaches to the Teaching of Science in the Junior High School I. Two sem hours (Formerly PHY 522)
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 623 New Approaches to the Teaching of Science in the Junior High School II. Two sem hours (Formerly PHY 523)
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 625 Physical Science. Two sem hours (Formerly PHY 525)
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 650 Approaches to Teaching Physics I. Two sem hours
(Formerly PHY 550)
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 651 New Approaches to Teaching Physics II. Two sem hours (Formerly PHY 551)
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 650 New Approaches to Teaching Physics I.

PHY 652 Supervision of the Science Program. Two sem hours (Formerly PHY 552)
Problems in organizing, staffing, planning and evaluating the K–12 science program.
Prereq: Graduate standing.

PHY 653 Recent Science Curricular Developments. Two sem hours (Formerly PHY 553)
Problems in development and implementation of materials, methods and content of recent curricular efforts.
Prereq: Science teaching experience and graduate standing.

PHY 662 Advanced Mechanics. Three sem hours (Formerly PHY 562)
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 671 Electromagnetic Theory. Three sem hours (Formerly PHY 571)
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, Čerenkov radiation, multipole fields, plasma electrodynamics.
Prereq: 450 Electricity and Magnetism or permission of the department.

PHY 675 Quantum Mechanics. Four sem hours (Formerly PHY 582)
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 679, 680, 681 Special Topics. One, two and three sem hours (Formerly PHY 537, 594)
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 682, 683, 684 Workshop. One, two and three sem hours
Laboratory and/or field experience guided toward problems and new curricula in physics and physical science.
Prereq: Departmental permission.

PHY 690, 691, 692 Thesis/Final Project. One, two and three sem hours
Intensive research in physics or physics education including the submission of a thesis or written report under the direction of a research adviser.
Prereq: Departmental permission.

PHY 693, 694, 695 Seminar. One, two and three sem hours (Formerly PHY 596)
Presentation of special reports and group discussion on selected topics in physics and physical science.

PHY 697, 698, 699 Independent Study/Research. 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 103 Exploration of the Universe 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 103 Exploration of the Universe 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

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† 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 694 and BIO 694. It will be offered as PHY 694 in the winter of 1980.
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 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: 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 590, 591, 592 Special Topics. One, two and three sem hours
(Formerly PLS 539)
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 694, 695, 696 Seminar in Current Affairs. Two, three and four sem hours (Formerly PLS 596)
The problems involved in the teaching of current affairs and exploration of the most effective techniques and materials available in the field.

PLS 697, 698, 699 Independent Studies. One, two and three sem hours (Formerly PLS 597, 598, 599)
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
These upper division undergraduate courses may be taken for graduate credit and applied on the degree program in social studies or as cognates by majors in other fields.

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)
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 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 includes 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. Place 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

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.

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 625 Behavior Change Methods (3)
     - PSY 627 Psychopathology (3)
     - PSY 628 Clinical Psychology (3)
     - PSY 743 Psychopathology (3)
     - PSY 750 Clinical Psychology (3)
     - PSY 775 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. PSY 692 Thesis (3)
   Original research designed and completed 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.

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 762, 763, 770, and 771, and six credits in practicums. The research project completed as 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’S DEGREE 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
1. Meet the state requirements for full approval as school psychologists
2. Provide the psychological services required by state and federal laws
3. Promote the student welfare through the development of effective programming recommendations
4. 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 3.3 (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 519 Behavioral Design and Assessment. Three sem hours
Methods for measuring and analyzing behavior in applied settings, such as direct observation, behavioral interviews and self-recording will be taught. Single case designs and statistical procedures as well as evaluation procedures that address accountability will be stressed. 
Prereq: One course in psychology.
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 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 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 hours
A study of statistical techniques including small sample theory, analysis of variance and non-parametric statistics. 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.
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 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 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 697, 698, 699 Independent Reading. One, two and three sem hours (Formerly PSY 591, 592, 593)
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 734 Psychopathology. Three sem hours (Formerly PSY 643)
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 750 Clinical Psychology. Three sem hours (Formerly PSY 650)
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 762 Individual Testing I. Four sem hours (Formerly PSY 662)
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 763 Individual Testing II. Four sem hours (Formerly PSY 663)
Training and supervised experience in Binet and special diagnostic tests.
Prereq: PSY 762 Individual Testing I and department permission.

PSY 770 Personality Evaluation I. Four sem hours (Formerly PSY 670)
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 771 Personality Evaluation II. Four sem hours (Formerly PSY 671)
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 775 Theory of Psychological Testing. Three sem hours (Formerly PSY 660)
Assumptions, rationale and statistical foundation of psychological tests used in differential diagnosis.
Prereq: Twenty hours in psychology and department permission.

PSY 788 Practicum in Clinical Psychology I. Three sem hours (Formerly PSY 680)
Supervised psychological testing and interviewing in a clinical setting.
Prereq: PSY 750 Clinical Psychology and
SOCIOLGY

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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

1. SOC 630 Advanced Social Statistics (3)
   SOC 640 Advanced Sociological Theory (3)
   SOC 677 Advanced Methods in Sociological Research (3)
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 694). 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 equivalents:

- 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:
1. Core Courses
412 Law and Society (3)
513 Social Deviance (3)
610 Theories of Criminal Behavior (3)
611 Sociology of Crime and its Correction (3)
678 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 55.

SOCIOLGY

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 Introductory 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 reference 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 The Family as an Institution (Formerly 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 Introductory Sociology or SOC 500 Man in Society.

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 Introductory Sociology or SOC 500 Man in Society.
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 Introductory Sociology or SOC 500 Man in Society; no credit 406 Criminology.

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 308 Social Psychology or PSY 308 Social Psychology.
Prereq: SOC 105 Introductory Sociology or SOC 500 Man in Society 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 Introductory Sociology or SOC 500 Man in Society or ANT 135 Cultural Anthropology or ANT 505 Cultural Anthropology.

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 610 Theories of Criminal Behavior. Three sem hours (Formerly SOC 510)
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 611 Sociology of Crime and Its Correction. Three sem hours (Formerly SOC 511)
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.

SOC 630 Advanced Social Statistics. Three sem hours (Formerly SOC 530)
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 636 Qualitative Analysis. Three sem hours (Formerly SOC 536)
An examination of the methods and techniques of qualitative analysis in sociology. Research will be conducted by class members and reviewed in seminar presentations.

SOC 640 Advanced Sociological Theory. Three sem hours (Formerly SOC 540)
An analysis of contemporary theoretical schools of thought in sociology.

SOC 641 Theory Construction and Verification. Three sem hours (Formerly SOC 541)
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.

SOC 642 Social Stratification Theory and Research. Three sem hours (Formerly SOC 542)
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.

SOC 645 Advanced Social Psychology. Three sem hours (Formerly SOC 545)
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.

SOC 646 Research in Family Interaction. Three sem hours (Formerly SOC 551)
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 647 Contemporary Community Structure. Three sem hours (Formerly SOC 555)
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 656 Human Ecology and Community Development. Three sem hours (Formerly SOC 556)
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 662 Supervised Field Experience. Two sem hours
(Formerly SOC 594)
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 677 Advanced Methods in Sociological Research. Three sem hours (Formerly SOC 535)
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.

SOC 678 Research Methods in Criminology and Criminal Justice Evaluation. Three sem hours (Formerly SOC 592)
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 680 Special Topics in Sociology. Two sem hours (Formerly SOC 539)
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 683 Workshop in Crime and the Community. Two sem hours (summer only) (Formerly SOC 595)
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.

SOC 690, 691 and 692 Thesis. One, two and three sem hours
Prereq: Permission of the department.

SOC 694 Seminar in Sociology. Two sem hours (Formerly SOC 596)
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 697, 698, 699 Independent Studies. One, two and three sem hours (Formerly SOC 597, 598, 599)
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.

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 309 Culture and Personality.
Prereq: SOC 105 Introductory Sociology or SOC 500 Man in Society or ANT 135 Cultural Anthropology or ANT 505 Cultural Anthropology.

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.

ANT 697, 698, 699 Independent Study in Anthropology. One, two and three sem hours
Intensive study of an anthropological problem or theory supervised by a member of the anthropology faculty on an individual basis.
Prereq: Permission of the department.

OTHER
Selected 300 or 400 level undergraduate courses in sociology and anthropology may be taken for graduate credit in consultation with the graduate adviser.
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.

OBJECTIVES
1. To provide advanced preparation both for the teaching of speech and dramatic arts and for other communication related pursuits.
2. To provide preparation for further study of advanced graduate work in speech and dramatic arts.

REQUIREMENTS FOR ADMISSION
1. Undergraduate major or minor in speech andlor dramatic arts.
2. Admission to the Graduate School.
3. Minimum of 2.5 GPA on a 4.0 scale.
4. Acceptance into the department program by the Graduate Committee of the Department of Speech and Dramatic Arts.

COURSE OF STUDY
1. The completion of a minimum of 30 hours of approved course work beyond the bachelor’s degree.
2. The selection of an emphasis in one of the following: (1) communication/public address, (2) dramatic arts, or (3) drama for the young.
3. Training in research approaches and resources in speech and dramatic arts; possible interdepartmental cognate; possible intradepartmental cognate in communication/public address, dramatic arts, radio/tv/film, oral interpretation, drama for the young, or speech science and pedagogy.
4. Preparation of a program of study in consultation with assigned graduate adviser. To be prepared at outset of student’s graduate work.

GRADUATION REQUIREMENTS
1. The completion of all conditions stipulated upon entry into the program.
2. Attainment of at least a 3.0 (B) average in all course work.
3. One of the following: (1) the successful completion of a terminal qualifying examination covering the student’s elected emphasis and selected cognates; (2) the submission and defense of a thesis; or (3) the successful completion of a special theory-application project.

Each year a limited number of graduate assistantships are awarded by the department to students possessing outstanding background in speech andlor dramatic arts AND at least a 3.0 grade point average in their overall undergraduate work. Such students teach up to three sections of the department’s fundamentals of speech course; or assist with the teaching of basic dramatic arts or drama for the young courses; or supervise one of the activities.

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.

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.

SPH 509 Communications for Leaders. Two sem hours
Theory and applications of communication in leadership roles. Deals with interviews, staff meetings,
dynamistic communication, communication in large and small organizations, and communication barriers with methods of evaluating and improving interpersonal, group, and public communication.

**SPH 574 Directing Secondary Forensic Activities. Two sem hours (Formerly SPH 596 Seminar Directing Secondary Forensic Activities)**

The philosophy, organization and administration of forensic programs for those who direct or plan to direct such activities on the secondary level.

**RADIO, TELEVISION AND FILM**

**SPH 534 Directing High School Broadcasting, TV and Film Activities. Two sem hours (Formerly SPH 596 Seminar in Directing High School Broadcasting, TV and Film Activities)**

The philosophy, organization and administration of broadcasting, television and film programs for those who direct or plan to direct such activities on the high school level.

**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.

**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 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 505 Improvisation or 501 Creative Drama and Role Playing (Formerly Creative Drama). Two sem hours**

An introductory consideration of the creative process, dramatic play, gaming, and involvement drama as developmental learning.

**SPH 506 Studies in Drama/Theatre for the Young (Formerly Seminar in Dramatic Arts for Children). Two sem hours**

Studies in the history, theory, and techniques of drama and theatre for the young. Selection of focus is made by individual students in the group, according to their particular interests.

**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 570 College Teaching of Speech. One sem hour**

Theory and practice of teaching speech at the college level.

**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.

**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.

**SPH 582 Modern Rhetorical Theory. Three sem hours**

A study of selected rhetorical theories from 1900 to the present with a view discovering the methods and objectives of modern rhetoricians and relating them to society and its problems.

**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.

**SPH 585 Theories of Argument and Controversy. Three sem hours**

Theoretical foundations of argument and controversy and a review of related research.
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 590, 591, 592 Special Topics in Speech and Dramatic Arts. One, 
Two and Three sem hours 
(Formerly SPH 539, 540, 541) 
Students will investigate a particular topic which is approved by the 
Department of Speech and Dramatic Arts. 
Prereq: Graduate students and qualified seniors in speech and dramatic arts. 
Departmental permission required.

SPH 606, 607, 608 Colloquium in Speech & Dramatic Arts. One, 
two and three sem hours 
Students will study a special topic area with resource persons from the 
community as well as members of the speech and dramatic arts faculty. 
Prereq: Graduate student in speech and dramatic arts or a related field. 
Departmental permission required.

SPH 677 Research Techniques in Speech and Dramatic Arts. Two 
sem hours (Formerly SPH 592) 
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 679, 680, 681 Special Topics in Speech & Dramatic Arts. One, 
two and three sem hours 
Students will investigate a particular topic which is approved by the 
Department of Speech and Dramatic Arts. 
Prereq: Graduate students in speech and dramatic arts. Departmental permission 
required.

SPH 682, 683, 684, 685 Workshops in Speech & Dramatic Arts. One, 
two, three and four sem hours 
Students will be provided practical and theoretical study in a selected topic area. 
Prereq: Graduate student in speech and dramatic arts or a related field. Departmental permission required.

SPH 690 Degree Requirement: Examination. One sem hour 
(Formerly SPH 689) 
An examination over the student’s field of study conducted by a departmental 
faculty committee from assigned readings. 
Prereq: Graduate student in speech and dramatic arts and departmental permission.

SPH 691, 692 Degree Requirement: Thesis. One, two and three sem hours 
A research-oriented study conducted under the supervision of a departmental 
faculty committee. 
Prereq: Graduate student in speech and dramatic arts and departmental permission.

SPH 693, 694, 695 Seminar in Speech & Dramatic Arts. One, two and 
three sem hours (Formerly SPH 696) 
A research-oriented course for graduate majors in speech and dramatic arts. 
Prereq: Graduate student in speech and dramatic arts and departmental permission.

SPH 697, 698, 699 Independent Studies. One, two and three sem hours 
(Formerly SPH 597, 598, 599) 
An intensive study of one or more problems under the direction of a 
University faculty member. 
Prereq: Department permission.

DRAMATIC ARTS

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 555 Advanced Directing Lab. One sem hour 
Intensive scene study of selected dramatic styles and theatrical variants. 
Prereq: One course in directing 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 
nonrealistic styles of drama. 
Prereq: One course in directing or permission of the department.

SPH 559 Advanced Acting. Two sem hours 
Theoretical and practical considerations involved in the acting of selected 
nonrealistic styles of drama. 
Prereq: One course in acting or permission of the department.

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 1700s to the present day.
Prereq: 406 History of the Theatre or permission of the department.

SPH 566 Studies in Theatre History (Formerly 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 Problems in Design and Technical Theatre (Formerly 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 Bel Geddes.
Prereq: 370 Scene Design, 376 Stage Lighting, 406 History of the Theatre or permission of the department.

SPH 568 Problems in Acting (Formerly 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 Problems in Directing (Formerly 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 590, 591, 592 Special Topics in Speech and Dramatic Arts. One, two and three sem hours (Formerly SPH 539, 540, 541)
Students will investigate a particular topic which is approved by the Department of Speech and Dramatic Arts.
Prereq: Graduate students and qualified seniors in speech and dramatic arts. Departmental permission required.

SPH 606, 607, 608 Colloquium in Speech & Dramatic Arts. One, two and three sem hours
Students will study a special topic area with resource persons from the community as well as members of the speech and dramatic arts faculty.
Prereq: Graduate student in speech and dramatic arts or a related field. Departmental permission required.

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
SPH 656 Playwriting II. Two sem hours
A continuation of 386 Dramatic Writing.
Prereq: Graduate standing.

SPH 677 Research Techniques in Speech and Dramatic Arts. Two sem hours (Formerly SPH 592)
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 or a related field. Departmental permission required.

SPH 679, 680, 681 Special Topics in Speech and Dramatic Arts. One, two and three sem hours
Students will investigate a particular topic which is approved by the Department of Speech and Dramatic Arts.
Prereq: Graduate students in speech and dramatic arts. Departmental permission required.

SPH 682, 683, 684, 685 Workshops in Speech & Dramatic Arts. One, two, three and four sem hours
Students will be provided practical and theoretical study in a selected area.
Prereq: Graduate student in speech and dramatic arts or a related field. Departmental permission required.

SPH 690, 691, 692 Degree Requirement: Project. One, two and three sem hours
A theory-application project conducted under the supervision of a departmental faculty committee.
Prereq: Graduate student in speech and dramatic arts and departmental permission.

SPH 693, 694, 695 Seminar in Speech & Dramatic Arts. One, two and three sem hours (Formerly SPH 696)
A research-oriented course for graduate majors in speech and dramatic arts.
Prereq: Graduate major in speech and dramatic arts and departmental permission.

SPH 697, 698, 699 Independent Studies. One, two and three sem hours (Formerly SPH 597, 598, 599)
An intensive study of one or more problems under the direction of a University faculty member.
Prereq: Departmental permission.

DRAMA FOR THE YOUNG

SPH 565 Studies in Drama/Theatre for the Young (Formerly Seminar in Dramatic Arts for Children). Two sem hours
Studies in the history, theory, and techniques of drama and theatre for/with the young. Selection of focus is made by individual students in the group, according to their particular interests.
Prereq: 323 Improvisation or 501 Creative Drama and Role Playing plus 322 Theatre for Children or 502 Introduction to Theatre for the Young.

SPH 590, 591, 592 Special Topics in Speech and Dramatic Arts. One, two and three sem hours (Formerly SPH 539, 540, 541)
Students will investigate a particular topic which is approved by the Department of Speech and Dramatic Arts.
Prereq: Graduate students and qualified seniors in speech and dramatic arts.
Departmental permission required.

SPH 606, 607, 608 Colloquium in Speech & Dramatic Arts. One, two and three sem hours
Students will study a special topic area with resource persons from the community as well as members of the speech and dramatic faculty.
Prereq: Graduate student in speech and dramatic arts or a related field. Departmental permission required.

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: Graduate in speech and dramatic arts.

SPH 677 Research Techniques in Speech and Dramatic Arts. Two sem hours (Formerly SPH 592)
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 or a related field. Departmental permission required.

SPH 679, 680, 681 Special Topics in Speech and Dramatic Arts. One, two and three sem hours
Students will investigate a particular topic which is approved by the Department of Speech and Dramatic Arts.
Prereq: Graduate students in speech and dramatic arts. Departmental permission required.

SPH 682, 683, 684, 685 Workshops in Speech & Dramatic Arts. One, two, three and four sem hours
Students will be provided practical and theoretical study in a selected area.
Prereq: Graduate student in speech and dramatic arts or a related field. Departmental permission required.

SPH 690 Degree Requirement: Examination. One sem hour (Formerly SPH 689)
An examination over the student’s field of study conducted by a departmental faculty committee from assigned readings.
Prereq: Graduate student in speech and dramatic arts and departmental permission.

SPH 691, 692 Degree Requirement: Thesis. One, two and three sem hours
A research-oriented study conducted under the supervision of a departmental faculty committee.
Prereq: Graduate student in speech and dramatic arts and departmental permission.

SPH 693, 694, 695 Seminar in Speech & Dramatic Arts. One, two and three sem hours (Formerly SPH 696)
A research-oriented course for graduate majors in speech and dramatic arts.
Prereq: Graduate major in speech and dramatic arts and departmental permission.

SPH 697, 698, 699 Independent Studies. One, two and three sem hours (Formerly SPH 597, 598, 599)
An intensive study of one or more problems under the direction of a University faculty member.
Prereq: Departmental permission.

DRAMA FOR THE YOUNG

SPH 565 Studies in Drama/Theatre for the Young (Formerly Seminar in Dramatic Arts for Children). Two sem hours
Studies in the history, theory, and techniques of drama and theatre for/with the young. Selection of focus is made by individual students in the group, according to their particular interests.
Prereq: 323 Improvisation or 501 Creative Drama and Role Playing plus 322 Theatre for Children or 502 Introduction to Theatre for the Young.

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Students will investigate a particular topic which is approved by the Department of Speech and Dramatic Arts.
Prereq: Graduate students and qualified seniors in speech and dramatic arts.
Departmental permission required.

SPH 606, 607, 608 Colloquium in Speech & Dramatic Arts. One, two and three sem hours
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A research-oriented course for graduate majors in speech and dramatic arts.
Prereq: Graduate major in speech and dramatic arts and departmental permission.

SPH 697, 698, 699 Independent Studies. One, two and three sem hours (Formerly SPH 597, 598, 599)
An intensive study of one or more problems under the direction of a University faculty member.
Prereq: Departmental permission.
**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.

**Communication and Public Address**

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)
496 Seminar in Speech. (2)

**Broadcasting and Film**

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)
412 Interpretation of Poetry. (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 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.

GENERAL ADMISSION INFORMATION

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: including (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*; and (d) grades received in post-baccalaureate study.

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.

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.

Specific admission requirements for each master's degree program are indicated in the descriptions of the individual programs.

*The Graduate Management Admission Test is offered four times a year at sites throughout the United States and in most other countries. For information and registration materials write: Graduate Management Admission Test; Educational Testing Service; Box 966; Princeton NJ 08541.
LENGTH OF PROGRAM

The length of time required to complete a business master's program depends upon the undergraduate preparation of the student. Normally, students with undergraduate business administration degrees can complete the master's program with a calendar year of full-time study. Students without undergraduate coursework in business may need two calendar years of full-time study to complete degree requirements.

FOUNDATION/PREREQUISITE REQUIREMENT

Each business master's program has a required common body of knowledge which each student must complete before enrolling in core level graduate courses. Students may demonstrate proficiency in each subject area of the required common body of knowledge by presenting satisfactory grades from appropriate undergraduate coursework, by proficiency examination such as the College Level Examination Program or by completing appropriate foundation and prerequisite coursework.

Eastern Michigan University offers a series of 491-495 numbered foundation courses, open only to graduate students, which cover most subjects in the common bodies of knowledge. Introductory courses are open to students admitted to any graduate level degree program, including non-business programs. These courses cannot count toward core level requirements in any graduate business program.

CORE LEVEL REQUIREMENTS

Core level courses are those graduate courses, both required and elective, which provide the 30-33 hours of advanced coursework for the graduate degree. Most of these courses are reserved for those students admitted to a graduate business program who have completed all foundation prerequisite and core level requirements.

Students who do not hold regular admission to a graduate business program must have written permission from the director of Graduate Business Programs or an authorized graduate business adviser before enrolling in 600 level core courses.

GRADUATION REQUIREMENTS

Graduate business students must complete all foundation/prerequisite and core level requirements for the program in which they are enrolled, maintaining at least a B (3.0) average in courses of this type for which graduate credit is received. Core level courses completed more than six years prior to graduation cannot be used unless validated by examination.

Some 400 level undergraduate (non-foundation) courses are available for graduate credit to students with special interests or needs. Depending on specific program requirements, graduate business students may also include 500 level courses on their programs. The combined total of 400 and 500 level courses included on a program is limited to six hours. Students must have prior written approval of their adviser and must initially enroll in the course for graduate credit.

There are also many business related graduate level electives offered by departments outside the College of Business. Students may include up to six hours of graduate level electives from outside the College of Business if deemed acceptable by their advisers.

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 Operations Research and Information Systems Department maintains a computer laboratory with 14 terminals, some with hard-line connections to the Instructional Computer Center, again 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 to better enable the student to perform in a chosen area of employment.

MBA ADMISSION CATEGORIES

Admission to the MBA program is granted to those graduates of regionally accredited colleges and universities whose grades and Graduate Management Admission (GMAT) indicate an aptitude for advanced study in business. Students cannot be admitted to the MBA program without a GMAT score of at least 400.

Regular Admission

The basic standards for regular admission are a 2.5 cumulative undergraduate grade point average (or 2.75 for the last two years) and a GMAT score of 450.

Students whose undergraduate grade point is below 2.5 or whose GMAT score is from 400 to 449 may qualify for admission if:

1. Students whose undergraduate grade point is below 2.5 or whose GMAT score is from 400 to 449 may qualify for admission if:

2. Students whose undergraduate grade point is below 2.5 or whose GMAT score is from 400 to 449 may qualify for admission if:

3. Students whose undergraduate grade point is below 2.5 or whose GMAT score is from 400 to 449 may qualify for admission if:

Conditional Admission

A few students not eligible for regular admission may be awarded Conditional Admission. These admissions will be limited in number and awarded to the most qualified applicants.

Conditionally admitted students must maintain a B (3.0) average in foundation level courses and must maintain a B+ with no grade lower than B and no repeats in 12 hours of advisor approved core courses. Conditionally admitted students must have an adviser's written permission to enroll in core level and cannot take more than 12 hours of core as conditional admission. Students who successfully meet the probationary requirements will be granted regular admission.

Non-Degree Admission

Students holding non-degree admission are not eligible to enroll in foundation or graduate business courses. A new student with an exceptional undergraduate record and no GMAT score may be allowed to enroll in
of the program, is designed to improve decision-making ability.

Students who have an undergraduate major in accounting, finance, management, or marketing can waive the required core course for that area.

Electives may be distributed among the functional areas of business or may be used to develop a concentration in accounting, finance, information systems, management, or marketing. MBA students may not elect more than one graduate course in their undergraduate major field and may elect no more than one 400 level undergraduate business course for graduate credit, and must have prior approval of the adviser. Students may, with adviser approval, elect up to six hours of business related graduate credit from outside the College of Business.

**MBA PROGRAM REQUIREMENTS**

**Foundation/Prerequisite Courses**

Students must complete coursework in each of the following foundation areas unless they have satisfactorily completed the undergraduate equivalent.

<table>
<thead>
<tr>
<th>Foundation</th>
<th>Undergraduate Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 491 (3)</td>
<td>Principles of Accounting (6)</td>
</tr>
<tr>
<td>ADS 493 (3)</td>
<td>Legal Environment of Business (3)</td>
</tr>
<tr>
<td>ECO 501 &amp; 502 (6)</td>
<td>Principles of Economics (6)</td>
</tr>
<tr>
<td>FIN 492 (3)</td>
<td>Principles of Finance (3)</td>
</tr>
<tr>
<td>MGT 491 (3)</td>
<td>Principles of Management (3)</td>
</tr>
<tr>
<td>MKT 491 (3)</td>
<td>Principles of Marketing (3)</td>
</tr>
<tr>
<td>MTH 119 or 120 (3)*</td>
<td>Calculus (3)</td>
</tr>
<tr>
<td>ORI 494 (3)</td>
<td>Business Statistics (3)</td>
</tr>
<tr>
<td>ORI 495 (3)</td>
<td>Fortran Programming (3)</td>
</tr>
</tbody>
</table>

*Some students may find it necessary to also complete the prerequisites for MTH 119 or MTH 120.

**Core Level Requirements**

The MBA core consists of 30-33 hours: 21-24 hours of required courses and nine hours of electives. The required courses are:

- ORI 601 Managerial Economics
- ORI 602 Techniques in Business Research
- ORI 603 Quantitative Methods I
- ACC 605 Administrative Controls
- MGT 605 Organizational Theory & Behavior
- MKT 610 Marketing Policies and Problems
- FIN 620 Financial Administration Policies
- MGT 696 Management Strategy and Policy
- Management Strategy and Policy, an optional case course taken at the end of the program

**MASTER OF SCIENCE IN ACCOUNTING (MSA)**

The MSA program is designed to establish an in-depth understanding of theoretical and practical accounting concepts beyond the level attained in the bachelor’s degree.

**MSA ADMISSION CRITERIA**

**Regular Admission**

Academic performance, Graduate Management Admission Test score*, and work experience are significant factors considered by the MSA Program Committee as a part of the admission process. As a minimum for regular admission, the applicant must have an undergraduate grade point average of 2.80 overall (on a 4.0 scale) or 3.0 in the last 60 hours of undergraduate coursework and a GMAT score of 475. In addition, each applicant must arrange for two letters of recommendation to be sent to the chairman of the MSA Program Committee. One of the letters should come from a college level instructor and the other from a past or present employer. The committee will also consider other information that the applicant may care to supply, e.g., extra curricular activities.

**Formula Admission**

Formula admission is also possible for some applicants who do not meet the GPA or GMAT criteria for regular admission. The applicant should contact the chairman of the MSA Program Committee in the Department of Accounting and Finance to discuss this form of admission.

**Application Dates**

To insure adequate time for consideration of each application, the applicant should adhere to the following dates when applying to the MSA Program:

<table>
<thead>
<tr>
<th>Term</th>
<th>Preference if Received</th>
<th>Postponed to Next Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>April 1</td>
<td>July 1</td>
</tr>
<tr>
<td>Winter</td>
<td>Oct. 15</td>
<td>Nov. 15</td>
</tr>
<tr>
<td>Sp/Su</td>
<td>February 15</td>
<td>March 15</td>
</tr>
</tbody>
</table>

*The Graduate Management Admissions Test should be taken at the earliest convenient date to avoid delays in the processing of one’s application to the MSA Program.

**Program Design**

Upon admission to the MSA program, each student is required to prepare a total program of coursework leading to the MSA degree. The program is reviewed with the student by the MSA Program Committee (or its representative) to ascertain that the program is suitable for the student’s background and career goals. The program of coursework becomes the student’s degree requirement when accepted by the student and the MSA Program Committee. Subsequent changes in coursework must be approved by the MSA Program Committee.
MSA PROGRAM REQUIREMENTS

Foundation/Prerequisite Courses

Students must complete coursework in each of the following foundation areas unless they have satisfactorily completed the undergraduate equivalent.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 491 (3)</td>
<td>Principles of Accounting (3)</td>
</tr>
<tr>
<td>FIN 492 (3)</td>
<td>Principles of Finance (3)</td>
</tr>
<tr>
<td>MGT 491 (3)</td>
<td>Principles of Management (3)</td>
</tr>
<tr>
<td>MKT 491 (3)</td>
<td>Principles of Marketing (3)</td>
</tr>
<tr>
<td>ORI 494 (3)</td>
<td>Business Statistics (3)</td>
</tr>
<tr>
<td>ORI 495 (3)</td>
<td>Fortran Programming (3)</td>
</tr>
<tr>
<td>ADS 493 (3)</td>
<td>Legal Environment of Business (3)</td>
</tr>
</tbody>
</table>

ECO 501 & 502 (6) Principles of Economics (6)
MTH 118 Probability & Beginning Calculus (3–6)

In addition the student must complete the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 340 Intermediate Accounting I (3)</td>
<td></td>
</tr>
<tr>
<td>ACC 341 Intermediate Accounting II (3)</td>
<td></td>
</tr>
<tr>
<td>ACC 342 Managerial Cost Accounting (3)</td>
<td></td>
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<tr>
<td>ACC 344 Tax Accounting (3)</td>
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</tbody>
</table>

MAA Courses

The MAA course requirement is presently in the process of revision. The courses listed below constitute the program at the time this catalog went to press. Prospective applicants should contact the MAA Program Committee for information on the latest changes.

The MAA program requires the completion of thirty semester hours of coursework divided into two fifteen hour segments as follows:

Required Core Courses (15 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 620 Advanced Managerial Accounting (3)</td>
<td></td>
</tr>
<tr>
<td>MGT 605 Organizational Theory and Behavior (3)</td>
<td></td>
</tr>
<tr>
<td>ORI 603 Quantitative Methods I (3)</td>
<td></td>
</tr>
<tr>
<td>ACC 665 Theory of Accounting (3)</td>
<td></td>
</tr>
<tr>
<td>ORI 602 Techniques in Business Research (3)</td>
<td></td>
</tr>
</tbody>
</table>

Electives Courses (15 semester hours; at least six hours in accounting must be taken.)

ACCOUNTING

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 667 Professional Auditing (3)</td>
<td></td>
</tr>
<tr>
<td>ACC 696 Seminar in Accounting (3)</td>
<td></td>
</tr>
<tr>
<td>ACC 699 Independent Study (3)</td>
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</tbody>
</table>

FINANCE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 615 Business Financial Markets (3)</td>
<td></td>
</tr>
<tr>
<td>FIN 625 Securities Analysis (3)</td>
<td></td>
</tr>
<tr>
<td>FIN 620 Financial Administration Policies (3)</td>
<td></td>
</tr>
<tr>
<td>ORI 669 Business Conditions: Analysis &amp; Forecasting (3)</td>
<td></td>
</tr>
</tbody>
</table>

FIN 660 Advanced Financial Management (3)

INTERNATIONAL

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 544 International Taxation and Accounting (3)</td>
<td></td>
</tr>
<tr>
<td>FIN 540 International Finance (3)</td>
<td></td>
</tr>
<tr>
<td>MKT 460 International Marketing (3)</td>
<td></td>
</tr>
<tr>
<td>MGT 489 Comparative Management Systems (3)</td>
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</tbody>
</table>

SYSTEMS AND QUANTITATIVE ANALYSIS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 610 Design &amp; Installation (3)</td>
<td></td>
</tr>
<tr>
<td>ORI 604 Quantitative Methods II (3)</td>
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</tbody>
</table>

TAXATION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 585 Business Tax Planning (3)</td>
<td></td>
</tr>
<tr>
<td>ACC 672 Estate Tax Planning (3)</td>
<td></td>
</tr>
</tbody>
</table>

Courses may be elected from other fields with the advice and consent of program adviser.

Total semester hours required: 30

MASTER OF SCIENCE IN COMPUTER BASED INFORMATION SYSTEMS (MSIS)

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 ADMISSION CATEGORIES

Admission to the MSIS Program is granted to those graduates of regionally accredited colleges and universities whose grades and Graduate Management Admission Test (GMAT) scores indicate an aptitude for advanced study in computer-based information systems.

Regular Admission

Regular admission will be granted to students who have completed the
GMAT with a score of 450 or higher (or a score of 1000 or higher on the verbal and quantitative sections of the Graduate Record Examination) and who have either (a) a cumulative undergraduate grade point average of 2.75; (b) an undergraduate grade point average of 3.0 for the last 60 hours of the undergraduate degree; or (c) a cumulative graduate grade point average of 3.3 based on at least 12 hours of degree related graduate work.

Conditional Admission

Students with a GMAT of 400 to 449 whose undergraduate grade point average is above 2.5 but below the 2.75 requirements may qualify for conditional admission if:

\[(200 \times \text{undergraduate GPA}) + \text{GMAT} = 950 \text{ or more; or if}\]

\[(200 \times \text{GPA for last 60 undergraduate hours}) + \text{GMAT} = 1000 \text{ or more; or if}\]

\[(200 \times \text{undergraduate GPA}) + (200 \times \text{graduate GPA}) + \text{GMAT} = 1550 \text{ or more; or if}\]

\[(200 \times \text{GPA for last 60 undergraduate hours}) + (200 \times \text{graduate GPA}) + \text{GMAT} = 1600 \text{ or more.}\]

Graduate hours must be degree related and must total at least 12 hours to be considered in the latter formulae above.

Conditionally admitted students must maintain a B (3.0) average in foundation courses and a B+ average, with no grade below B and no repeats, in 12 hours of adviser approved core courses. Conditionally admitted students must have an appropriate advisor's written permission to enroll in core courses and will not be permitted to enroll in more than 12 hours as a conditional admitted. Students who successfully meet the probationary requirements will be granted regular admission.

Non-Degree Admission

A new student with an exceptional undergraduate record and no GMAT score may be allowed to enroll in foundation/core courses for one semester only; the student must satisfactorily complete the GMAT and gain admission to the MSIS program before enrolling again.

MSIS PROGRAM REQUIREMENTS

Foundation/Prerequisite Courses

Students must complete course work in each of the following foundation areas unless they have satisfactorily completed the undergraduate equivalent.

Foundation Equivalent

- ACC 491 (3) Principles of Accounting (6)
- ADS 493 (3) Legal Environment of Business (3)
- ECO 501 & 502 (6) Principles of Economics (6)
- FIN 492 (3) Principles of Finance (3)
- MGT 491 (3) Principles of Management (3)
- MKT 491 (3) Principles of Marketing (3)
- MTH 120 (3) Beginning Calculus (3)
- MTH 122 (2) Vectors and Matrices (2)
- MTH 239 (3) Assembly and Machine Language Programming (3)
- ORI 494 (3) Business Statistics (3)
- ORI 465 (3) Business Statistics (3)
- ORI 495 (3) FORTRAN (3)
- ORI 316 (3) COBOL (3)

Core, Concentration and Elective 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:

Plan A

Required Core:
- Information Systems (12)

Concentration:
- Computer Systems (9)

Electives:
- Any combination of courses in Management Science and/or a functional area in business (9)

Plan B

Required Core:
- Information Systems (12)

Concentration:
- Management Science (9)

Electives:
- Any combination of courses in Computer Systems and/or a functional area in business (9)

Plan C

Required Core:
- Information Systems (12)

Concentration:
- Functional Area (9)

Electives:
- Computer Systems of Management Science (9)

Required Core in Information Systems

(12 semester hours)**

All MSIS students take each of the following courses:

- ORI 610 Access Methods and Data Structures (3)
- ORI 614 Project Mgt. for Comp.-Based Inf. Sys. I (3)
- ORI 615 Project Mgt. for Comp.-Based Inf. Sys. II (3)
- ORI 695 Research Seminar in Comp.-Based Inf. Sys. (3)

**Students are required to develop a research paper related to the field of information systems in which they are interested. The research paper is developed as a part of the core requirements. Successful completion of the MSIS Program includes a satisfactory research paper.

Concentration

(9 semester hours)

Select one of these areas: computer systems, management science or a functional area in business.

1. Computer Systems
- ORI 620 Data Networks (3)
- ORI 624 Operating Systems and Compiler Analysis (3)
- ORI 628 Adv. Techniques of Info. Storage and Retrieval

2. Management Science
- ORI 630 Linear Programming and Extensions (3)
- ORI 632 Nonlinear Programming (3)
- ORI 634 Stochastic Models (3)
- ORI 636 Forecasting Models (3)
- ORI 638 Simulation and Modeling (3)
- ORI 640 Operations Management (3)

*Required courses for an area of concentration.
3. Functional areas in Business
Options are accounting, finance, marketing, management, operations management or other area approved by adviser.

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.
Functional area courses and elective courses do not include ORI 601 and ORI 602 which are primarily service courses for the MBA degree.
Total semester hours required 30.

MASTER OF SCIENCE IN ORGANIZATIONAL BEHAVIOR AND DEVELOPMENT (MSOD)

In recent years a growing emphasis on human resource development has emerged in all types of organizations. Instead of merely concentrating on the financial material and mechanical aspects of the productive organization, attention has been increasingly directed toward developing human assets. Both production and service types of businesses, governmental agencies at all levels, health care institutions, volunteer service associations and professional forms of all types have become increasingly sensitive to the human potential aspects of their endeavors.

Part of this trend has been brought on by the demands of the new, more socially aware generation of managers and employees who look for psychic benefits from their work as well as material rewards. Also, part of this emphasis stems from the pragmatic recognition that at the organizational level there should be concern for establishing a climate of problem solving around shared goals, rather than a climate of political manipulation.

Demand has now developed, and promises to continue to develop, for especially trained persons (1) to understand and utilize organization development in the organizations they manage or (2) to fill full-time professional consulting positions in this field. This program is designed to meet these needs.

ADMISSION CRITERIA
Applications for admission to the MSOD program are reviewed by the MSOD Advisory Committee. Criteria for admission to the MSOD program include:
1. A cumulative undergraduate grade point average of 2.5 (4.0 system) or a 2.75 for the last 60 hours completed as an undergraduate.
2. A minimum score of 450 on the Graduate Management Admission Test or a minimum score of 1000 on the verbal and quantitative sections of the Graduate Record Examination.
3. Prior completion of two years successful full-time employment in an organization, preferably in a management role.
4. Three letters of recommendation from professors or employers attesting to the students abilities, interests or needs relevant to organizational development.

In addition, the MSOD Advisory Committee may wish to interview the applicant before reaching an admission decision. Inquiries about the program and letters of recommendation should be addressed to the Office of the Associate Dean, College of Business.

MSOD PROGRAM REQUIREMENTS

Foundation/Prerequisite Courses
Students must complete coursework in each of the following foundation areas unless they have satisfactorily completed the undergraduate equivalent.

<table>
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<tr>
<th>Foundation</th>
<th>Undergraduate Equivalent</th>
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<tr>
<td>ACC 491 (3)</td>
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<td>ECO 501 &amp; 502 (6)</td>
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<td>ORI 494 (3)</td>
<td>Business Statistics (3)</td>
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<td>ORI 495 (3)</td>
<td>Fortran Programming (3)</td>
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Core Level Requirements
The MSOD core consists of 30–33 hours: 24–27 hours of required courses and 6–9 hours of restricted electives. The required courses are:

- MGT 576 Corporate Social Policy (3)
- MGT 605 Organizational Theory and Behavior (3)
- MGT 628 Human Resource Development (3)
- MGT 638 Improving the Quality of Work Life (3)
- MGT 648 Communication and Organization Development (3)
- MGT 658 Techniques of Organization Development (3)
- MGT 678 Survey and Diagnostic Methods in Organizational Development (3)
- MGT 688 Practicum in Organization Development Strategy and Policy (3)

Students who have completed an undergraduate major in management may waive MGT 605, reducing the requirement to 30 hours. Students who have successfully completed an undergraduate course in corporate social policy (or responsibility) should substitute three hours of electives for MGT 576.

Elective credits must be selected from the list below or must have prior approval by the MSOD Advisory Committee.

- EDP 612 Behavior Modification Techniques for School Personnel (2)
- MGT 693 Seminar in Personnel Administration (3)
- PSY 550 Dynamics of Human Behavior (2)
- PSY 565 Industrial Psychology (2)
- SPH 509 Communication for Leaders (2)
- SPH 584 Studies in Small Group Communication (3)
- ORI 602 Techniques in Business Research (3)
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 in order to teach business education 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.

Cooperative Program with Educational Leadership
The Department of Educational Leadership offers a cooperative program in vocational/technical administration. The program combines course work in school administration with courses in vocational/technical education (Industrial Education, Business Education, or Home Economics). This program is designed for persons seeking a career as either a director or supervisor of vocational/technical education. This program is available at either the master’s or specialist’s level. Persons interested in this program should contact the department head in Educational Leadership.
ACCOUNTING and FINANCE

Elton A. Devine
Department Head
516-A Pray-Harrold, 487-3320

OPEN ONLY TO STUDENTS ON A DEGREE ADMISSION

ACC 491 Accounting Principles. Three sem hours (Formerly ACC 301)
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.

OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS IN THE COLLEGE OF BUSINESS

ACC 544 International Taxation and Accounting. Three sem hours
International accounting problems; the interaction of tax laws of the United States and selected foreign countries.
Prereq: Completion of MSA Core.

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 605 Administrative Controls. Three sem hours (Formerly ACC 584)
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 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 605 Administrative Controls or ACC 620 Advanced Managerial Accounting.

ACC 615 Corporate Financial Reporting. Three sem hours
Study of authoritative pronouncements on accounting principles 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 605 Administrative Controls.

ACC 620 Advanced Managerial Accounting. Three sem hours (Formerly ACC 587)
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.

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. ACC 665 is a capstone course which integrates theoretical concepts and practical applications of the accounting discipline.
Prereq: ACC 615 Corporate Financial Reporting or six 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 six hours of 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 695 Seminar in Accounting. Three sem hours (Formerly ACC 696)
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 not otherwise treated in department courses.
Prereq: Completion of MSA core or departmental permission.

OPEN ONLY TO STUDENTS ON A DEGREE PROGRAM

FIN 492 Financial Principles. Three sem hours (Formerly FIN 502)
An introduction to financial management of the business firm. Covers techniques and theory of asset
FIN 540 International Finance. Three sem hours (Formerly FIN 685)
Study of international monetary system, the environment of foreign investment decisions, financial control in multinational companies. 
Prereq: FIN 620 Financial Administration Policies 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 Financial Principles.

OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS IN THE COLLEGE OF BUSINESS

FIN 615 Business Financial Markets.
Three sem hours (Formerly Finance 553)
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 Financial Principles or departmental permission.

FIN 620 Financial Administration Policies. Three sem hours (Formerly FIN 683)
The internal policies and problems of financial management encountered in business. Developing administrative methods 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 625 Securities Analysis. Three sem hours (Formerly Finance 573)
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 Financial Principles or departmental permission.

FIN 660 Advanced Financial Management. Three sem hours (Formerly FIN 693)
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 620 Financial Administration Policies or departmental permission.

FIN 681 Special Topics in Finance.
Three sem hours (Formerly FIN 694)
An in-depth study of a specialized area in accounting or finance.
Prereq: FIN 620 Financial Administration Policies or departmental permission.
ADMINISTRATIVE SERVICES and BUSINESS EDUCATION

Rosetta Wingo
Department Head
515 Pray-Harrold,
487-3410

OPEN ONLY TO STUDENTS ON A DEGREE ADMISSION

ADS 493 Legal Environment of Business. Three sem hours
(Formerly ADS 503)
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 626 Administrative Practices in the Contemporary Office. Three sem hours
Contemporary office administration practices are studied and related competencies developed. Specific activities in office management are dealt with; technical work tasks and personnel responsibilities are applied to various office situations.

ADS 695 Seminar in Business Law.
Three sem hours (Formerly ADS 696)
A study of selected business law issues and topics which may vary from term to term.
Prereq: ADS 493 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.

OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS IN THE COLLEGE OF BUSINESS

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 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 typing and shorthand courses.
Prereq: Business education major or permission of the department.

BED 672 Administration of Business Education. Two sem hours
(Formerly BED 572)
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.
BED 675 Office Education Block.  Three sem hours (Formerly BED 580)
Study of philosophy, planning and evaluation procedures for office education block programs. Prepare instructional materials for block programs.
Prereq: Graduate standing.

BED 678 Research in Business Education: Analysis and Application. Three sem hours
A review of basic research techniques applied to business education, including office and distributive education areas. Studies completed in business education are analyzed in light of research processes and conclusions. Students become involved in the design and application of research methodology to projects appropriate to business education classes.

BED 680 Special Topics in Business Education. Two sem hours (Formerly BED 539)
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 681 Special Topics in Business Education. Three sem hours (Formerly BED 540)
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 683 Workshop in Business Education. Two sem hours (Formerly BED 595)
Modern methods, procedures and materials for improving the effectiveness of the classroom teacher in the areas of shorthand, typewriting, bookkeeping and basic business.

BED 695 Seminar in Business Education. Three sem hours (Formerly BED 696)
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.

BED 697, 698, 699 Independent Studies. One, two and three sem hours (Formerly BED 597, 598, 599)
An intensive study of a problem or group of problems under the direction of a University faculty member.
Departmental permission.

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MANAGEMENT

Floyd Patrick
Acting Department Head
504 Pray-Harrold,
487-3240

OPEN ONLY TO STUDENTS ON A DEGREE ADMISSION

MGT 491 Management: Concepts, Principles and Practice. Three sem hours (Formerly MGT 501)
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: One course in management.

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 580 Management of Organizational Behavior. Three sem hours
A survey and synthesis of behavioral science theories relevant to management of business and non-business organizations. This course is not open to students enrolled in a College of Business program.
Prereq: MGT 491 or equivalent.

OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS IN THE COLLEGE OF BUSINESS

MGT 605 Organizational Theory and Behavior. Three sem hours (Formerly MGT 585)
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 Management: Concepts, Principles and Practice or equivalent; completion of graduate prerequisites.

MGT 628 Human Resource Development. Three sem hours (Formerly MGT 586 Training and Organizational Development)
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 Management: Concepts and Practice or MGT 605 Organizational Theory and Behavior.

MGT 638 Improving the Quality of Worklife. Three sem hours (Formerly MGT 587)
A historical and overview consideration of the newly developed field of organizational development in the private and public sectors as a means of increasing employee satisfaction and productivity in the work place.
Prereq: MGT 605 Organizational Theory and Behavior.

MGT 648 Communication and Organization Development. Three sem hours (Formerly MGT 588)
The development of communication understanding and skills as required in organizational management and interaction by internal and external change agents.
Prereq: Department Permission.

MGT 658 Techniques of Organizational Development. Three sem hours (Formerly MGT 589)
The study and development of specific skills in the techniques of organization development as perfected in the field in recent years and as currently applied in modern service and profit oriented organizations.
Prereq: MGT 605 Organizational Theory and Behavior and MGT 638 Improving the Quality of Work Life.

MGT 678 Survey and Diagnostic Methods in Organizational Development. Three sem hours (Formerly MGT 590)
The study and applications of varied methodologies in problem diagnosis, field survey, action research, team effectiveness analysis, organization renewal inventory and related instruments as applied in the organization development process.
Prereq: MGT 605 Organizational Theory and Behavior, MGT 638 Improving the Quality of Work Life, MGT 658 Techniques of Organizational Development.
MGT 688 Practicum in Organization Development Training. Three sem hours (Formerly MGT 593)
The opportunity to participate in an organization development project in an active organization under the close guidance of a practicing consultant.

MGT 693 Seminar in Personnel Administration. Three sem hours (Formerly MGT 687)
Problems actually faced by executives, line and staff, in all levels of an organization in carrying out their responsibility for personnel administration.
Prereq: MGT 605 Organization Theory and Behavior or permission of department.

MGT 694 Organizational Development Strategy and Policy. Three sem hours
The development and application of overall organization development policies and strategies in one or more active organizations in the private and/or public sector with the consultation and guidance of a qualified practitioner in the field.
Prereq: Completion of a substantial portion of the MSOD core and permission of the MSOD Advisory Committee.

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 605 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 605 Organizational Theory and Behavior and departmental approval.

TENTATIVE SCHEDULE

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MKT 491 Marketing. Three sem hours (Formerly MKT 501)
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 592 Special Topics in Marketing. Three sem hours (Formerly MKT 693)
The course involves daily visitations to various types of domestic and/or 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.

OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS IN THE COLLEGE OF BUSINESS

MKT 610 Marketing Policies and Problems. Three sem hours (Formerly MKT 518)
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 Marketing or equivalent.

MKT 630 Sales Operations Management. Three sem hours (Formerly MKT 565)
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 610 Marketing Policies and Problems.

MKT 640 Promotions Management. Three sem hours (Formerly MKT 575)
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 610 Marketing Policies and Problems.

MKT 650 Channels of Distribution and Logistics. Three sem hours (Formerly MKT 577)
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 610 Marketing Policies and Problems.

MKT 675 Market Planning and Forecasting. Three sem hours (Formerly MKT 680)
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 610 Marketing Policies and Problems.

MKT 681 Special Topics in Marketing. Three sem hours (Formerly MKT 694)
Selected topic(s) from the field of marketing.
Prereq: MKT 610 Marketing Policies and Problems.

MKT 695 Seminar in Marketing. Three sem hours (Formerly MKT 696)
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 610 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 610 Marketing Policies and Problems.

TENTATIVE SCHEDULE

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OPEN ONLY TO STUDENTS ADMITTED TO GRADUATE PROGRAMS IN THE COLLEGE OF BUSINESS

ORI 494 Introductory Probability and Statistics for Business. Three sem hours (Formerly ORI 501)
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 Introduction to Computers and Programming. Three sem hours (Formerly ORI 502)
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 601 Managerial Economics. Three sem hours (Formerly ORI 588)
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.

ORI 602 Techniques in Business Research. Three sem hours (Formerly ORI 592 Business Research)
Scientific research; basic considerations in research methodology; economic analyses. Oral and written reports.
Prereq: Business Major, ORI 494 Introductory Probability and Statistics for Business, ORI 495 Introduction to Computers and Programming or equivalent.

ORI 603 Quantitative Methods I. Three sem hours (Formerly ORI 586 Quantitative Analysis for Business)
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 Introductory Probability and Statistics for Business or equivalent and ORI 495 Introduction to Computer and Programming.

ORI 604 Quantitative Methods II. Three sem hours ( Formerly ORI 687 Advanced Quantitative Methods)
Transportation networks. Queuing theory, Bayesian inference, regression and correlation analysis, in addition to various discrete mathematical programming topics of contemporary interest.
Prereq: ORI 495 Introduction to Computers and Programming and ORI 603 Quantitative Methods I or department permission.
ORI 610 Access Methods and Data Structures. Three sem hours
(Formerly ORI 510)
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 Introduction to Computers and Programming or equivalent.

ORI 614 Project Management for Computer-Based Information Systems I. Three sem hours
(Formerly ORI 514)
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 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 610 Access Methods and Data Structures and ORI 614 Project Management for Computer-Based Information Systems I.

ORI 620 Data Networks. Three sem hours (Formerly ORI 520)
Fundamental concepts and techniques needed in the design of data transmission 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 I and ORI 495 Introduction to Computers and Programming or equivalent.

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 610 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 610 Access Methods and Data Structures.

ORI 630 Linear Programming and Extensions. Three sem hours
(Formerly ORI 530)
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; transportations, transhipment, 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 632 Non-linear Programming. Three sem hours
An introduction to the theory, computational algorithms and business applications of various types on nonlinear programming models. Topics include separable programming, classical theory of optimization, searching techniques, goal programming, Branch and Bound, and dynamic programming.
Prereq: ORI 630 Linear Programming and Extensions or equivalent.

ORI 634 Stochastic Models. Three sem hours
An introduction to Stochastic Models. Topics include Markov models, queuing models, Stochastic programming, and renewal theory. Applications of these models in various operating systems are emphasized.
Prereq: ORI 630 Linear Programming and Extensions or equivalent.

ORI 636 Forecasting Models. Three sem hours (Formerly ORI 536)
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 638 Simulation and Modeling. Three sem hours (Formerly ORI 538)
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 Introductory Probability and Statistics for Business or ORI 495 Introduction to Computer and Programming.

ORI 640 Operations Management. Three sem hours (Formerly ORI 540)
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 603 Quantitative Methods I or department permission.
ORI 669 Business Conditions: Analysis and Forecasting. Three sem hours (Formerly ORI 689)

Macroeconomic activity as a major determinant of firm operations. Short-term economic forecasting: econometric models, opportunistic models, economic indicators. Forecasting business investment, housing, consumer purchases, other GNP components. Seasonal variation and methods of seasonal adjustment.
Prereq: ORI 601 Managerial Economics.

ORI 681 Special Topics in Operations Research and Information Systems Three sem hours (Formerly ORI 694)

This course will be offered periodically to review selected contemporary topics in quantitative analysis, business computer systems, and/or managerial and business economics.
Prereq: Completion of MBA core.

ORI 695 Research Seminar in Computer-Based Information Systems. Three sem hours (Formerly ORI 619)

This capstone course integrates MIS with the fundamental areas of business. The impact of MIS in the organization is analyzed in terms of current design and implementation techniques and followup evaluation of business systems. The student writes an original research paper in the area of management information systems.
Prereq: All other core courses ORI 610 Access Methods and Data Structures, ORI 614 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 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: Completion of required core.
COLLEGE OF EDUCATION

ACTING DEAN: W. Scott Westerman
ASSOCIATE DEAN: Jose R. Llanes

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

Leah Adams
Acting Department Head
325 Pierce Hall,
487-3261

Robert Tibbals
Coordinator of Advising
305 Pierce Hall,
487-4441

The Curriculum and Instruction Department offers six programs leading to the Master of Arts degree. These are early childhood education, elementary education, middle school education, secondary school teaching, K–12 curriculum and reading. In addition, a thirty hour post-master’s program is offered which leads to a Certificate of Advanced Studies in Curriculum and Instruction.

EARLY CHILDHOOD EDUCATION

The program in early childhood education is designed for the professional preparation of teachers and other early childhood education specialists who are interested in working with the age range of birth through nine years, or prekindergarten through third grade. Students can plan programs with their advisers which will enable them to meet the State of Michigan requirements for the Z A Endorsement for the elementary teaching certificate.

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 ensure more effective service as a classroom teacher in the elementary school. Four options are offered: (1) a general overview of elementary education, (2) language arts, (3) open education and (4) 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.
The Certificate of Advanced Studies in Curriculum and Instruction (CASCI)

The Certificate of Advanced Studies in Curriculum and Instruction (CASCI), a thirty hour post-master’s program, offers an opportunity for post-master’s teachers to select study experiences which are specifically related to their current professional needs. There are no pre-determined course requirements. Advisers approve program choices which teachers make in accordance with their individual desires for professional growth.

CASCI is offered in response to the need for relevant, flexible, individualized programs which will enable career teachers to keep abreast of new developments and to respond to the professional challenges in their classrooms and in their school districts.

A teaching certificate, a master’s degree from an accredited university and a minimum of one year’s teaching experience are prerequisites to acceptance in the program.

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.

CUR 510 Creative Activities in Elementary Education. Two sem hours (Formerly CUR 504 Creative Activities in Early Elementary Education)

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 512 Enriching the Elementary Classroom Program. Two sem hours (Formerly CUR 567 Enriching the Early Elementary Classroom Program)

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 520 The Junior High/Middle School Curriculum. Two sem hours (Formerly CUR 523)

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.

CUR 522 Effective Teaching in the Middle School. Four sem hours (Formerly CUR 524)

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.

Prereq: CUR 520 The Junior High/Middle School Curriculum

CUR 524 Developing a Support System. Two sem hours

Developing and implementing a support system for students or individual classes. Development of support systems which address the needs of the economically and educationally disadvantaged.

CUR 550 Improving Instruction. Two sem hours (Formerly CUR 566)

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 551 Integrating the Curriculum Via School Camping. Two sem hours (Formerly CUR 563)

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.

RDG 554 Reading Problems of the Disadvantaged. Two sem hours (Formerly RDG 560)

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.
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 The Teaching of Social Studies and GEO 348 Teaching Social Studies in Elementary Schools.

CUR 572 Education of the Gifted. Two sem hours (Formerly SGN 561)
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.

CUR 600 Early Childhood Education. Two sem hours (Formerly CUR 587)
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.

CUR 602 Teaching in the Preschool. Two sem hours (Formerly CUR 584)
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 604 Planning and Implementing Prekindergarten Programs. Two sem hours (Formerly CUR 585)
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 602 Teaching in the Preschool or instructor's permission.

CUR 606 Trends and Issues in Kindergarten Education. Two sem hours (Formerly CUR 586)
Important trends and issues affecting the education of kindergarten children.

CUR 616 Curriculum—Elementary School. Two sem hours (Formerly CUR 541)
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 617 Elementary School Children and Social Studies. Two sem hours (Formerly CUR 532)
Current issues and controversies in the teaching of social studies in the elementary school.

RDG 618 Developmental Reading—Elementary. Two sem hours (Formerly RDG 501)
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 619 Programs in Language Arts. Two sem hours (Formerly RDG 573)
Curricular objectives and their implementation through listening, speaking, handwriting, spelling and creative, narrative and expository writing, evaluative procedures and some consideration of corrective techniques.

CUR 630 Curriculum—Secondary School. Two sem hours (Formerly CUR 542)
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 632 Individualizing Instruction in the Secondary School. Two sem hours (Formerly CUR 568)
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 633 Career Education for Secondary Classroom Teachers. Two sem hours (Formerly CUR 569)
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.

CUR 634 The Dropout Problem. Two sem hours (Formerly CUR 546)
An intensive review of this national problem; practical procedures based upon school and community resources for improving holding power.

RDG 635 Developmental Reading—Secondary. Two sem hours (Formerly RDG 502)
Curricular objectives and their implementation through recommended activities, methods and materials; functional programs for disabled readers.

CUR 655 Curriculum Foundations. Two sem hours (Formerly CUR 540)
Curriculum content and patterns of schools in the United States. Historical and theoretical authority for the curriculum; criteria for the choice of content.

CUR 656 Curriculum Futures. Two sem hours (Formerly CUR 543)
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 657 The Open Classroom. Four sem hours (Formerly CUR 564)
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 658 The Community-Centered Classroom. Four sem hours (Formerly CUR 565)
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 659 K–12 Curriculum. 4 sem hours (Formerly CUR 545)
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 660 Supervision of Student Teachers. Two sem hours (Formerly CUR 591)
Preparing the public school teacher to work with student teachers.

RDG 663 Foundations of Reading Development. Four sem hours (Formerly RDG 500)
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 664 The Nature of Common Reading Problems. Two sem hours (Formerly RDG 582)
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 663 Foundations in Reading Development.

RDG 665 Psycholinguistics and Reading. Two sem hours
An analysis of the reading process from a psycholinguistic perspective. Emphasis includes selected reading in language development, learning and comprehension as each relates to reading.
Prereq: RDG 663 Foundations of Reading Development.

RDG 666 Analysis and Treatment of Common Reading Problems.
Two sem hours (Formerly RDG 661)
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 664 Nature of Common Reading Problems.

RDG 667 Evaluation of Reading Growth and Development. Two sem hours (Formerly RDG 663)
Standardized and informal tests; selection, administration and interpretation, techniques for appraising achievement in listening, speaking, reading and writing. Kindergarten through 12th grade.
Prereq: RDG 663 Foundations in Reading Development.

RDG 668 Diagnosis and Remediation of Reading Problems. Four sem hours
A survey of formal and informal procedures used in identifying, evaluating, and remediating reading problems in a classroom or clinical setting. Preparation of case studies and recommendations to teachers and parents; design of state approved individual programs.
Prereq: RDG 663 Foundations of Reading Development.

RDG 669 Developing School-Wide Reading Programs. Two sem hours (Formerly RDG 589)
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/RDG 679, 680, 681 Special Topics. One, two and three sem hours

CUR/RDG 682, 683, 684, 685 Workshops. One, two, three and four sem hours

CUR/RDG 683 Workshops in Selected Areas. Two sem hours (Formerly CUR/RDG 595)
Please examine the current time schedule for specific workshop topics. Among those which have been offered in the past:

CUR 694 Seminar: Secondary Curriculum. Two sem hours (Formerly CUR 596)
Please examine the current time schedule for specific seminar topics. Among those which have been offered in the past:

CUR 695 Curriculum Foundations; CUR 520 The Junior High/Middle School Curriculum, CUR
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.

**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 514 Resource Materials for the Elementary School. Two sem hours (Formerly EDM 525)**

Criteria and sources for selection and purchase of books, pamphlets, periodicals and free materials for nursery school through the sixth grade. *Teachers only.*

**EDM 552 Audio-Visual Instruction. Two sem hours (Formerly EDM 512)**

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 553 Radio and TV in the Classroom. Two sem hours (Formerly EDM 526)**

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 661 Administration of Audio-Visual Services. Two sem hours (Formerly EDM 522)
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 552 Audio-Visual Instruction.

EDM 662 TV in Education. Two sem hours (Formerly EDM 524)
Extent and nature of experimentation in instruction by radio and television; current philosophy and attitudes toward teaching by radio and television.

EDM 679, 680, 681 Special Topics. One, two and three sem hours

EDM 682, 683, 684, 685 Workshops in Selected Areas. One, two, three and four sem hours. (Formerly EDM 595)
Please examine the current time schedule for specific workshop topics. Among those which have been offered in the past:

EDM 683 Workshop in Reading Guidance for Children. Two sem hours (Formerly EDM 595)
Reading guidance for teachers and librarians learning to meet the special needs of the individual child. Pre-school children to adolescents.

EDM 683 Workshop in Production of Instructional Materials. Two sem hours (Formerly EDM 595)
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 projectals; display boards of all types.
Prereq: 344 Audio-Visual Methods in Teaching or EDM 552 Audio-Visual Instruction.

EDM 683 Workshop in Television Utilization. Two sem hours (Formerly EDM 595)
For teachers; advanced problems in the use of television in the classroom.

EDM 693, 694, 695, 696 Seminars in Selected Areas. One, two, three and four sem hours
Please examine the current time schedule for specific seminar topics. Among those which have been offered in the past:

EDM 694 Seminar: The Administrator and the School Library. Two sem hours (Formerly EDM 596)
For administrators, supervisors, beginning audio specialists and beginning librarians; services, activities, materials and standards of a materials center in a school library.

EDM 694 Seminar: History and Appreciation of Motion Pictures and Photography. Two sem hours (Formerly EDM 596)
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 552 Audio-Visual Instruction or permission of the department.

EDM 694 Seminar: Instructional Materials. Two sem hours (Formerly EDM 596)
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 552 Audio-Visual Instruction or permission of the department.

EDM 697, 698, 699 Independent Studies. One, two and three sem hours

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)
EDUCATIONAL LEADERSHIP

Jack D. Minzey
Department Head
101 Boone Hall,
487-0255

Bruce K. Nelson
Coordinator of Advising
101-C Boone Hall,
487-0255

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. (Applicants for a second master’s degree must have had a 3.0 graduate grade point average on the first master’s degree program.)
4. A valid teaching certificate. (See adviser for waiver provisions.)
5. Program planning interview with an adviser.

NOTE: International students should consult with an adviser regarding their admission.

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:
1. Core requirements (16 semester hours)
   - Six semester hours required:
     - EDP 677 Research Techniques
     - EDL 510 Educational Organization
     - EDL 514 Educational Leadership
   - Two semester hours chosen from the following:
     - EDL 618 Elementary School Principalship
     - EDL 619 Middle School/Junior High School Administration
     - EDL 620 Senior High School Principalship
     - EDL 621 Community Education Administration
     - EDL 622 Organization and Administration of the Community College
     - EDL 623 Adult Education Administration

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
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, or a favorable Miller Analogies test score. (Applicants for a second master’s degree must have had a 3.0 graduate grade point average on the first master’s degree program.)
4. A 3.3 (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 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’s Candidates Holding a Master’s Degree
1. Must meet specialist’s degree admission requirements of the Graduate School.
2. A valid master’s degree from an accredited graduate school.
3. A 3.3 (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’s 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’s 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 710 Leadership Theory
   EDL 712 Behavioral Science in Administration and Supervision
   EDL 713 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 786, 787, 788, 789 Internship or Thesis (EDL 790, 791 and 792) or statistical block (EDP 621 or EDP 651, and EDP 678).
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. Internship placements should be arranged at least one year in advance.

Coordinator of advising Bruce K. Nelson. Advisers: George Brower, Francis Daly, Kenneth Grinstead, Doris Kilanski, Jack Minzey, Bruce K. Nelson, Donna Schmitt

COURSE OFFERINGS

EDL 510 Educational Organization.
Two sem hours (Formerly EDL 502)
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 non-majors and majors.

EDL 511 Community Organization. Two sem hours (Formerly EDL 540)
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 non-majors and majors.

EDL 512 Community Education. Two sem hours (Formerly EDL 556)
The basic principles and philosophy of community education; its current status and relationship to education. Open to non-majors and majors.

EDL 513 School and Community Understanding. Two sem hours (Formerly EDL 560)
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 514 Educational Leadership. Two sem hours (Formerly EDL 562)
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 515 Supervision of Instruction. Two sem hours (Formerly EDL 566)
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 516 School Law for Teachers. Two sem hours (Formerly EDL 580)
Legal principles underlying day-to-day teaching activities; how laws operate and legal principles develop. Open to non-majors only.

EDL 517 Evaluating Educational Services. Two sem hours (Formerly EDL 587)
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 610 Accounting for School Business Administrators. Two sem hours (Formerly EDL 515)**
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. Open to non-majors and majors.

**EDL 611 Introduction to Adult Education. Two sem hours (Formerly EDL 550 Adult Education)**
A general overview of the topic of adult education to students for introductory purposes and a basis for further concentration and study in selected advanced areas of adult education. The course should be a prerequisite for advanced study and would include: philosophy, history, identification of adult objectives, knowledge of adult learners, contemporary status, trends and issues in adult education. Open to non-majors and majors.

**EDL 612 Economics of Public Education. Two sem hours (Formerly EDL 553)**
Examines the basic economic, fiscal and legal theories of support for education tax structures, state aid formulas, federal aid and school budgets. Open to non-majors and majors.

**EDL 613 Philosophy and Purposes of the Community College. Two sem hours (Formerly EDL 563)**
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 614 Law of Higher Education. Two sem hours (Formerly EDL 581)**
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 630, Legal Aspects of Administration.

**EDL 615 Collective Negotiations in Education. Two sem hours (Formerly EDL 651)**
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 616 School Plant Planning. Two sem hours (Formerly EDL 655)**
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. Open to non-majors and majors.

**EDL 617 School Personnel Administration. Two sem hours (Formerly EDL 658)**
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. Open to non-majors and majors.

**EDL 618 Elementary School Principalship. Two sem hours (Formerly EDL 671)**
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 619 Middle School/Junior High School Administration. Two sem hours (Formerly EDL 672)**
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 620 Senior High School Principalship. Two sem hours (Formerly EDL 673)**
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 621 Community School Administration. Two sem hours (Formerly EDL 674)**
Principles and techniques of administering community education. 
Prereq: EDL 512 Community Education.

**EDL 622 Organization and Administration of the Community College. Two sem hours (Formerly EDL 675)**
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. Open to non-majors and majors.

**EDL 623 Adult Education Administration. Two sem hours (Formerly EDL 676)**
An in-depth study of the leadership necessary to administer and manage adult education programs in the public and private sector. A practical knowledge of adult education administration will also be obtained. 
Prereq: EDL 611 Introduction to Adult Education.

**EDL 624 School Business Management. Two sem hours (Formerly EDL 677)**
School business procedures; budgeting, construction, purchasing, salary schedules, school indebtedness and insurance problems. 
Prereq: 612 Economics of Public Education.
EDL 630 Legal Aspects of Administration. Two sem hours (Formerly EDL 680)
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. Open to non-majors and majors.

EDL 679, 680, 681 Special Topics. One, two and three sem hours (Formerly EDL 539)
These course numbers are used for special offerings of the department whenever a course is being offered on an experimental basis.
Pre: Will be determined on the basis of the course being offered.

EDL 682, 683, 684, 685 Workshops in Educational Leadership. One, two, three and four sem hours (Formerly EDL 595)
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).
Pre: Will be determined on the basis of the workshops being offered.

EDL 686, 687, 688, 689 Master's Internship in Educational Leadership. One, two, three and four sem hours (Formerly EDL 594)
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 694, 695, 696 Seminars in Administration and Supervision. One, two and three sem hours. (Formerly EDL 596)
Concerned with broad or special topics of educational leadership. (Students are limited to four hours of seminar credit on master's degree program.) Topics to be selected (see current schedule).
Pre: Will be determined on the basis of the seminar being offered.

EDL 697, 698, 699 Independent Studies. One, two and three sem hours (Formerly EDL 597, 598, 599)
Pre: Permission of the adviser and ten hours in educational leadership.

EDL 710 Leadership Theory. Two sem hours (Formerly EDL 605)
Theories and models of administration and leadership; general theories and research in leader behavior.
Pre: Open to majors.

EDL 711 Advanced School Finance. Two sem hours (Formerly EDL 653)
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.
Pre: EDL 612 Economics in Public Education.

EDL 712 Behavioral Science in Administration and Supervision. Two sem hours (Formerly EDL 683)
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.
Pre: Six hours in administration and EDP 677 Research Techniques.

EDL 713 Practicum. Two sem hours (Formerly EDL 693)
Development of a study proposal for the thesis or the internship. EDL 713 must be taken prior to the Thesis (790, 791, 792) or Internship (786, 787, 788, 789).
Pre: EDP 677 Research Techniques, EDL 712 Behavioral Science in Administration and Supervision and permission of the adviser.

EDL 779, 780, 781 Special Topics Seminar. One, two and three sem hours (Formerly EDL 686)
An intensive study of a topic of current relevancy.
Pre: Will be determined on the basis of the topic being offered.

EDL 786, 787, 788, 789 Internship in Educational Administration. One, two, three and six sem hours (Formerly EDL 694)
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.
Pre: See course prerequisite for internship (available from department).

EDL 790, 791 and 792 Thesis. One, two and three sem hours (Formerly EDL 690, 691, 692)
An intensive study of a problem or group of problems under the direction of a University faculty member.
Pre: Approval of adviser and departmental requirements for thesis.

EDL 794, 795, 796 Advanced Seminar in Administration and Supervision. Two, three and
four sem hours (Formerly EDL 696)
An intensive study of selected problems in administration and supervision. Students are limited to four hours of seminar credit on specialist's degree program. Prereq: Six hours toward Specialist in Arts degree.

EDL 797, 798, 799 Independent Studies. One, two and three sem hours (Formerly EDL 697, 698, 699)
An intensive study of a problem or group of problems under the direction of a University faculty member. Prereq: Approval of adviser and ten hours in educational leadership.

TENTATIVE SCHEDULE

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The above schedule is subject to modification because of personnel and enrollment changes. Consult the official class schedule for each term. Courses are offered each term through Continuing Education as a supplement to the above schedule.
EDUCATIONAL PSYCHOLOGY

Wilbur A. Williams
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N. Kishor Washi
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OBJECTIVES

The Graduate Program in Educational Psychology offers two areas of concentration: development and personality and research and technology. Upon completion of the core courses students will:

1. be familiar with major theories and principles of learning and their application to classroom management and instruction (EDP 603).
2. understand the construction and use of teacher-made tests, rating scales, questionnaires, checklists and the administration and utilization of standardized tests (EDP 631).
3. be able to organize data, apply and interpret descriptive statistics (EDP 621).
4. develop skills in locating, reading, interpreting, summarizing and evaluating various types of research reports (EDP 677).
5. integrate, synthesize and explore in-depth significant issues in educational psychology (EDP 694).

Students who select the development and personality concentration will become familiar with:

1. 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 501, EDP 600, and EDP 610).
2. theories, conditions and practices which promote mental, emotional and social well-being in the home, school and other social settings (EDP 509 and EDP 605).
3. 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 611, EDP 612, EDP 614, and EDP 618).

Students who select the research and technology concentration will become familiar with:

1. parametric and non-parametric statistical techniques and the application of these tests to the verification of hypotheses (EDP 651).
2. methods of conducting educational research which include problem formulation, review of related research, research designs, measurement procedures, data analyses and interpretations (EDP 678).
3. the field of data processing, the use of computers and other technology in instruction (EDP 617).

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.

E.D.P. 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.

E.D.P. 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.

E.D.P. 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.

E.D.P. 535 Measurement and Evaluation of Adult Learners. Two sem hours
Designed to assist teachers of adults to become familiar with the construction and uses of teacher-made and selected standardized tests suitable for placement, diagnosis, individualizing instruction, and evaluating student achievement. Treats measurement issues unique to adult learners.

Prereq: Admission to a degree program for teachers of adults, or departmental permission.

E.D.P. 590, 591, 592 Special Topics.
One, two and three sem hours
The content will include current relevant topics and will vary from term to term. Special topics not included in the usual course offerings but within the domain of educational psychology will be considered. See appropriate schedule.

E.D.P. 600 Human Development. Two sem hours (Formerly E.D.P. 500)
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 603 Principles of Classroom Learning. Two sem hours (Formerly EDP 503)
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 604 Essentials of Programmed Instruction. Three sem hours (Formerly EDP 504)
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 605 Mental Hygiene. Two sem hours (Formerly EDP 505)
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 606, 607, 608 Colloquim. One, two and three sem hours
Academic seminars centered upon a broad field of study involving several different lecturers from within and outside of the department. See appropriate schedule for announcement.

EDP 610 Personality Theories for Educators. Two sem hours (Formerly EDP 510)
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 600 Human Development or equivalent or departmental permission.

EDP 611 Piaget for Educators. Two sem hours (Formerly EDP 511)
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 600 Human Development or equivalent.

EDP 612 Behavior Modification Techniques for School Personnel. Two sem hours (Formerly EDP 512)
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 614 Psychology of Creativity for Educators. Two sem hours (Formerly EDP 514)
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 600 Human Development or equivalent or departmental permission.

EDP 615 Psychoanalytic Theory and Education. Two sem hours (Formerly EDP 584)
Major psychoanalytic concepts will be discussed and compared. Applicability of psychoanalytic theories to problems of education will be explored.
Prereq: EDP 600 Human Development or equivalent.

EDP 616 Technology of Instruction.
Two sem hours (Formerly EDP 506)
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 617 Computer Applications in Education. Two sem hours (Formerly EDP 508)
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 618 Play and Development. Two sem hours (Formerly EDP 518)
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 600 Human Development or equivalent.

EDP 621 Statistics I: Descriptive Statistics. Two sem hours (Formerly EDP 521)
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 631 Measurement and Evaluation. Two sem hours (Formerly EDP 531)
A study of the construction and use of teacher-made tests, rating scales, questionnaires, check lists and similar measures. Also includes the administration of standardized tests and utilization of their results.

EDP 633 Systematic Observation, Checklists and Rating Scales. Two sem hours (Formerly EDP 533)
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 631 Measurement and Evaluation and/or statistics or departmental permission.

EDP 651 Statistics II: Inferential Statistics. Two sem hours (Formerly EDP 551)
Inferential statistics, both parametric and non-parametric; theory of hypothesis testing.
Prereq: EDP 621 Statistics I: Descriptive Statistics or equivalent.

EDP 652 Statistics III: Analysis of Variance. Two sem hours (Formerly EDP 631)
Involves statistical principles in experimental design through the study of single and multi-factor analyses of variance.

EDP 677 Research Techniques. Two sem hours (Formerly EDP 592)
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 678 Empirical Methods for Educational Research. Three sem hours (Formerly EDP 650)
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 621 Statistics I: Descriptive Statistics or EDP 651 Statistics II: Inferential Statistics and EDP 677 Research Techniques (or permission of instructor).

EDP 679 and 680 Special Topics. One and two sem hours (Formerly EDP 539)
An experimental course designed to include specific topics of concern in Educational Psychology.
Prereq: Permission of the instructor.

EDP 682, 683, 684, 685 Workshop. One, two, three and four sem hours
Particular topics of investigation in educational psychology. Designed to emphasize student participation. Workshop method of teaching and learning. See schedule for announced workshops.

EDP 690, 691 and 692 Thesis. One, two and three sem hours
Prereq: Permission of the graduate adviser.

EDP 694 Seminar in Educational Psychology. Two sem hours (Formerly EDP 596)
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 697, 698, and 699 Independent Study. One, two and three sem hours (Formerly EDP 597, 598, 599)
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.
GUIDANCE, COUNSELING and PERSONNEL WORK

John G. Pappas
Department Head
13 Boone Hall, 487-3270

B.W. Van Riper
Coordinator of Advising
13 Boone Hall, 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, public offender counselors, community/agency personnel and business/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. B. W. Van Riper, 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 and community 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:

Major Concentration in Guidance and Counseling 18–22 sem hours
1. Required Courses (16 sem hours)
   G&C 500 Helping Relationships: Basic Concepts and Services
   G&C 505 Counselor Development: Basic Skills
   G&C 510 Counselor Development: Counseling Process
   G&C 520 Standardized Group Testing
   G&C 530 Educational and Occupational Information
   G&C 540 Group Process I
   G&C 611 The Elementary School Counselor, or
   G&C 613 The Secondary School Counselor
   G&C 686 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.
Cognate Areas (10–14 sem hours)

1. Required Courses
   EDP 621 Statistics I:
   Descriptive Statistics (2 sem hours) or equivalent
   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 certificates must provide evidence of their valid Michigan teaching certificates at the time of admission. These students are eligible to apply for counselor endorsement of their teaching certificates 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:

**Area of Concentration in Guidance and Counseling 18–22 sem hours**

1. Required Courses (14 sem hours)
   G&C 500 Helping Relationships:
   Basic Concepts and Services
   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 686 Counseling Practicum I, or
   G&C 689 Field Work Experience
   G&C 694 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.

**Cognate Areas**

1. Required Courses 10–14 sem hours
   EDP 621 Statistics I:
   Descriptive Statistics (2 sem hours) or equivalent
   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's degree requirements of the Graduate School.
2. A master's degree in guidance and counseling or its equivalent from an accredited institution.
3. A 3.3 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. B. W. Van Riper, 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:

**Foundation Courses (6 sem hours)**

This requirement is designed to provide counselors with greater ability to relate to the total functioning of their setting. It is also designed to ensure 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 677 Research Techniques for one of these experiences.

**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 687 Counseling Practicum II
   G&C 688 Supervision of Counseling Practicum
   G&C 689 Field Work Experience
3. G&C 699 Specialist's Project (3 sem hours)
   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 Helping Relationships: Basic Concepts and Services (Formerly Introduction to Guidance and Counseling). Two sem hours
An introduction to concepts and principles used in helping relationships and an overview of services offered by helping professions. The course provides experiences in interpersonal relations and opportunities for self-development.

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.

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.

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. Counseling skills and processes are introduced.
Prereq: G&C 500 Helping Relationships: Basic Concepts and Services; 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.

G&C 530 Educational and Occupational Information. Two sem hours (Formerly G&C 630)
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 guidance and counseling courses.

G&C 531 Career Education in the Guidance Program. Two sem hours (Formerly G&C 530)
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 Helping Relationships: Basic Concepts and Services or equivalent; or permission of instructor.

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 Helping Relationships: Basic Concepts and Services; G&C 505 Counselor Development: Basic Skills.

G&C 550 Student Personnel Services in Higher Education. Two sem hours (Formerly G&C 601)
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 educational process of students in colleges and universities, including junior and community colleges.

G&C 551 Contemporary College Students. Two sem hours
An examination is made of the changing undergraduate lifestyle, attitudes, and characteristics. Focus is given to the dimensions of career education, outcomes/benefits of a higher education, and the student as a learner. Attention is given to both the traditional and nontraditional college population in two- and four-year institutions.
Prereq: Open to guidance and counseling majors and graduate students in related fields.

G&C 590, 591 Special Topics. One and two sem hours (Formerly G&C 596 Seminar in Counselor Development)
Special courses and seminars will be offered dealing with contemporary issues in the guidance and counseling field. These counselor development offerings will be designed primarily for graduate students and practitioners in the helping professions.

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 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 guidance and counseling 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, emotional, social and physical characteristics; diagnosis of learning difficulties; and early use of available resources to meet student needs.
Prereq: Ten semester hours in guidance and counseling 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 guidance and counseling courses.

G&C 620 Individual Appraisal in Guidance and Counseling. Two sem hours
Testing and non-testing procedures, techniques, and the processes of psychoeducational 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.

G&C 614 The Secondary School Counselor. Two sem hours
Consulting and coordinating skills for working with teachers, parents, administrators, referral agencies, and pupil personnel staff will also be developed.

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.

G&C 622 Case Studies in Counseling. Two sem hours (Formerly G&C 612)
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 guidance and counseling 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 530 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 530 Educational and Occupational Information.

G&C 640 Group Process II. Two sem hours (Formerly G&C 542)
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 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 guidance and counseling courses.

G&C 686 Counseling Practicum I.
Two sem hours (Formerly G&C 680)
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: Ten semester hours in guidance and counseling courses.

G&C 687 Counseling Practicum II.
Two sem hours (Formerly G&C 685)
An advanced course in supervised counseling experiences. Students are involved in diverse counseling relationships designed to facilitate higher levels of counseling effectiveness.
Prereq: Permission of the Graduate Committee in Guidance and Counseling.

G&C 688 Supervision of Counseling Practicum. Two sem hours (Formerly G&C 686)
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 689 Field Work in Guidance, Counseling and Personnel Work.
Two sem hours (Formerly G&C 681)
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 694 Seminar in Guidance/Personnel Work. Two sem hours (Formerly G&C 696 Seminar in Guidance/College Personnel Work)
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 guidance and counseling 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.


d| Course | Winter | Spring | Summer | Fall |
--- | --- | --- | --- | --- |
G&C 500 | X | X | 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 | X | X |
G&C 531 | | X | | |
G&C 540 | X | X | X | X |
G&C 550 | | | X | |
G&C 551 | X | | | |
G&C 610 | X | X | X |
G&C 611 | X | | X | |
G&C 613 | X | X | X |
G&C 620 | X | X | X | X |
G&C 622 | | | | |
G&C 631 | X | | | |
G&C 632 | | | | |
G&C 640 | X | | | |
G&C 650 | | | | |
G&C 686 | X | X | X | X |
G&C 687 | X | | X | |
G&C 688 | X | | X | |
G&C 689 | X | X | X | X |
G&C 694 (Guid) | X | X | X |

† Courses offered on a two (2) year cycle.
HEALTH, PHYSICAL EDUCATION, RECREATION and DANCE

Patric L. Cavanaugh
Department Head
Warner Gymnasium, 487-4338

John E. Sheard
Coordinator of Advising
233 Warner, 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, knowledge 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 six 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:
1. Core Courses (12 Sem Hours)
   PED 585 Physical Education in Elementary Schools, or
   PED 586 Physical Education in Secondary Schools
   PED 587 Philosophy of Physical Education

   PED 588 Administrative Problems in Physical Education
   PED 589 Advanced Physical Testing
   PED 677 Research Techniques
   PED 698 Independent Study
2. Professional Courses (electives in H.P.E.R.&D.) (12–18)
3. Cognate Courses (0–6)

ATHLETIC COURSES (ATH)

These were formerly PED courses.

ATH 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.

ATH 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.

ATH 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.

ATH 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.

ATH 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 of instructor.

ATH 611 Advanced Techniques of Coaching Football. One sem hour
A lecture-demonstration course in the problems and techniques of advanced coaching theories of football.

ATH 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.

ATH 613 Advanced Techniques of Coaching Basketball. One sem hour
A lecture-demonstration course in the problems and techniques of advanced coaching theories of basketball.

ATH 614 Advanced Techniques of Coaching Baseball. One sem hour
A lecture-demonstration course in the problems and techniques of advanced coaching theories of baseball.

ATH 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.

ATH 616 Advanced Techniques of Coaching Tennis. One sem hour
A course designed to identify and discuss tennis techniques, strategies and coaching problems.

ATH 619 Problems in Training for Athletics. Two sem hours
Problems in the physical preparation of athletics for competition; treatment and rehabilitation following injuries.

RECREATION COURSES (REC)
These were formerly PED courses.

REC 520 Trends in Community Recreation. Two sem hours
Recreation and the cultural aspects of communities.

REC 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.

REC 522 Social Recreation. Two sem hours
Planning and directing activities for family groups, church groups, senior citizens and school and community functions.

REC 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.

HEALTH EDUCATION COURSES (HED)
These were formerly PED courses.

HED 545 Sex Education (Formerly 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.

HED 546 Alcohol Use and Abuse (Formerly 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.

HED 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.

HED 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: HED 640 Basic Concepts of the School Health Program.

HED 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.

HED 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: HED 640 Basic Concepts of the School Health Program.

HED 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: HED 640 Basic Concepts of the School Health Program.

PHYSICAL EDUCATION COURSES (PED)

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.

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 566 Sport in American Society. Two sem hours
A study of significance of sport in American society with emphasis upon sport in the context of American culture, sport and social institutions in American society, socialization and sport, and some projections concerning the future of American sport.

PED 568 Physical Fitness (Formerly 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 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 impared 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.

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 590, 591, 592 Special Topics. One, two and three sem hours

PED 606, 607, 608 Colloquium. One, two and three sem hours

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 Sport Training and Physical Fitness. (Formerly Seminar in Physical Fitness). Two sem hours
A study of current literature pertinent to the administration, exercise evaluation and implementation of adult and school fitness programs. Components of the physical training process and its importance to various sports is also examined.

PED 670 Current Problems in Physical Education. Two sem hours
Identification, discussion and analysis of
current problems and issues which
confront the physical educator.

DANCE COURSES (DAN)
This was formerly a PED course.

DAN 571 Teaching Modern Dance
(Formerly Seminar in Modern Dance). Two sem hours
A concentrated study of the teaching of
modern dance in the secondary school
including technique and composition.

RESEARCH COURSES

PED 677 Research Techniques. Two
sem hours (Formerly PED 592)
Research in a variety of settings;
reviewing published research,
participating in research, presenting a
plan for a research problem.

PED 697, 698, 699 Independent
Studies. One, two and three sem
hours (Formerly PED 597, 598, 599)
An intensive study of a problem under
the direction of a University faculty
member. Prereq: PED 677 Research Techniques or equivalent.

WORKSHOP COURSES

ATH 595 Workshop in Athletics.
Two sem hours (Formerly PED 515)
A specialized workshop in the area of
athletics with the central theme to be
announced.

REC 595 Workshop in Recreation.
Two sem hours (Formerly PED 535)
A specialized workshop in the area of
recreation with the central theme to be
announced.

HED 595 Workshop in Health
Education. Two sem hours
(Formerly PED 555)
A specialized workshop in the area of
health education with the central theme
to be announced.

PED 595 Workshop in Physical
Education. Two sem hours
(Formerly PED 575)
A specialized workshop in the area of
physical education with the central
theme to be announced.

PED 595 Workshop in Gymnastics.
Two sem hours (Formerly PED 576)
The development and improvement of
gymnastics as a major area of physical
education in the schools; the continuity
and progression of gymnastic skills
from grades one through twelve and
current trends in theory and practice.
Lectures, demonstrations and
discussions.

PED 595 Workshop in Movement
Education. Two sem hours
(Formerly PED 577)
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.

SEMINAR COURSES

PED 694 Seminar in Current
Literature Analysis. Two sem
hours (Formerly PED 663)
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 694 Seminar in Motor Skills.
Two sem hours (Formerly PED 678)
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 694 Seminar in International
Physical Education. Two sem
hours (Formerly PED 680)
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.

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:

410 Drug Overdose Aid. (2)
450 Advanced Dance Composition. (4)
480 Recreation Therapy. (2)
foundations 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—provides for depth of study in the history of education. The student may select from social foundations courses 572, 601, 602, 671 and 673 and appropriate courses from the Department of History.

Option B—provides for depth of study in socio-cultural aspects of education by selection from social foundations courses 354, 402, 560, 580, 603, 604, 625, 626, 627, 662 and 673, and from appropriate courses in the Department of Sociology.

Option C—offers similar opportunities in philosophical study in courses 550, 601, 602, 624, 651, 652 and 693, 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 540, 541, 542, 560, 624, 625, 626, 627 and 662, and appropriate courses in economics, geography, history and political science.

Option E—an option in the multi-cultural aspects of education which is currently being developed by the Department of Social Foundations, will include some present courses plus several that are in process. Those interested can get further information from the Department office.

When students have completed at least twenty (20) hours, including SFD 500 and at least eight (8) hours in Option A, B, C, D, or E, they will enroll in SFD 693, 694, 695 or 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 the seminar) 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. 7 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

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 540, 541, 542 Field Studies in Comparative Education. One, two and three sem hours
A study of selected aspects of education and the environment 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 Philosophy 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 education; personal meaning of philosophical questioning. Prereq: SFD 500 Social Foundations of Education: An Introduction for major; 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 Social Foundations of Education: An Introduction for majors; course in sociology or anthropology 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 Social Foundations in Education: An Introduction 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 Social Foundations of Education: An Introduction for majors; course in sociology for majors and non-majors.

SFD 601 History of Educational Thought. Two sem hours (Formerly SFD 501)
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 Social Foundations of Education: An Introduction or an undergraduate course in Western history or philosophy.

SFD 602 Progressivism in American Education. Two sem hours (Formerly SFD 502)
The genesis and development of pragmatism; the special contributions of Peirce, 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 Social Foundations of Education: An Introduction or an undergraduate course in Western history or philosophy.

SFD 603 Groups in Schools. Two sem hours (Formerly SFD 503)
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 Sociology of Education
majors; for non-majors, SFD 580 Sociology of Education or one course in psychology or sociology.

SFD 604 Delinquency and Schools. Two sem hours (Formerly SFD 504)
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 Sociology of Education for majors; for non-majors, SFD 580 Sociology of Education or one course in psychology or sociology.

SFD 624 Education for What and Whom: A World View. Two sem hours (Formerly SFD 524)
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.

SFD 625 Power and Influence in Education: A Cross-cultural View. Two sem hours (Formerly SFD 525)
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 626 Schools, Poverty, Population: Selected Problems in Comparative Education. Two sem hours (Formerly SFD 526)
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 627 Social Problems and the Schools: International Perspectives. Two sem hours (Formerly SFD 527)
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 651 Analysis of Educational Concepts. Two sem hours (Formerly SFD 551)
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 Social Foundations of Education: An Introduction for majors; course in philosophy or religion for non-majors.

SFD 652 Pragmatism and Education. Two sem hours (Formerly SFD 552)
Consideration of pragmatists' psychology, sociology, ethics, social philosophy and their influence upon educational philosophy and practices.
Prereq: SFD 500 Social Foundations of Education: An Introduction for majors; course in philosophy or religion for non-majors.

SFD 653 Existentialism and Education. Two sem hours (Formerly SFD 553)
An historical and comparative analysis of the relationship of pragmatism to existentialism; factors which affect theories and practices of American education.
Prereq: SFD 500 Social Foundations of Education: An Introduction for majors; course in philosophy or religion for non-majors.

SFD 662 Cultural Determinants of Learning. Two sem hours (Formerly SFD 562)
The educational theories and practices in literate and pre-literate societies illustrate 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 Social Foundations of Education: An Introduction for majors; course in sociology or anthropology for non-majors.

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OTHER COURSES

The following upper division undergraduate course may also be elected for graduate credit and a course description may be found in the undergraduate catalog:

402 Sexism and Education. (3)
SPECIAL EDUCATION

Norman Niesen
Department Head
215 Rackham
487-3300

Nancy Halmhuber
Coordinator of Advising,
230 Rackham
487-3302

C. Wayne Fulton
Adviser
Speech and Language Impaired
231-A Rackham
487-4413

Gari E. Garber
Adviser
Hearing Impaired,
121 Rackham
487-4412

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 understanding 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's 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's 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.

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 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 590, 591, 592 Special Topics in Special Education. One, two and three sem hours (Formerly SGN 539)
Experimental courses designed to investigate specific topics of concern related to handicapping conditions.

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 613 The Slow Learner in the Classroom. Two sem hours (Formerly SGN 513)
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 615 Social Psychology of the Handicapped. Two sem hours (Formerly SGN 515)
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 619 Administration and Supervision of Special Education. Two sem hours (Formerly SGN 519)
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 620 Family-School Relationship in Special Education. Two sem hours (Formerly SGN 520)
Discovering and analyzing the home problems which have educational implications for the child. Prereq: SGN 506 Education of Exceptional Children.

SGN 669 Occupational Information in Special Education. Two sem hours (Formerly SGN 569)
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 675 Psychoeducational Diagnosis and Educational Programming for Children with Learning Problems. Four sem hours (Formerly SGN 541)

SGN 679, 680, 681. Special Topics in Special Education. One, two and three sem hours
Experimental courses designed to investigate specific topics of concern in special education. Prereq: Permission of department.

SGN 683 Workshops. Two sem hours (Formerly SGN 595)
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.

SGN 686 Internship in Special Education. One sem hour (Formerly SGN 680)
Prereq: Permission of adviser.

SGN 687 Internship in Special Education. Two sem hours (Formerly SGN 681)
Prereq: Permission of adviser.

SGN 688 Internship in Special Education. Three sem hours (Formerly SGN 682)
Prereq: Permission of adviser.

SGN 689 Supervised Internship with Handicapped Children. Four sem hours (Formerly SGN 594)
Supervised student teaching with handicapped children in local schools and institutions. Prereq: Permission of adviser.

SGN 694 Interdisciplinary Seminar in Special Education. Two sem hours (Formerly SGN 696)
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.

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 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 Prof. George E. Caputo.

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 620 Psychological and Educational Techniques for Emotionally Impaired. Two sem hours (Formerly SEI 696)
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.

SEI 663 The Emotionally Impaired Child in the Regular Classroom. Two sem hours (Formerly SEI 563)
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 694 Seminar in the Emotionally Impaired Child. Two sem hours (Formerly SEI 596)
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.

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.

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.

SHI 526 Visual Communication for the Hearing Impaired. Two sem hours (Formerly SHI 626)
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 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.

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 582 Evaluation and Training of Hearing Impaired Infants. Two sem hours (Formerly SHI 682)
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 673 Advanced Speech for the Hearing Impaired. Two sem hours (Formerly SHI 688)
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 675 Secondary School Subjects for the Hearing Impaired. Four sem hours (Formerly SHI 686)
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.

SHI 687 Auditory Training and Speechreading Practicum. Two sem hours (Formerly SHI 593)
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 688 Clinical Internship in Hearing Impaired Education. Four sem hours (Formerly SHI 694)
Opportunity to practice will be provided, as well as an opportunity to work as part of a professional team in rehabilitation procedures. Prereq: Undergraduate major in deaf education.

SHI 689 Public School Internship. Four sem hours (Formerly SHI 594)
Supervised teaching with deaf persons. Prereq: Undergraduate major in deaf education; concurrent enrollment in SHI 694 Seminar Hearing Impaired Education.

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 306 Education of Exceptional Children. Not open to students who have credit in 468 Education of Children with Learning Disabilities.

SLD 683 Workshops. Two sem hours (Formerly SLD 595)
Please check the current class schedule for specific offerings.

Sensory Training for Perceptually Impaired Children.

Diagnostic Procedures in Learning Disabilities

Language Problems of Neurologically Impaired.

Prereq: Language Problems of Neurologically Impaired. Permission of department.

SLD 691 Diagnostic Practicum Learning Disabilities. Six sem hours (Formerly SLD 593)
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 683 Diagnostic Procedures immediately prior to or following this course. Prereq: SLD 693 Seminar Special Education I and department permission.

SLD 693 Seminar Special Education I. Two sem hours (Formerly SLD 596)

SLD 694 Seminar Special Education II. Two sem hours (Formerly SLD 596)
Open only to students who have completed SLD 683 Diagnostic Practicum; follow-up of cases from diagnostic practicum. Prereq: Permission of the department.

MENTALLY IMPAIRED

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
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 694 Seminar in Mental Impairment. Two sem hours
(Formerly SMI 596)
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.

SMI 697, 698, 699 Independent Studies. One, two and three sem
hours (Formerly SMI 597, 598, 599)
Prereq: Departmental permission.

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.

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 578 Audiometric Testing and permission of the department.

SLI 538 Clinical Practice in Hearing Therapy. Two sem hours
Supervised practice in auditory training and lip-reading with children and adults.
Prereq: SLI 534 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
rations 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.

SLI 595 Workshops. Two sem hours (Formerly SLI 595)
Please check the current class schedule for specific offerings.

SLI 607 Colloquium in Speech Pathology. Two sem hours (Formerly SLI 696 Seminar in Speed Pathology)
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 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. Three 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 687 Clinical Internship in Speech Pathology II. Two sem hours
(Formerly SLI 694)
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 689 Public School Internship in Speech Pathology I. Four sem hours (Formerly SLI 594)
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 694 Seminar in Public School Speech Pathology.

SLI 694 Seminar in Public School Speech Pathology. Two sem hours (Formerly SLI 596)
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 689 Public School Internship in Speech Pathology I.

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:

Emotionally Impaired
401 Methods and Curriculum Emotionally Impaired. (2)
402 Programs Emotionally Impaired Child. (2)
448 Seminar in Emotionally Impaired. (2)

Learning Disabilities
468 Education of Children with Learning Disabilities. (2)

Mentally Impaired
444 Seminar in Mental Impairment. (2)

Physically and Otherwise Impaired
446 Seminar in Physically Impaired. (2)

Speech and Language Impaired
416 Experimental Phonetics. (3)
452 Voice (3)
454 Stuttering (3)

Visually Impaired
450 Seminar in Visually Impaired. (2)

Upper division undergraduate courses suitable for use as cognates by majors in other fields:
468 Education of Children with Learning Disabilities. (2)
HOME ECONOMICS

Billie Lou Sands
Department Head
108 Roosevelt Hall,
487-1217

Richard B. Leinbach
Coordinator of Advising
202-K Roosevelt,
487-2490

MASTER'S PROGRAMS AVAILABLE IN HOME ECONOMICS

A master's degree may be earned in:

General home economics
1. a minimum of 24 hours in home economics (four-eight hours in four major areas of home economics);
2. minimum of zero to six hours of cognate courses (outside home economics);
3. minimum of 30 hours required for the master's degree;
4. recommended for the applicant who has a major or minor in general home economics.

Specialized area of home economics
1. minimum of 24 hours in a specialized area;
2. minimum of zero to six hours of cognate courses (outside home economics);
3. minimum of 30 hours required for the master's degree;
4. specializations available in clothing and textiles, consumer affairs, family and child development; foods and nutrition; housing, interiors and equipment;
5. recommended for the applicant who has a major or 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. 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.

COOPERATIVE PROGRAM WITH EDUCATIONAL LEADERSHIP

The Department of Educational Leadership offers a cooperative program in vocational/technical administration. The program combines course work in school administration with courses in vocational/technical education (industrial education, business education, or home economics). This program is designed for persons seeking a career as either a director or supervisor of vocational/technical education. This program is available at either the master's or specialist's level. Persons interested in this program should contact the department head in Educational Leadership.

HEC 506 Social and Economic Problems in Housing. Two sem hours (Formerly HEC 505)
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 508 Foods in Cultures of the World. Two sem hours (Formerly HEC 506)
An interdisciplinary approach to the study of cultures and food habits; the influence of attitudes and values in food selection.

HEC 509 Nutrition Problems of Low-Income Groups. Two sem hours (Formerly HEC 508)
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 521 Special Problems in Home Economics Education. Two sem hours (Formerly HEC 518)
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.

HEC 526 Methods and Materials in Teaching Related Arts. Two sem hours (Formerly HEC 571)
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 528 Methods and Materials in Teaching Foods and Nutrition. Two sem hours (Formerly HEC 513)
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 532 Current Programs in Family Life Education. Two sem hours (Formerly HEC 512)
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 533 Leisure and the Family. Two sem hours (Formerly HEC 507)
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 534 Methods and Materials in Teaching Clothing and Textiles. Two sem hours (Formerly HEC 570)
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 550 Methods and Materials in the Teaching of Consumer Education. Two sem hours (Formerly HEC 502)
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 556 Problems in Interior Design. Two sem hours (Formerly HEC 569)
Analyzing and solving problems of interiors with regard to social,
psychological and economic concerns of families.
Prereq: Permission of the department.

HEC 600 Home Management and Consumer Economics. Two sem hours (Formerly HEC 515)
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 601 Curriculum Development in Home Economics Education. Two sem hours (Formerly HEC 511)
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 602 The Disadvantaged Family. Two sem hours (Formerly HEC 500)
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 603 Parent Education. Two sem hours (Formerly HEC 504)
Study of parental roles and competence in family life; analysis of methods and techniques for providing education for parents.

HEC 608 Recent Developments in Foods. Two sem hours (Formerly HEC 580)
Survey of recent research in food science, including the production, preservation, processing and distribution of food.
Prereq: 211 Food Science or equivalent.

HEC 609 Recent Developments in Food Systems Management. Two sem hours (Formerly HEC 581)
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 611 Home Management for Disabled Homemakers. Two sem hours (Formerly HEC 532)
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 612 Laws Affecting the Family. Two sem hours (Formerly HEC 545)
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 613 Child Guidance in the Family. Two sem hours (Formerly HEC 541)
Consideration of theoretical approaches to child guidance applicable for home or school. Practical application of child guidance principles at various developmental stages.

HEC 616 Consumer Problems in Home Furnishings. Two sem hours (Formerly HEC 566)
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 618 Recent Developments in Nutrition. Two sem hours (Formerly HEC 584)
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 620 Evaluation in Home Economics Education. Two sem hours (Formerly HEC 611)
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 622 Family Development. Two sem hours (Formerly HEC 540)
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 623 Drug Abuse and Family Dynamics. Two sem hours (Formerly HEC 510)
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.

HEC 625 The Fashion Field. Two sem hours (Formerly HEC 568)
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 630 Problems in Family Finance. Two sem hours (Formerly HEC 503)
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 631 Consumer Issues and Decisions in the Family. Two sem hours (Formerly HEC 514)
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 HEC 630 Problems in Family Finance or permission of the department.

HEC 632 The Man-Woman Relationship in Modern Society. Two sem hours (Formerly HEC 501)
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.

HEC 633 Family in Crisis. Two sem hours (Formerly HEC 542)
Social, psychological and interpersonal aspects of crisis situations in families; educational and therapeutic resources available to families in crisis.

HEC 634 Consumer Problems in Clothing and Textiles. Two sem hours (Formerly HEC 561)
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 635 History of Costume. Two sem hours (Formerly HEC 562)
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 636 Recent Developments in Home Equipment. Two sem hours (Formerly HEC 531)
Innovations in household appliances; mechanical principles involved in construction, use and methods of testing. Cost-quality factors, energy conservation and consumer protection.

HEC 640 Values and Valuing in Family Systems. Two sem hours (Formerly HEC 529)
Study of sources, characteristics, and development of societal and personal values; impact of values and valuing on family management and decision making.
Prereq: HEC 600 Management and Consumer Economics.

HEC 642 Family in the Middle and Later Years. Two sem hours (Formerly HEC 544)
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: HEC 622 Family Development.

HEC 644 Recent Developments in Textiles. Two sem hours (Formerly HEC 660)
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 645 Clothing Design and Construction. Two sem hours (Formerly HEC 565)
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 647 History of Furniture and Contemporary Trends. Two sem hours (Formerly HEC 563)
A study of furniture of various periods of history and the relationships to contemporary styles.

HEC 649 International Nutrition. Two sem hours (Formerly HEC 585)
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 660 Decision Processing in the Family. Two sem hours (Formerly HEC 530)
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: HEC 600 Home Management and Consumer Economics.

HEC 661 Supervision in Home Economics Education. Two sem hours (Formerly HEC 613)
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 667 Fabric Design for the Home. Two sem hours (Formerly HEC 564)
Advanced work in experimental design with fabrics, with emphasis on use in the home.
Prereq: Permission of the department.

HEC 669 Vitamins and Minerals. Two sem hours (Formerly HEC 583)
Emphasis on interrelationships of minerals and vitamins in human metabolism.
Prereq: 402 Nutrient Metabolism; physiology recommended.

HEC 675 Textile Analysis. Two sem hours (Formerly HEC 661)
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 644 Recent Developments in Textiles or permission of the department.

HEC 677 Research Methods for Home Economics. Two sem hours (Formerly HEC 592)
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 major on a planned graduate program. Required in
all master's programs. Designed to be taken early in the program.

HEC 680 Special Topics in Home Economics. Two sem hours (Formerly HEC 539)
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 683 Workshops in Selected Areas. Two sem hours (Formerly HEC 595)
Prereq: Permission of the department.

HEC 686, 687, 688, 699 Practicum. One, two, three and four sem hours
Supervised field experience under the direction of a departmental advisor.
Prereq: 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 advisor and committee.
Prereq: Permission of the department.

HEC 694 Seminar in Home Economics. Two sem hours (Formerly HEC 596)
Consideration and investigation of special problems in the specialization areas of study in home economics.
Prereq: Permission of the department.

HEC 697, 698, 699 Independent Studies in Home Economics. One, two and three sem hours (Formerly HEC 597, 598, 599)
An intensive study of a selected professional problem under the direction of a staff adviser.
Prereq: Permission of the department.

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.

402 Nutrient Metabolism. (3)
407 Administration and Supervision in Child Development Centers. (3)
411 Food Investigation. (3)
412 Nutrition of the Life Cycle. (3)
415 Diet and Disease. (3)
416 Contemporary Nutrition Issues. (3)
422 Seminar in Child Development. (2)
460 Tailoring. (3)
461 Family Interaction. (3)
472 The Consumer in the Ecology. (3)
473 Consumer Problems in the Family. (3)
474 Seminar in Consumer Issues. (2)
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 IE 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;

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's signature.

**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 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 8 semester hours of 3.0 (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 3.0 (B) grade point average for all graduate credit applicable to the master's degree program;
5. have completed the requirements for:
   - Concentration in Manufacturing Technology Core (6)
   - Business Core (8–10)
   - Manufacturing Technology (10)
   - Related Electives (4–6)
   - Total (30)

**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 3.0 (B) average in the major;
3. hold a 3.0 (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:
   - Concentration in Manufacturing Technology Core (6)
   - Business Core (8–10)
   - Manufacturing Technology (10)
   - Related Electives (4–6)
   - Total (30)

**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 8 semester hours of 3.0 (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 3.0 (B) grade point average for all graduate credit applicable to the master's degree program;
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.
COOPERATIVE PROGRAM WITH EDUCATIONAL LEADERSHIP

The Department of Educational Leadership offers a cooperative program of vocational/technical administration. The program combines course work in school administration with courses in vocational/technical education (industrial education, business education, or home economics). This program is designed for persons seeking a career as either a director or supervisor of vocational/technical education. This program is available at either the master's or specialist's level. Persons interested in this program should contact the department head in Educational Leadership.

COURSES FOR NON-MAJORS

IE 500 Crafts. Two sem hours (Formerly IED 500)
Basic craft areas of wood, metal, graphics, plastics, leather and ceramics are explored. Additional elective areas are also available. Not open to departmental majors.

IE 501 Crafts for Special Education. Two sem hours (Formerly IED 501)
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.

IE 502 Career Education for the Elementary Child. Two sem hours (Formerly IED 502)
A study of the concepts and methods used to develop an awareness of the career of society with elementary school children. Emphasis is on individual and group activities relevant to integrated curriculum studies. Also open to departmental majors.

IE 504 Recent Developments in Career Exploration and Preparation. Two sem hours (Formerly IED 504)
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 departmental majors.

IT 517 Graphic Arts. Two sem hours (Formerly IED 505)
General graphic arts including layout and design, composition, photo mechanics, offset and screen process reproduction.

IT 540 Recent Technological Developments. Two sem hours (Formerly IED 640)
Innovations in materials and processes and their implications for industrial education and industrial technology. Industrial visitations and other means of investigation will be employed.

IT 640 Contemporary American Industry. Two sem hours (Formerly IED 540)
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.

IT 641 Materials of Industry. Two sem hours (Formerly IED 541)
Selected industrial materials; sources, properties, characteristics, analysis and testing.
Prereq: IED 123 Metal Processes or IED 215 Machine Tool Metalworking and IED 202 Plastics.

IT 645 Occupational Safety and Health. Two sem hours (Formerly IED 545)
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.

IT 647 Industrial Research and Development. Two sem hours (Formerly IED 547)
Laboratory experiences focusing on production problems utilizing various materials, processes, methods of measurement, and analysis techniques.

FOUNDATIONS

IE 550 Development of Industrial Education. Two sem hours (Formerly IED 550)
The historical development of industrial education programs; the influence of industrial, technological and societal change, institutions, professional associations, movements and leaders in the field.

IE 551 Philosophy of Industrial Education. Two sem hours (Formerly IED 551)
Philosophical viewpoints concerning industrial arts, vocational and technical education; historical development and philosophical justification of modern programs.
IE 650 Industrial Education in Colleges and Universities. Two sem hours (Formerly IED 650)
The philosophy, history and development of industrial teacher education programs; current trends in selected institutions.

IE 651 Administration of Vocational Technical Education. Two sem hours
Focusses on the legislation, programs, planning and regulations which are unique to vocational education and the administrative functions which are directly related.

IE 652 Technical Programs in Community Colleges. Two sem hours (Formerly IED 652)
Nature, scope and functions of vocational and technical programs in community colleges; recent developments.

IE 655 Supervision of Industrial Education. Two sem hours
(Formerly IED 680)
Principles and problems involved in the improvement of instruction in industrial education. Open to majors in industrial education and to majors in administration.

IE 661 Evaluation in Industrial Education. Two sem hours
(Formerly IED 661)
Principles and methods of evaluating student development in industrial education; experience in development and construction of effective evaluation devices.

IE 663 Instructional Media in Industrial Education. Two sem hours
(Formerly IED 663)
Recent developments in instructional media and technology; the relationship of media to the psychology of learning. Implications for programs of industrial education.

IE 664 Laboratory Planning. Two sem hours
(Formerly IED 670)
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.

CURRICULUM

IE 560 Middle/Junior High School Industrial Arts. Two sem hours
(Formerly IED 560)
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.

IE 562 Technical Programs in Community Colleges. Two sem hours (Formerly IED 652)
Nature, scope and functions of vocational and technical programs in community colleges; recent developments.

IE 565 Supervision of Industrial Education. Two sem hours
(Formerly IED 680)
Principles and problems involved in the improvement of instruction in industrial education. Open to majors in industrial education and to majors in administration.

IE 566 Evaluation in Industrial Education. Two sem hours
(Formerly IED 661)
Principles and methods of evaluating student development in industrial education; experience in development and construction of effective evaluation devices.

IE 568 Instructional Media in Industrial Education. Two sem hours
(Formerly IED 663)
Recent developments in instructional media and technology; the relationship of media to the psychology of learning. Implications for programs of industrial education.

IE 664 Laboratory Planning. Two sem hours
(Formerly IED 670)
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.

IE 666 Independent Studies. One two, and three sem hours
(Formerly IED 697, 698, 699)
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 IE 677) and "Research Proposal Format" guideline sheets are available from the department.

Prereq: Department permission.

SPECIAL COURSES—PRACTICUM, INTERNSHIP, WORKSHOP, SEMINAR

ITE 590, 591, 592 Special Topics. One, two, and three sem hours
(Formerly IED 539)

ITE 594, 595, 596, 597 Workshops in Selected Areas. (Formerly IED 595) One, two, three and four sem hours

ITE 679, 680, 681 Special Topics. One, two and three sem hours
(Formerly IED 539)

ITE 682, 683, 684, 685 Workshops in Selected Areas. One, two, three and four sem hours

IE 686 Practicum in Industrial Education. Two sem hours
(Formerly IED 593)
An examination and evaluation of a variety of instructional methods. Direct experiences are provided in developing and utilizing instructional materials.

IE 688 Internship in Industrial Education. Two sem hours
(Formerly IED 594)
A supervised experience in education. Opportunities are provided for directing a variety of teaching-learning experiences contracted with a University faculty member.

IT 689 Industrial Internship. Two sem hours (Formerly IED 694)
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.
IE 693, 694, 695, 696 Seminar in Industrial Education. One, two, three and four sem hours (Formerly IED 596)
A discussion of problems and issues in industrial education with emphasis on literature review and appraisal.

COMMUNICATION—TECHNICAL DESIGN

IT 514 Graphic Presentation. Two sem hours (Formerly IED 537)
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: IED 122 Technical Drawing.

IT 615 Product Design. Two sem hours (Formerly IED 515)
Principles of product design; emphasis on the design process, basic elements of design, and the interdependence of design and human needs.
Prereq: IED 122 Technical Drawing.

IT 617 Visual Communication. Two sem hours (Formerly IED 517)
Application of visual communication theories in the production of media including photography, photo mechanics, offset and screen processes.

IT 618 Computer Assisted Design. Two sem hours (Formerly IED 518)
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: MTH 107 Trigonometry; not open to students with credit in IED 231 Industrial Computer Graphics.

CONSTRUCTION

IT 616 Architectural Drafting and Design. Two sem hours (Formerly IED 516)
Contemporary architectural drafting and design; methods of presentation, site planning, perspective, rendering, and recent developments in drafting media.
Prereq: IED 128 Architectural Drawing.

IT 626 Solar Energy Applications. Two sem hours
A study of solar energy and applications to space heating and domestic hot water. Topics include: landscape developments; solar architecture; design and construction of collectors, distribution systems and storage; heat loss and system evaluation.
Prereq: IED 128 Architectural Drawing 1 and IED 201 Construction Technology.

IT 630 Forest Products Industry. Two sem hours (Formerly IED 530)
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.
Prereq: IED 102 Woodwork.

IT 648 Principles of Construction Technology. Two sem hours (Formerly IED 548)
A study of the production system of the construction industries; a study of utility systems, housing construction, and city and regional planning practices.

MANUFACTURING

IT 537 Numerical Control in Manufacturing. Two sem hours (Formerly IED 537)
Study of the conversion of part descriptions to numerical control programs for mill and drill machining. Students write and execute NC programs using COMPACT II language. Verification of programs is accomplished using computer graphics.
Prereq: IED 215 Machine Tool Metalworking.

IT 633 Plastics Technology. Two sem hours (Formerly IED 533)
Sources and properties of plastics materials; testing, chemical production, molding and forming processes; the fabricating and finishing industry.
Prereq: IED 202 Plastics.

IT 634 Plastics Forming Processes. Two sem hours (Formerly IED 534)
Selection of plastics resins for product design; application of resins to industrial production, molding, forming and fabricating techniques, including mold design and testing.
Prereq: IT 633 Plastics Technology.

IT 636 Metal Technology. Two sem hours (Formerly IED 536)
A study of the metals industry; sources, characteristics and refining of metals, testing procedures, machining and processing applications, production methods.
Prereq: IED 123 Metals Processes or IED 215 Machine Tool Metalworking.

IT 649 Principles of Manufacturing Technology. Two sem hours (Formerly IED 549)
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.
POWER TECHNOLOGY

IT 510 Electricity-Electronics. Two sem hours (Formerly IED 510)
An investigation of basic theories combined with laboratory experiences and practical application of test equipment.
*Prereq: IED 200 Industrial Electricity and MTH 107 Trigonometry.

IT 610 Electronics Circuitry. Two sem hours (Formerly IED 610)
Electronic theories as related to solid state circuits. Solid state design, printed circuit board fabrication and circuit construction.
*Prereq: IED 414 Solid-State Electronics.

IT 620 Power Systems. Two sem hours (Formerly IED 520)
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.

IT 621 Energy Control Analysis.
Two sem hours (Formerly IED 521)
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.
*Prereq: IED 318 Energy Transfer systems or one undergraduate course in physics or permission of instructor.

OTHER COURSES
These upper division undergraduate courses may be elected for credit toward a master’s degree in industrial teacher education and/or industrial technology.

400 Site Planning and Development. (3)
401 Construction Estimating and Bidding. (2)
402 Construction Materials. (3)
414 Solid State Electronics. (3)
420 Materials Handling. (3)
424 Industrial Plant Facilities and Planning. (3)
428 Control and Instrumentation. (3)
452 Principles of Vocational-Technical Education. (3)

TENTATIVE SCHEDULE

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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

Devine, Elton A. (1976) Professor, Department Head, B.B.A., 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, Tribhован N. (1976) Associate Professor, B. Com., University of the Punjab; 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


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

Huntington, Albert W. (1969) Associate Professor, B.S., M.S., Indiana State University; Ph.D., University of Michigan

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, Department Head, 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

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<th>Name</th>
<th>Year</th>
<th>Position/Institution</th>
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<tr>
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<td>1970</td>
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