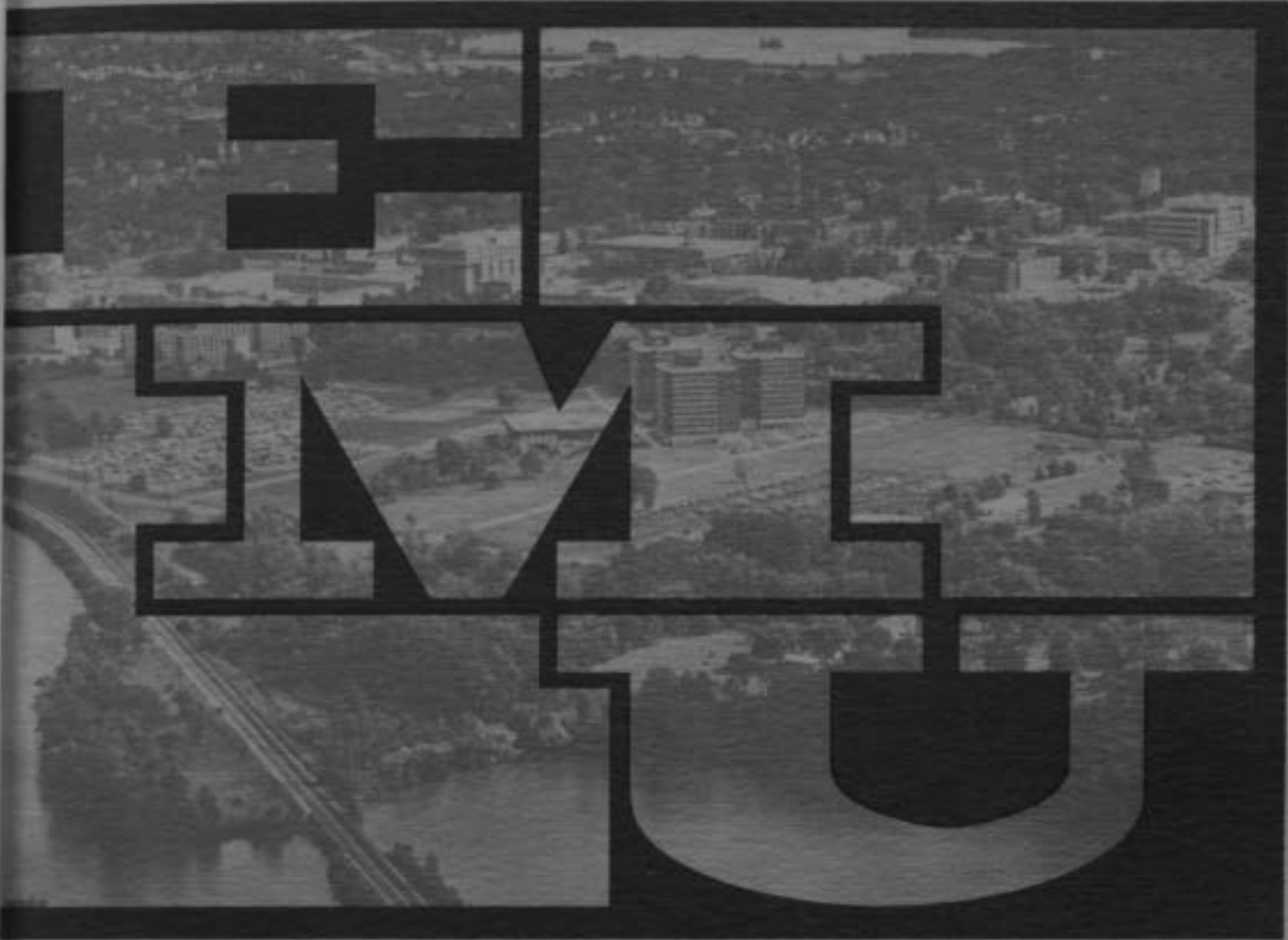


# EASTERN MICHIGAN UNIVERSITY BULLETIN



Undergraduate Catalog  
1973-1974

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# **EASTERN MICHIGAN UNIVERSITY BULLETIN**

## **The Undergraduate Catalog**

118th Annual Edition

ACCREDITED BY

The North Central Association of Colleges and Secondary Schools

The National Council for Accreditation of Teacher Education

The American Chemical Society

American Assembly of Collegiate Schools of Business

National Association of Schools of Music

Announcements for 1973-1974

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# EASTERN MICHIGAN UNIVERSITY

Ypsilanti, Michigan 48197

## GOVERNMENT OF THE UNIVERSITY

The 1963 Constitution of the State of Michigan places Eastern Michigan University under a board of control 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 money paid by the people of Michigan and receipt of student tuition and fees.

## THE BOARD OF REGENTS

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PLEASE ADDRESS SPECIFIC INQUIRIES TO THE FOLLOWING OFFICES:

Admission (undergraduate).....	Admissions and Financial Aids. Office
Admission (graduate).....	Graduate School
Adult Education.....	Field Services Office
Alumni Affairs.....	Alumni Relations Office
Campus life.....	Counseling Center
Campus visits of individual or groups.....	Admissions and Financial Aids. Office
Catalogs (undergraduate).....	Admissions and Financial Aids. Office
Catalogs (graduate).....	Graduate School
Consultation services to schools.....	Field Services Office
Courses of study.....	Academic Advising Office
Curricular requirements and scheduling.....	Academic Advising Office
Degree and Certification requirements.....	Academic Records and Teacher Certification. Office
Fees and financial aids.....	Student Accounting Office
General welfare and academic progress of individual students.....	Counseling Center
In-Service and Correspondence Courses.....	Field Services Office
Living accommodations.....	Housing Office
Loans.....	Admissions and Financial Aids. Office
Opportunities for earning a portion of University expenses.....	Placement Center
Program information (undergraduate).....	Admissions and Financial Aids. Office
Program information (graduate).....	Graduate School
Registration of applicants for teaching, business and industrial positions.....	Placement Center
Scholarships and grants-in-aid.....	Admissions and Financial Aids. Office
Speakers for special occasions.....	Field Services Office
Teaching vacancies.....	Placement Center
Transcripts.....	Academic Records and Teacher Certification. Office
Transfer Credit.....	Academic Records and Teacher Certification. Office
Work offered in the field of assisting handicapped children and occupational therapy.....	Special Education Department



Assistant Deans . . . . . Stanley A. Ward  
 Nancy L. Dahl

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 Administrative Assistant . . . . . Vincent A. Neton  
 Resident Area Coordinators . . . . Tom Sullivan  
 Jon Swanson  
 Resident Counselors . . . . . Anita Bartkus  
 Suzanne Brigham  
 Patrick Spielmacher

**Placement Center:**

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 Assistant Directors . . . . . Donald C. Boy  
 Theophilus E. Hamilton  
 Kenneth T. Mac  
 Assistant Director (Student Employment)  
 Ruth F. Burso

**Minority Affairs:**

Director . . . . . Roselle W. Davenport

**UNIVERSITY RELATIONS**

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 Personnel Officer . . . . . Robert L. Shipm  
 Personnel Officer . . . . . Cynthia C. O  
 Employment Manager . . . . . John Thom

**WEMU-FM:**

Station Manager . . . . . Richard Jacqu  
 Program Director . . . . . Arthur J. Tim

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**Administrative Assistant to the President**

Mitchell M. Osadch

**Alumni Relations:**

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 Assistant Director . . . . . Douglas G. Mc

**Field Services:**

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 Associate Director . . . . . Ralph A. Ges

**University Conferences:**

Coordinator . . . . . Frederick J. Pet

**Information Services:**

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 News Writer . . . . . Jeanne B. Jord  
 News Writer . . . . . David S. Gre  
 Publications Editor . . . . . Neil C. Bertr  
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 Assistant Publications Editor . . . . Nancy J. MJ  
 Art Director . . . . . Donald L. Hubach  
 Assistant Art Director . . . . . William M. Beck  
 Sports Information Director . . . . . John C. Found  
 Assistant Sports Information Director . . . Terry Barn

**SPARD (Special Projects and Research Development)**

Lee K

**Athletics:**

Director . . . . . F. L. Fernan



# 1973-1974 UNIVERSITY CALENDAR

## FALL SEMESTER, 1973

August 25, 26, Saturday and Sunday . . . . . Move in Days  
 August 27, Monday . . . . . Classes Begin  
 September 3, Monday (No Classes) . . . . . Labor Day  
 November 21-25, Wednesday noon (12:00)  
 through Sunday . . . . . Thanksgiving Recess  
 November 26, Monday . . . . . Classes Resume  
 December 9, Sunday . . . . . Mid-year Commencement  
 December 10, Monday . . . . . Last Day of Classes  
 December 11-15, Tuesday through Saturday  
 Final Examinations  
 December 15, Saturday . . . . . Fall Semester Closes

## SPRING SESSION, 1974

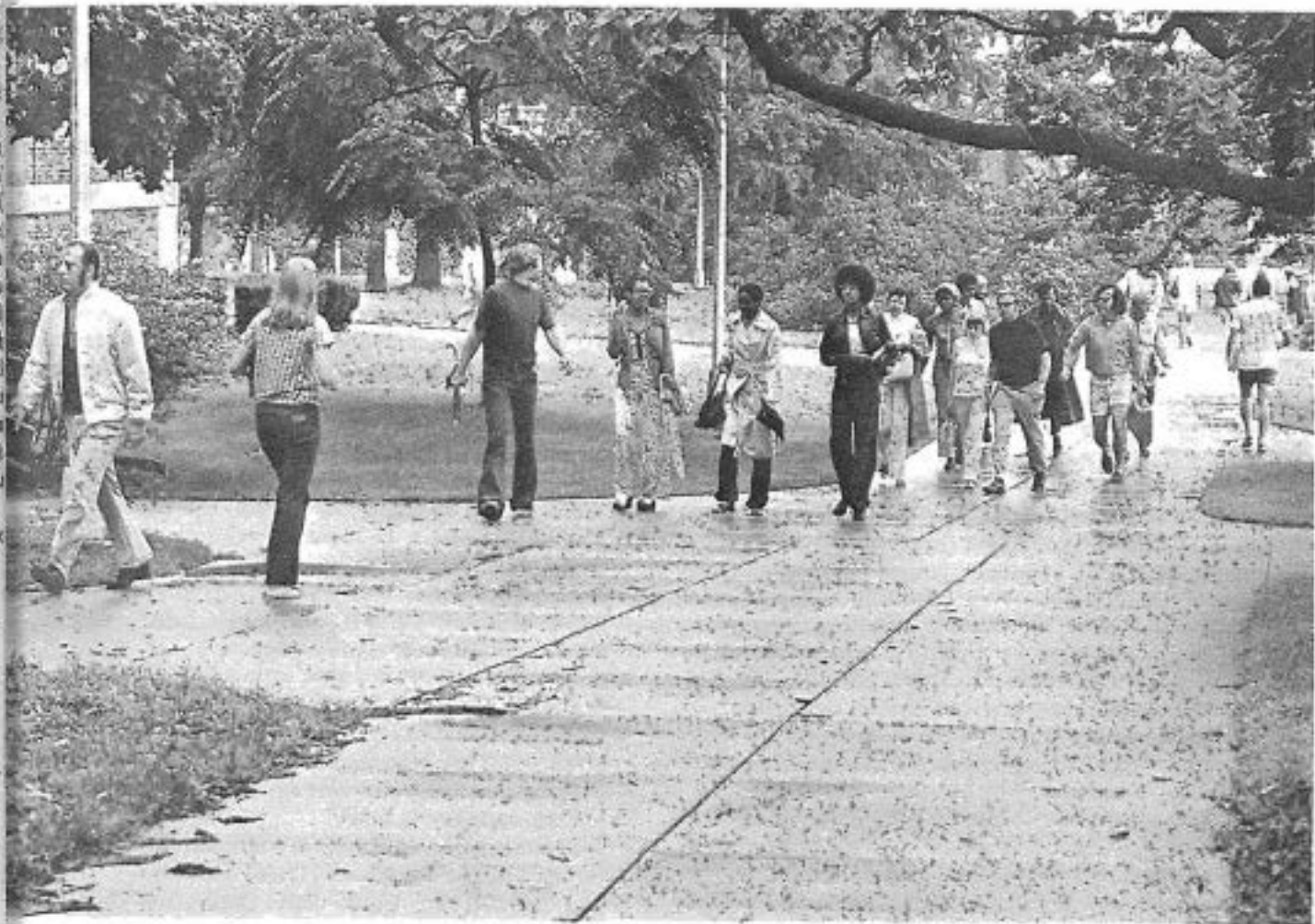
April 29, Monday . . . . . Classes Begin  
 May 27, Monday (No Classes) . . . . . Memorial Day  
 June 19, Wednesday . . . . . Spring Session Closes

## SUMMER SESSION, 1974

June 24, Monday . . . . . Classes Begin  
 July 4, Thursday (No Classes) . . . . . Independence Day  
 August 2, Friday . . . . . Six Weeks Session Closes  
 August 14, Wednesday . . . . . Summer Session Closes

## WINTER SEMESTER, 1974

January 3, Thursday . . . . . Classes Begin  
 March 7-10, Thursday through Sunday . . . . . Winter Recess  
 March 11, Monday . . . . . Classes Resume  
 April 3, Wednesday . . . . . Honors Convocation  
 April 12-14, Friday through Sunday . . . . . Easter Recess  
 April 15, Monday . . . . . Last Day of Classes  
 April 16-20, Tuesday through Saturday  
 Final Examinations  
 April 20, Saturday . . . . . Commencement  
 April 20, Saturday . . . . . Winter Semester Closes



# GENERAL INFORMATION

## LOCATION

Eastern Michigan University is located in Ypsilanti, a community of about 60,000 people, 30 miles west of Detroit and seven miles east of Ann Arbor. Ypsilanti is exceptionally convenient to widely diversified cultural, commercial and industrial activities and to all types of transportation.

Detroit Metropolitan Airport is 15 miles away. I-94, the major east-west expressway in lower Michigan, borders Ypsilanti on the south. A north-south expressway passes between Ypsilanti and Ann Arbor, connecting with the Ohio turnpike to the south and with other interstate highways to the north.

In addition to the extensive cultural opportunities at Eastern, the resources of the University of Michigan are 15 minutes away, and downtown Detroit is a 45-minute drive. Approximately four million people—more than half the population of the state of Michigan—live within 50 miles of the Eastern Michigan University Campus.

## RESOURCES

Eastern Michigan University includes all the resources of a rapidly-growing, multi-purpose university. Faculty, staff, physical plant and related facilities are available for enrollment of more than 20,000 students.

The College of Education is Eastern's oldest college, and includes the departments of education, educational leadership, educational psychology, guidance and counseling, curriculum and instruction, special education and occupational therapy and health, physical education and recreation.

The College of Arts and Sciences includes departments of art, biology, chemistry, economics, English language and literature, foreign languages and literature, geography and geology, history and philosophy, mathematics, music, physics and astronomy, political science, psychology, sociology, and speech and dramatic arts.

The College of Business includes the departments of accounting and finance, business education, general business, management, marketing and the bureau of business services and research.

Eastern offers specialized non-degree courses in pre-dentistry, pre-engineering, pre-forestry, pre-law, pre-medicine and osteopathy, pre-mortuary science, pre-pharmacy and pre-social work. Professional curriculums include applied science, medical technology and occupational therapy.

Specialties in undergraduate education programs include early and later elementary teaching, secondary teaching and teaching of art, business education, home economics, industrial education, library science, music, physical education, recreation and special education.

The applied science departments of the University include home economics, industrial education and military science.

The main campus is located on approximately 275 acres on the north side of Ypsilanti near the Huron river. An additional 182 acres west of the central campus houses athletic facilities and the Westview apartments for married students.

On-campus housing for more than 6,000 persons is provided in residence halls and married student apartments. Much of this space can be made available for conference guests, students taking short-term courses and others during summer months.

Eastern operates a summer session offering regular credit courses in both graduate and undergraduate fields. In addition to regular courses, special sessions and concentrated workshops are held in areas of particular interest. Enrollment in the University's summer sessions in 1971 exceeded 8,000.

The University's Division of Field Services offers regular and special courses in communities throughout Michigan, and especially in the southeastern section of the state. The division also provides consultative service in adult education activities, conferences and workshops and a variety of other specialized services designed to carry the resources of the University into communities throughout the state.

## MAJOR BUILDINGS

- Richard G. Boone Building houses the College of Education and a post office substation.
- John D. Pierce Hall houses major administrative offices.
- Frederic H. Pease Auditorium seats 1,700 and is the location of the Frederick Alexander Memorial Organ. It has a stage, practice rooms, classrooms and faculty studios.
- Frederick Alexander Music Hall is adjacent to Pease Auditorium and houses faculty and practice studios, classrooms, a recital hall and large rehearsal hall.
- Julia Ann King Hall was renovated in 1971 to house the Music Department, the head of the department, music practice rooms and faculty; The Nursing Education Department, the head of the department and the faculty. There are also additional offices for the Special Education Department.
- Welch Hall houses University business offices.
- Sherzer Hall houses academic offices and the University observatory and astronomy laboratory.
- Strong Physical Science Building houses the Department of Physics and Astronomy and the Department of Geography and Geology.
- Daniel L. Quirk Jr. Dramatic Arts Building contains an instructional theater seating 381, radio facilities, studio, outdoor amphitheater, classrooms and offices housing dramatic and speech activities and the University radio stations.
- Walter O. Briggs Building houses administrative offices.
- Joseph E. Warner Physical Education Building is adjacent to Bowen Field House and contains gymnasium, classrooms, offices, special purpose rooms and a swimming pool.
- Wilbur P. Bowen Field House is one of the largest and most functional in the state. It houses a complete track house with an eight-lap-to-a-mile track, a basketball court and tennis, volleyball and badminton courts. Seating capacity is 5,500.
- Glenadine C. Snow Health Center provides the clinical services of the University Health Service.
- Charles McKenny Union offers dining and recreational facilities for students, faculty, staff and guests. It

vides meeting and conference rooms, food catering facilities, and book store and a ballroom.

Mary Ann Starkweather Hall is the center of campus religious activities.

Bertha M. Goodison Hall was renovated in 1971 to house the Counseling Center, Dean of Students, Student Government and Student Publications.

J.M.B. Sill Building houses classrooms and offices for the Departments of Fine Arts and Industrial Education, as well as the University Bookstore Annex, art galleries and two large lecture halls.

University Library opened in its present quarters at the beginning of the spring semester, 1967. It has seating space for 1,800 and houses approximately a half-million books, periodicals, documents and microfilms. Books are generally available from open stacks.

Pray-Harold Classroom Building houses the Departments of English Language and Literature, History and Social Sciences, Mathematics, Sociology and the College of Business.

R. Clyde Ford Hall provides office and classroom space for the educational television and foreign languages and literature departments.

Mark Jefferson Science Building, a new classroom and laboratory facility opened in 1970, contains the biology, chemistry and psychology departments.

Roosevelt School houses the departments of Home Economics and Military Science.

### STATEMENT OF PURPOSE

Eastern Michigan University is a multi-purpose state university. Its primary specialty, historically, has been teacher education. Its primary service area has been the southeastern section of Michigan. The University has expanded in recent years to include increased emphasis in all areas of liberal arts, in graduate study, in science, in business and industrial technology. An increasing number of students from outside the traditional service area attend Eastern. A substantial portion of the enrollment now comes from throughout the state, from other states and from abroad.

“ . . . . . the following statements of broad university objectives are pertinent. Eastern Michigan University aims to serve the educational needs of the people of the state of Michigan, with special attention to the needs of the southeastern part of the state. It seeks to provide a healthy diversity of background and experience in the student body by attracting students from other parts of the nation and the world. A strong interest in the growing area of international education is shown by its current commitment in the development of a teacher-education center in Somali Republic; in its program for the preparation of Peace Corps workers for the Somali Republic; and the services that a number of individual members of the faculty have in recent years rendered abroad.

Consonant with its aims and purposes, Eastern offers the following goals:

1. To make available to all undergraduates intellectual training and knowledge that will add meaning, scope, richness and interest to their lives, no matter where they make their careers.
2. To provide for undergraduates an education that will equip them to make important cultural, social and economic contributions to their community, their state,

and to the nation.

3. To provide for undergraduates training of a quality and scope that will qualify them to enter graduate and professional schools.

4. To provide for undergraduates and graduates the specific education and training to qualify them for careers in education, business, and some technological or specialized fields where the basis for such training traditionally exists or grows naturally from a strong program in the liberal arts and sciences, and when there is a felt need for such training.

5. To provide graduate work at the fifth-year level (master's degree) and the sixth-year level (specialist's degree), and further graduate work as needs arise.

6. To cooperate with other institutions of higher learning in meeting the needs of the region for adult and continuing education.

7. To extend and diversify present programs, including more support for research, as circumstances require and as financial support becomes available, provided that this expansion shall enrich the instructional program.”

### 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.

### REAFFIRMATION OF EQUAL EMPLOYMENT OPPORTUNITY AND AFFIRMATIVE ACTION POLICIES

It is the policy of Eastern Michigan University, in recognition of the essential rights of all employees and applicants as individuals, to recruit and hire in all job classifications without regard to race, color, sex, marital status, age, religion or national origin or ancestry. Further, it is the policy of the University to take affirmative action to ensure that all personnel actions, such as rate of compensation, promotion, retirement, transfers, fringe benefits, layoffs, return from layoff, University training programs, social and recreational programs are administered without regard to race, color, sex, marital status, age, religion, national origin or ancestry.

### CONTROL AND GOVERNING BODY

From its creation in 1849 until January 1, 1964, the institution was governed by the State Board of Education. With the adoption of the new state Constitution, EMU became constitutionally independent and is now governed by the eight-member Board of Regents. The Regents are appointed to eight-year terms by the governor, subject to the approval of the State Senate.

Members of the Board of Regents are Edward J. McCormick of Monroe, chairman, Virginia R. Allan of Dearborn, Veda S. Anderson of Ann Arbor, Dr. Charles L. Anspach of Mt. Pleasant, Timothy J. Dyer of Wayne, Dr. Richard Robb of Ypsilanti, Dr. Mildred Beatty Smith of Flint and George E. Stripp of Ypsilanti.

## HISTORY

Eastern Michigan University was founded by the State Legislature in 1849 to educate teachers for the public schools. Teacher preparation was the primary purpose of the institution for its first 100 years, but this purpose was always broadly interpreted and included instruction in liberal arts, science and other areas vital to the background of a well-qualified teacher. The University's capabilities in these various areas developed steadily, and were formally recognized in recent years by the designation of Eastern as a multi-purpose university with accredited and respected degrees in many areas of the liberal arts, social and natural sciences, business and pre-professional programs. Graduate study is offered in art, biology, chemistry, English language and literature, foreign languages and literature, geography and geology, history and philosophy, mathematics, music, physics and astronomy, psychology, speech and dramatic arts, accounting and finance, business education, general business, management, marketing, as well as in various areas of general and special education, health, physical education, recreation, home economics and industrial education.

In the 1960's Eastern experienced a period of sustained growth. Enrollment nearly quadrupled during the decade, and the number and variety of courses expanded to meet the needs of students and society. Present enrollment is approximately 18,500 and is not expected to change dramatically in the near future.

In its early years, Eastern, as one of the first education colleges in the nation, had a primary role in defining America's educational philosophy. At the time of the institution's founding, only five normal schools existed in the United States, none more than 14 years old. Eastern was the first west of Albany, New York. The Detroit Public School system was only 10 years old and had no high school. "Union grade schools"—multi-room schools formed by consolidating ungraded one-room school districts—were just beginning in some of the state's larger communities and only a few had high school departments.

With education in this primitive state and with Eastern presenting a pioneering role, a significant debate over the institution's curriculum evolved.

The Michigan State Normal School faculty began developing academic courses far more advanced than those offered in the public schools. This caused resentment among some, particularly when many normal graduates did not enter the teaching profession after graduation.

The institution insisted, however, that a liberal arts education is essential in the development of the professional teacher. This concept is one of the school's most important legacies to the teaching profession.

In 1956, recognizing the development of regional teachers' colleges in the state, Michigan State Normal College became Eastern Michigan College. On June 1, 1959, the college became Eastern Michigan University, comprising

three colleges—Arts and Sciences, Education and Graduate School. The College of Business was created in 1964.

## EASTERN MICHIGAN UNIVERSITY TODAY

Eastern will enroll approximately 18,500 students in the fall of 1973. Approximately 85 per cent of these students come from nine counties in southeastern Michigan, nearly half of them from Wayne County. All areas of Michigan are represented in Eastern's student body, as are more than 35 other states, Washington, D.C., the Philippines and Puerto Rico. Nearly 40 countries are represented in Eastern's student body.

Although Eastern is 124 years old, its most rapid growth has been recent. Eastern enrolled just over 1,000 students in 1899, and had grown to 2,520 in 1924. The 1924 enrollment was not exceeded until after World War II. In 1955, Eastern enrolled 3,400 students and in 1960, 5,100. Enrollment jumped to 5,900 in 1962, 7,200 in 1963, 8,400 in 1964, 10,200 in 1965, 12,884 in 1966, 14,769 in 1967 and 19,107 in the fall of 1972.

Summer session enrollment has risen rapidly. More than 8,000 students enrolled for the 1972 spring session on Eastern's campus and more than 6,900 in the summer sessions.

Approximately \$50,000,000 in major construction has been completed since 1960, providing many new facilities as well as expanding and remodeling existing buildings.

The athletic plant includes a new 15,500-seat football stadium, a 2,500-seat baseball stadium and track and field facilities on the west campus.

In its development as a multi-purpose university, Eastern has not neglected its traditional role as one of the nation's leading teacher education institutions. In its history, 22,885 provisional certificates, 21,130 certificates and 3,834 other certificates have been awarded, for a total of 47,949. More of the state's teachers are graduates of EMU than of any other institution. University officials have said repeatedly that "Teacher education will continue to be a major concern."

However, in the 14 years in which Eastern Michigan has been a university, the development of other programs has been rapid. Approximately 42 per cent of EMU students are in non-teaching curriculums. This is reflected in new degrees being granted, including a bachelor's degree in fine arts.

A new and unique degree-program curriculum in criminal justice and criminology has been added for the 1974 year. The program emphasizes professional education rather than technical training. It will prepare students for professional positions in a wide variety of criminal justice agencies. The curriculum and its constituent courses have a wide appeal to students in other fields, particularly pre-law and public service.

A program offering a minor in journalism has also been added to the University's curriculum. The program gives basic training to teachers and those who expect to make journalism a career, and is also designed to offer students a general knowledge of the journalistic media, both print and electronic.



Other bachelor's degrees are in arts, science, art education, business education, business administration and music education. Master of arts, master of science, master of business administration, master of business education and specialist degrees are also offered.

The Department of Foreign Languages and Literature was among the first in the country to establish a language laboratory.

The state's first program in industrial education began at EMU in 1901.

A formal physical education program was begun at EMU in 1862 with the construction of one of the first gymnasiums in the state.

Through its Division of Field Services, EMU offers classes at 17 centers in 14 counties in southeastern Michigan, an extension program which began in 1921.

One of the first Departments of Geography in the country was established at EMU in 1900. In student enrollment the department ranks among the top five in the United States.

Music studies were established at EMU in 1854.

The Department of Special Education and Occupational Therapy, established shortly after World War I, was the first of its kind in Michigan. The Rackham School of Special Education, built in 1937 with a grant from the Horace Rackham Foundation, has served as a model and prototype for the rest of the nation. It is equipped with closed circuit television and the most modern therapeutic and instructional equipment.

Eastern had the first student union of any teacher's college in the nation.

Eastern now boasts one of the finest fine arts programs in the nation.

The new College of Business is one of the fastest-growing segments of the University, both in size and in stature.

Virtually every department in every college can claim at least one major contribution to the advancement of learning.

## THE FUTURE

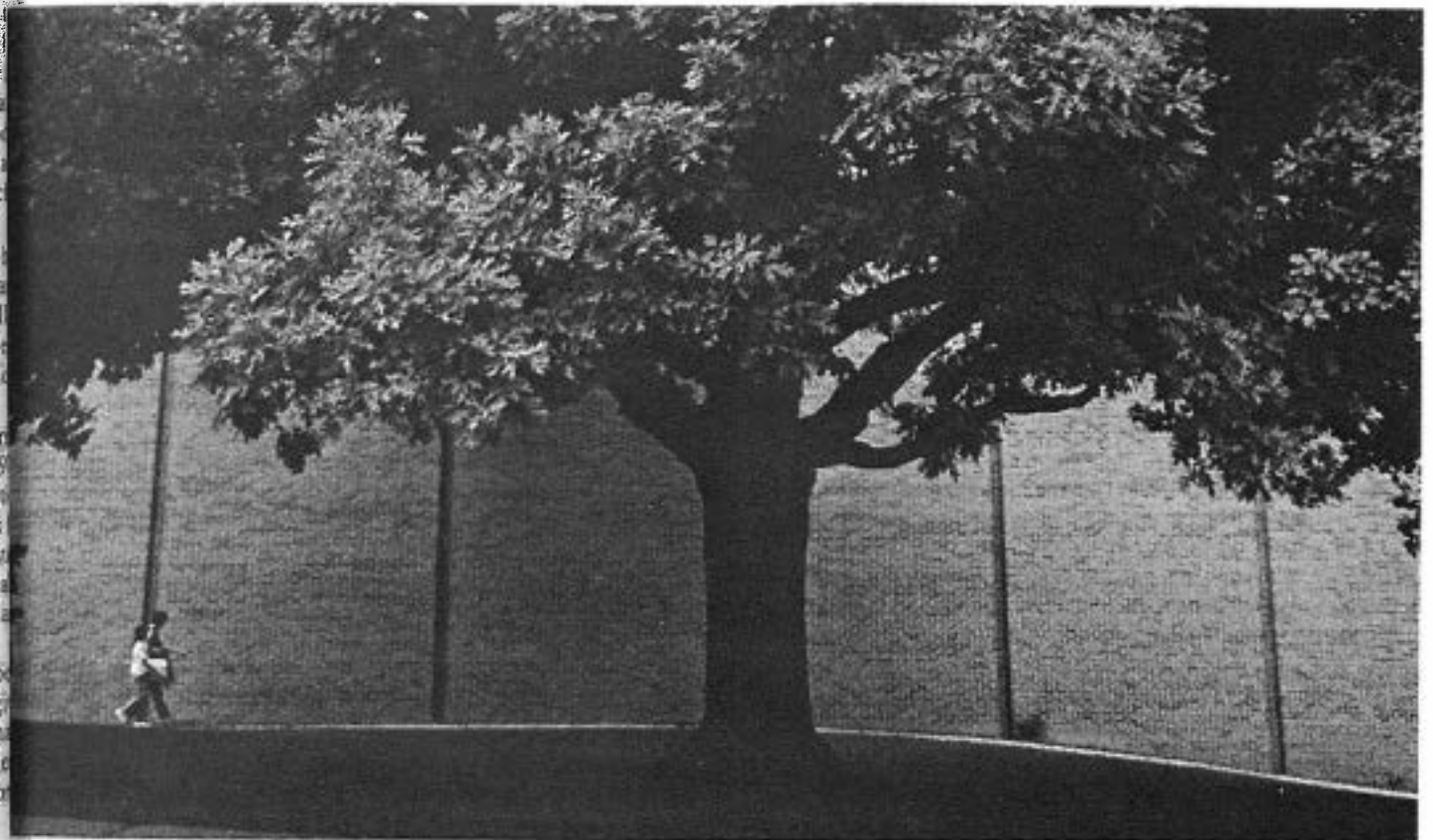
Eastern Michigan University's growth in the past decade has amazed alumni and friends who remember the quiet little teacher's college in Ypsilanti.

Profound changes are occurring simultaneously at EMU—both the more obvious physical growth and the less obvious conversion from a teacher's college to a university with all the enlargement in scope that this implies.

Under the dynamic leadership of Dr. Harold E. Sponberg, president of Eastern since July, 1965, Eastern has moved into a new era of excellence in which the stated policy of the University is to make "E" stand at once for Eastern and for Excellence.

## ACCREDITATION

Eastern Michigan University is an accredited member of the North Central Association of Colleges and Secondary Schools and it is accredited by the National Council for Accreditation of Teacher Education for the preparation of elementary teachers, secondary teachers and service school personnel. The specialist degree is the highest degree approved. The University is accredited by the American Assembly of Collegiate Schools of Business, by the National Association of Schools of Music and is approved by the American Association of University Women. The chemistry department is accredited by the American Chemical Society and the occupational therapy program by the American Medical Association in collaboration with the American Occupational Therapy Association.





# ADMISSION

## CRITERIA

Health, character, scholarship, special aptitude and general intelligence are considered in determining an applicant's qualifications for admission.

Permission to enroll at Eastern Michigan University is a privilege and carries with it certain responsibilities. The University reserves to itself, and the student concedes to it, the right to cancel enrollment and to require withdrawal whenever it becomes evident that the student is not conforming to the standards of scholarship and conduct established by the University.

## INFORMATION TO STUDENTS, PRINCIPALS AND COUNSELORS

To derive the greatest benefits from college, the high school student should take a liberal program of studies and should achieve an adequate level of scholarship in them. If he is planning a program of study in college which requires specific high school subjects as prerequisites, he should include these subjects in his preparation for college. He may be admitted to college without them, but he may not be fully admitted to his chosen curriculum. For example, if he is planning on an engineering program, he should take the prescribed high school mathematics to prepare him for that curriculum in college. In the event that a student has not taken these prerequisites in high school, he must take them in college before he can proceed in his chosen college curriculum. This is costly in time and money because it may extend his stay at the University by a semester or longer.

In order to plan effectively, the student should study the curriculum of his choice, as listed in the University catalog, to determine the specific prerequisite courses he must take to be admitted to that curriculum. In addition, he should consult his principal or counselor about his program of study in relation to his curriculum in college and to his choice of vocation. By achieving an adequate level of scholarship in high school, he will be better prepared for university work. Good planning in high school will smooth the road to his ultimate goal.

It is not necessarily true that graduation from high school will assure university admission. Students may be admitted in any of the following ways:

1. *Admission by Certificate:* A graduate of an accredited high school, academy, or equivalent may be admitted upon the presentation of an acceptable written record. Applicants will be considered in terms of their probability of success; their total school record, results of standardized tests, and other information from the school will be used to estimate their qualifications for beginning studies at Eastern Michigan University.

2. *Admission after Examination:* Applicants who do not qualify for admission on their academic records are required to submit the results of their College Entrance Examination Board Scholastic Aptitude Test (SAT) or the American College Test (ACT) as a part of the admissions process.

3. *Admission under the Michigan Association of Schools and Colleges Agreement:* A graduate qualified un-

der this agreement may be admitted without regard to a specific pattern of high school courses. The graduate will be held to the prevailing academic and/or testing requirements.

4. *Admission by Advanced Standing:* A student transferring from an accredited university, college or community college may be admitted upon presentation of an official transcript of credits showing honorable dismissal. A graduate of a Michigan county normal school, having completed the four-year high school course, may also be admitted upon presentation of an official transcript of credits showing honorable dismissal.

Except under unusual circumstances, a transfer applicant must present a transcript of credits showing at least a "C" average in his previous college work.

5. *Admission as a Special Student:* If a person 18 years of age or older wishes to study at this University as a special undergraduate student but is unable to furnish the credentials upon which his admission might be based, he may be admitted by the Admissions Office with the approval of the president. Before any special student receives a degree or certificate from this University, he must have met the requirements for admission prescribed under one of the other admission procedures numbered 1-4 above.

6. *Admission as a Guest:* One who is regularly matriculated and is in good standing in another college or university may be admitted as guest student. The student assumes full responsibility for determining whether or not the courses he takes at this University will apply in his program of study. A guest matriculant is urged to have his courses to be taken approved in advance by the registrar of the college or university to which the credits are to be transferred.

7. *Admission as an Auditor:* (See Auditing of Courses, page 18.)

## TESTING REQUIREMENTS

The Scholastic Aptitude Test (SAT) of the College Entrance Examination Board or the American College Test (ACT) is required of all new students prior to registration.

All new students except transfer students who have successfully completed 25 or more academic hours of college level work are required to submit the results of their College Entrance Examination Board Scholastic Aptitude Test (SAT) or the American College Test (ACT) prior to registration.

Freshmen and transfers who have not completed the SAT or ACT may obtain application blanks from their local high schools. The University recommends that the SAT or ACT be completed in the senior year of high school and not later than December for winter applicants or January for fall applicants.

Additional information may be obtained by writing to the College Entrance Examination Board, the American College Testing Program or the dean of admissions for financial aids.

## STUDENTS WHOSE NATIVE LANGUAGE IS NOT ENGLISH

Students whose native language is not English may apply for admission for the fall semester only. Students are advised to contact the Admissions Office prior to May 15 for complete admission requirements.

### FRESHMEN

Each applicant who has never attended a university, college, community college or any institution of higher education, should follow the procedures outlined below to make application for admission. The applicant should:

1. Secure an application from the Admissions Office or high school principal.
2. Complete the section of the application which is to be filled out by the applicant.
3. Give the application to the principal of the high school from which he graduated and request him to complete the application blank and forward it to the Admissions Office of Eastern Michigan University with a transcript of his high school record.
4. Provide the University with the results of his College Entrance Examination Board Scholastic Aptitude Test (SAT) or the American College Test (ACT).

If additional information is necessary, the applicant will be notified by the Admissions Office.

This application may be made any time after the completion of the sixth semester in high school, but at least one month before the academic year begins. See section on Admission Deposit, page 14.

### ADVANCED PLACEMENT

Eastern Michigan University participates in the Advanced Placement Program conducted by the College Entrance Examination Board. It awards college credit and advanced placement to a maximum of twelve semester hours for work in college level courses taken in high school and supplemented by satisfactory scores on national examinations of the program. Complete information to this available on request to the Admissions Office.

### COLLEGE LEVEL EXAMINATION PROGRAM

The University also participates in the College Level Examination Program of the College Entrance Examination Board and grants credit to students who have received undergraduate admission to the University and successfully pass approved examinations. Details of the program and indication of the areas in which credit is accepted are to be found in this catalog in the section entitled "Student Responsibilities and Information, Credit by Examination."

## TRANSFER STUDENTS

Any individual who has attended a university, college, community college or an institution of higher education other than Eastern Michigan University should follow the procedures outlined below. The applicant should:

1. Secure an application from the Admissions Office of Eastern Michigan University.
2. Complete the section of the application which is to be filled out by the applicant.
3. Give the application to the institution last attended and request that the application be completed and returned with an official transcript of former work to the Admissions Office of Eastern Michigan University.
4. Provide the University with the results of his College Entrance Examination Board Scholastic Aptitude Test (SAT) or the American College Test (ACT) if the applicant has earned less than 25 semester hours.

*If the applicant has attended a non-accredited college or institution of higher education, he will need to provide the Admissions Office with an official transcript of his high school record.*

*If the applicant has earned less than 25 semester hours in previous attendance at an accredited institution, he will need to provide the Admissions Office with an official transcript of his high school record.*

To avoid possible loss of credit toward graduation requirements, an Eastern Michigan University student who wishes to take courses at another college or university should secure approval of the department concerned or dean of academic records and teacher certification.

### FORMER STUDENTS OF EASTERN MICHIGAN UNIVERSITY

Former students not in attendance at Eastern Michigan University in the immediate preceding semester (summer excepted) are required to make application for readmission in the Academic Records and Teacher Certification Office at least two months prior to enrollment. The applicant should:

1. Secure an application for re-enrollment from the Academic Records and Teacher Certification Office.
2. Complete the application and return it to the Academic Records and Teacher Certification Office.

If the student has attended any institution of higher education since enrolled at Eastern Michigan University, he/she must secure a transcript of work done elsewhere and submit it to the Academic Records and Teacher Certification Office with an application for readmission.

If absence from Eastern Michigan University was by request of the University, the student must initiate any application for re-enrollment with the Academic Advising Office.

If the student wishes to advance register for a session, the application for re-enrollment should be filed no later than the following dates:

- For Fall Semester . . . . . March 15
- For Winter Semester . . . . . Nov. 1
- For Spring Session, . . . . . March 1
- For Summer Session. . . . . Between April 10 and June 8

# TUITION AND FEES

## FEES SUBJECT TO REVISION

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

### APPLICATION FEE

An application fee of \$10.00 must accompany each undergraduate application for admission to Eastern Michigan University. The fee is not refundable and does not apply to any tuition or fees.

### ADMISSION DEPOSIT

(Advance Tuition Payment)

Each newly admitted undergraduate student is required to make an advance tuition payment in the amount of \$50.00 to validate his enrollment. This tuition payment is applied toward the student's tuition and fees for the semester for which he has been admitted.

Refund of the advance tuition payment or transfer to another semester will be made if requested by the dates shown below. Failure to enroll in classes for the specified semester or to request a refund or transfer by the deadline date will result in forfeiture of the payment.

All deposits received or accepted after the stated deadline date for refund are non-refundable deposits.

Session or Semester	Refund or Transfer Deadline
Summer, 1973 . . . . .	May 1, 1973 or first work day after
Fall, 1973 . . . . .	June 1, 1973 or first work day after
Winter, 1974 . . . . .	December 1, 1973 or first work day after
Spring, 1974 . . . . .	April 1, 1974 or first work day after

The date that a request for refund or transfer is received by the Admissions Office, or postmarked, will determine the eligibility for refund.

### 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 a semester. Credits or other statements of record will be withheld and the student will be ineligible for further registration at E.M.U. until all obligations have been fulfilled.

### OFFICIAL REGISTRATION DAY

The official registration day each semester for each student for purposes of tuition and registration fee assessment is the day he completes his initial registration for the semester.

### REGISTRATION FEE

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

This fee is assessed and collected with the student's tuition and is non-refundable after the student registers for the semester or session.

## TUITION SCHEDULE— UNDERGRADUATE

(Fall and Winter Semesters)

(See Graduate Catalog for Graduate Tuition Schedule)

### MICHIGAN RESIDENT

Credit Hours	Tuition	Registration	
		Fee	Total
1	\$ 17.50	\$20.00	\$ 37.50
2	35.00	20.00	55.00
3	52.50	20.00	72.50
4	70.00	20.00	90.00
5	87.50	20.00	107.50
6	105.00	20.00	125.00
7	122.50	20.00	142.50
8	140.00	20.00	160.00
9	157.50	20.00	177.50
10	175.00	20.00	195.00
11	192.50	20.00	212.50
12	210.00	20.00	230.00
13	227.50	20.00	247.50
14	245.00	20.00	265.00
15	262.50	20.00	282.50
16	280.00	20.00	300.00
17	297.50	20.00	317.50
18	315.00	20.00	335.00

### NON-RESIDENT

Credit Hours	Tuition	Registration	
		Fee	Total
1	\$ 43.75	\$20.00	\$ 63.75
2	87.50	20.00	107.50
3	131.25	20.00	151.25
4	175.00	20.00	195.00
5	218.75	20.00	238.75
6	262.50	20.00	282.50
7	306.25	20.00	326.25
8	350.00	20.00	370.00
9	393.75	20.00	413.75
10	437.50	20.00	457.50
11	481.25	20.00	501.25
12	525.00	20.00	545.00
13	568.75	20.00	588.75
14	612.50	20.00	632.50
15	656.25	20.00	676.25
16	700.00	20.00	720.00
17	743.75	20.00	763.75
18	787.50	20.00	807.50

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

In determining tuition assessments, both activity and academic hours are counted.

## AUDITING FEES

Tuition and registration rates for auditing courses are the same as for credit. See page 18 for regulations governing auditing of courses.

## WORKSHOP SESSIONS

Several two- and three-week workshop sessions are offered. A workshop fee is assessed for each workshop independent of tuition for other enrollments. The registration fee does not apply to workshop sessions.

A credit adjustment of 100% of the workshop fee assessed will be made to those students who withdraw prior to noon of the first day of the session. No other adjustment will be granted.

## PAYMENT OF TUITION

Tuition and other University fees are due and payable at the beginning of each semester or session. However, for those students who may prefer to make installment payments, the University provides an optional installment payment plan.

The Installment Payment Plan applies only to tuition and room and board. It consists of a minimum initial payment of 40% of the room and board and tuition assessments for the semester, and one, two or three monthly installments at the option of the student, each consisting of a minimum of 20% of the assessments for the semester.

An Installment Payment Service Fee of \$3.00 is collected with each installment payment.

## STUDENT ACCOUNTS

Tuition, room and board and other assessments are charged to an account established for the student on computer files. A statement is sent to each student prior to the beginning of each semester and each month that there is a balance on the account. The due date of each payment is shown on the statement.

A Late Payment Fee of \$6.00 will be assessed to each initial payment and installment payment not received by the due date.

If a student accrues two past-due installments in a current semester, his enrollment, room and board, and other University services will be suspended until his account is brought into a 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.

## ACCOUNT ADJUSTMENTS

Adjustment to assessments are computed electronically and entered into student accounts following the close of the program adjustment period each semester.

Adjustments are not made for the registration fee.

Exceptions to the adjustment policy are made for students who are called into military service other than by enlistment.

### Withdrawal from the University:

1. A credit adjustment of 100% of the tuition assessment

for the semester will be made to those students who cancel their registration and withdraw from the University prior to the first day of classes. (Actual dates are printed in the class schedule for each semester and session.)

2. A credit adjustment of 60% of the tuition assessment for the semester will be made to those students who withdraw from the University on the first day of classes or within 20 days (seven days for the spring and summer sessions) thereafter. (Actual dates are printed in the class schedule for each semester and session.)

### Decrease in Academic Load:

1. A credit adjustment of 100% of the difference in tuition assessment for the semester will be made to those students who decrease their academic load before the first day of classes. (Actual dates are printed in the class schedule for each semester and session.)

2. A credit adjustment of 60% of the difference in tuition assessment will be made to those students who decrease their academic load on the first day of classes or within 20 calendar days (seven days for the spring and summer sessions) thereafter. (Actual dates are printed in the class schedule for each semester and session.)

## CANCELLATION OF REGISTRATION

After a student has registered, if he should decide before classes begin to not return to Eastern, he must sign a cancellation of registration form in the Registration Office before the first day of classes. If the student has applied for University housing, he must also cancel his contract in the Housing Office. This is necessary for cancellation of tuition and room and board assessments and adjustments to the student's account. In an emergency only, a letter to the Registration Office postmarked on or before the last official registration day will be acceptable. Telephone calls cannot be accepted.

## 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 Counseling Center. The date the request is made to the Counseling Center or the postmark date will be used in determining the amount of any assessment adjustment.

## QUALIFICATIONS FOR MICHIGAN RESIDENCE

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

1. Length of time lived in Michigan prior to first enrollment.
2. High school attended or previous college.
3. Domicile of parents.
4. Status as an elector.
5. Status as a taxpayer.
6. Source, length and continuity of employment.

7. Marital status.
8. Ownership of real estate.
9. Source of driver's license (state).
10. Source of vehicle license (state).
11. Self-supporting or dependency on others.
12. The type of visa held if a student from a foreign country.
13. Other factors which may be deemed relevant evidence of domicile.

A student shall have his residency status determined at the time of his initial enrollment and will be reviewed at each subsequent registration. It shall be the responsibility of any student adjudged as a non-resident, to apply for Michigan Residency if he believes he meets the requirements for such.

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

NOTE: It shall be 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 residence, to raise such questions in the Student Accounting Office in Briggs Hall.

### LATE REGISTRATION FEE

A late registration fee of \$5.00 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.

### PROGRAM ADJUSTMENT FEE

A fee of \$3.00 is assessed for each student-initiated change to his registration on or after the first day of classes of each semester. Such changes consist of adding a course or changing sections.

### APPLIED MUSIC FEE

All students accepted for private music lessons will be assessed an applied music fee at the following rates:

Music majors: \$60.00 per semester for all instruction.

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

Lessons are arranged through the office of the Music Department to begin only after payment of the music fee and tuition.

The applied music fee is payable each semester to the Cashier's Office with the student's tuition. 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, Graphics, Ceramics, Jewelry, Sculpture, 3-D Design
HPER	Snow Skiing, Trap & Skeet Shooting, Recreational Shooting, Bowling
Business Education	Business Laboratory Fees
Industrial Education	Flight Training Fees

### VEHICLE REGISTRATION AND FEE

All students, meeting the requirements of the law, 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.

Motor vehicles driven to or on the campus must be registered with the University, and the appropriate fee paid at the Safety Dept. during the first week of the semester.

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



**BOARD AND ROOM FEES**

**FEES SUBJECT TO REVISION**

See below or the Residence Hall Program brochure.

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

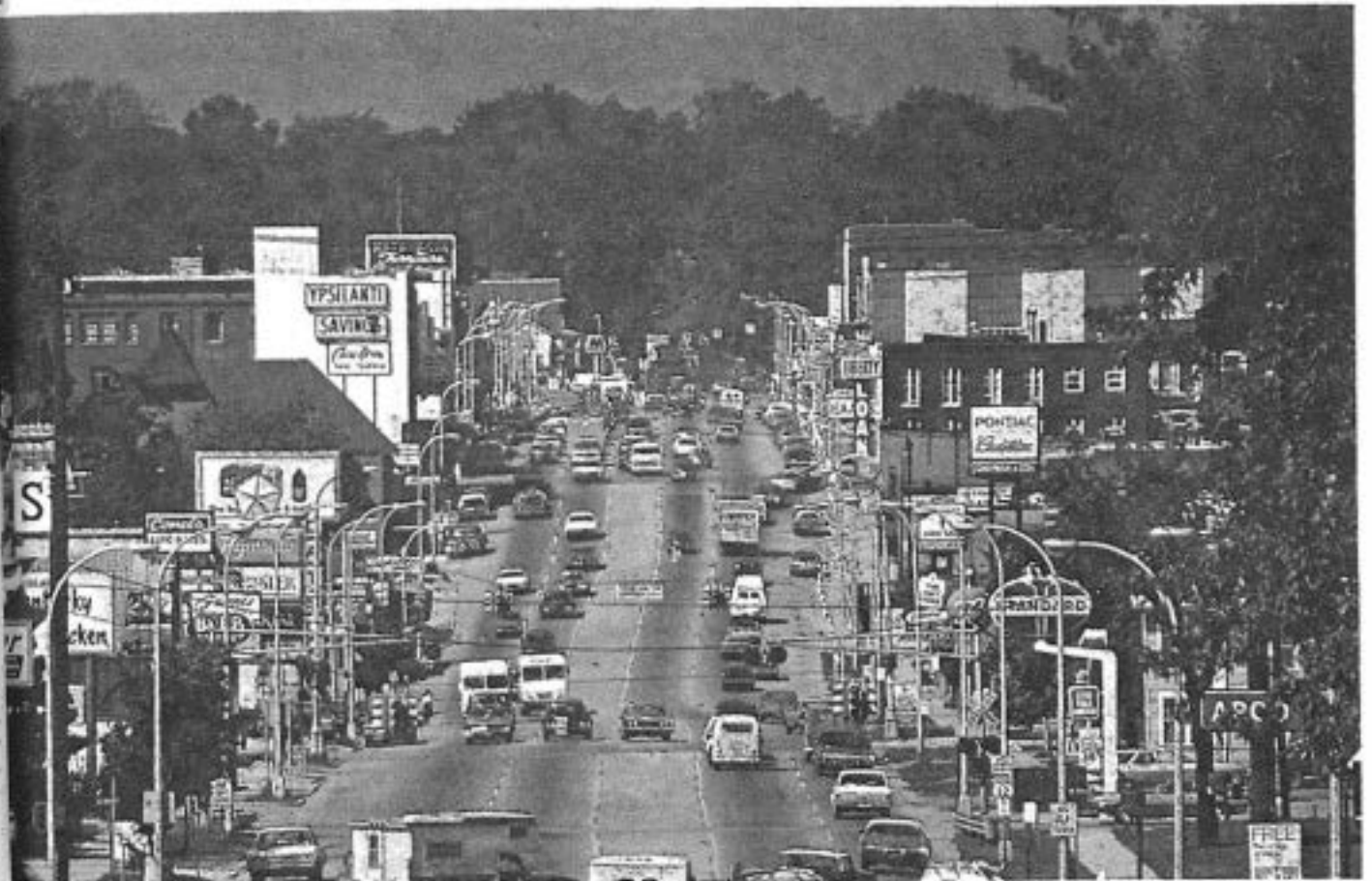
**SCHEDULE OF ESTIMATED EXPENSES PER SEMESTER**

Fall Semester, 1973	Amount	Due
Advance Tuition Payment . . . . . (New students only)	\$ 50.00	When admitted to E.M.U.
Registration Fee—All Students . . . . .	\$ 20.00	With tuition
Music Fee—Music Majors . . . . .	\$ 60.00	With tuition
Other Students . . . . .	\$ 30.00	With tuition
Residence Hall Damage Deposit . . . . .	\$ 35.00	With first room application
Balance of Tuition (Resident Student, 15 hours). . . . . (Less advance payment for new Students)	\$262.50	At registration or in accordance with the installment payment plan.
Room & Board . . . . . (\$577.50 for 15 meals-per-week option)	\$592.50	According to residence contract
Books, Supplies and Miscellaneous Expense . . . . .	\$125.00	After registration

**Total Estimated Annual Minimum Costs:**

Resident of Michigan . . . . . \$2,200.00 per year  
 Out-of-state student . . . . . \$2,987.50 per year  
 Vehicle registration fee—Applicable to all students who  
 bring vehicles on campus.  
 The \$35.00 residence hall deposit is payable only with

the first room application. For succeeding applications, only the charges against this deposit are necessary. See page 24 for an explanation of this deposit.  
 This estimate of expenses includes \$200 for personal expenses.



# STUDENT RESPONSIBILITIES AND INFORMATION

## THE ACADEMIC YEAR

The academic year is divided into two semesters of fifteen weeks each, a spring session of seven and one-half weeks, a summer session which offers six and seven and one-half week courses as well as workshops of one to three weeks duration. Those students whose native language is not English may apply for the fall semester only. All other students may enroll at the beginning of any semester or session. The calendar is printed at the beginning of this catalog.

## CLASS ATTENDANCE

The student is at the University primarily for the sake of his intellectual growth and development. Regular attendance and active participation in classes are important elements in the learning process. They also provide appropriate opportunities for the evaluation of the student's progress.

The student is personally responsible for the satisfactory completion of the course work prescribed by his/her instructors. This means specifically that he/she is expected to attend classes regularly, and that he/she is responsible for the work assigned in class, the material covered in class and for participation in class activities (including discussion and listening) designed by the instructor as a part of the learning experience.

## CREDITS

The unit of work or credit is the "semester hour." A semester hour is the credit granted in a course meeting one hour each week for one semester. Credits earned at Eastern on the "term hour" basis prior to September, 1939, are converted into semester hours by multiplying by 5/8.

## STANDARD COURSE LOAD

The standard student load in each of the fall and winter semesters is sixteen semester hours. No student may enroll for more hours without approval of the director of academic advising, and no credit will be given for work in courses not officially enrolled in and not so approved.

During the seven and one-half week spring and summer sessions the standard student load is six to nine semester hours, and a student may not take more than nine hours without permission. The standard student load in the six-week summer session is five to six semester hours, and a student must have special permission of the director of academic advising to elect more than six hours.

## INCREASED COURSE LOAD

The policies governing increased course loads are:

1. No student adjudged physically unfit will be permitted to carry an increased load.
2. No student who has earned less than fifteen semester hours of credit in residence at this institution is eligible to carry more than sixteen semester hours.
3. No entering freshman is permitted to carry more than sixteen semester hours.
4. No student whose cumulative scholarship index less than 2.5 will be eligible to carry more than sixteen semester hours. The index for the semester immediately preceding must be at least 3.0.

## REPEATING OF COURSES

A student may elect to repeat any course, regardless of the grade received, with the following provisions:

1. No course may be taken more than three times, except by permission of the Head of the Department which the course is offered.
2. No student may repeat more than ten different courses in the process of completing a baccalaureate degree, except by permission of the Academic Standards Committee.
3. All grades earned by a student will be retained in his permanent record.
4. Only the grade received the last time the course taken will be used in compiling graduation credits and determining the cumulative grade point average.
5. If a course taken at Eastern Michigan University is repeated at another accredited college or university, original grade will no longer be counted in computing EMU grade point average. The later grade will be computed as part of the transfer record.
6. If a course taken at another accredited college or university is repeated at EMU the original grade will no longer be counted in computing transfer credits and grade point average. The later grade will be computed as part of the student's EMU record.
7. If a course has been taken and repeated at other accredited colleges or universities, only the latest grade will be used in computing the transfer credits and grade point average.

## AUDITING OF COURSES

Regular students may audit courses subject to the approval of their adviser and the dean of the college offering the course. The student's intention to audit a course rather than to take it for credit must be established at the time of registration. Shifting from credit to "audit" status

is not permitted after the last day that classes may be adjusted. Obligation for attendance, preparation, recitation, and examination will be determined in advance by the instructor. No credit is awarded.

Others may be admitted as auditors under these additional restrictions:

1. By making application to the Admissions Office.
2. By paying tuition for auditors (See Tuition, page 15).
3. By having an official admission ticket approved by the dean of the college offering the course.
4. By having a medical examination at the University Health Service.

## PASS-FAIL OPTION

A student may elect to take a course under the Pass/Fail Option for various reasons (*e.g. if he/she wishes to experiment in an unfamiliar field without jeopardizing his/her grade point average*). Under these circumstances, the limiting features of the option are as follows:

1. It may be exercised only by juniors and seniors in good standing.
2. It may be applied only to free electives, that is, to courses which are outside the student's major, minor, curriculum or basic studies requirements.
3. A maximum of six such courses may be applied towards graduation.
4. The student shall indicate his intention to take a course under the Pass/Fail Option at the time of registration. This decision becomes binding at the end of the program adjustment period.
5. The instructor will not be notified of the student's election of this option. The regular letter grade reported by the instructor will be recorded on grade reports and transcripts as follows:
  - a. Grades of A, B, C or D will be converted to P (Pass), and shall count as credit towards graduation.
  - b. The grade of E will be converted to F (Fail), and shall not count towards graduation.
6. A course taken under this option shall not be used in any way in the computation of the student's grade point average.

Students should be fully aware of the possible implications of this option for acceptance into graduate schools and competition for financial aid there. It has been ascertained that most graduate schools will accept students who have elected to take courses on a Pass/Fail basis, but that courses taken on this basis are sufficient in number on the transcript, the Graduate School Examination may be utilized to determine the student's acceptability. Graduate schools, in general, do tend to favor those applicants who have good letter grades on their transcripts.

## HONORS COURSES

Honors courses are offered in several departments to qualified seniors specializing in those departments. These courses are geared to encourage creative interest, to promote subject investigation in depth and to permit overviews of subject matter fields.

To be eligible a student must have completed twenty semester hours of work on his major.

An eligible student should consult with the head of the department, who will cooperate with the student in the

preparation of a systematic proposal which must include a statement of the problem, the resources or references to be used, the method by which the problem is to be solved, the amount of time required and the credit to be given. This statement must be filed with and approved by the dean of the college in which the course is taken. *The honors course election is limited to two semester hours in any one semester.*

The Department of English Language and Literature offers a special Honors Program for English majors. The regulations governing that program may be found on page 64.

## CREDIT BY EXAMINATION

Credit by proficiency examination is available in two ways—by direct examination in a department and through the College Level Examination Program conducted by the College Entrance Examination Board (CLEP).

In the first instance, a student who wishes credit by proficiency examination within a department in a course not included in CLEP, should first discuss his request with the head of the department in which the course is offered. If the request is approved by the department head, the student will then make application at the Office of the Vice-President for Instruction, where further steps will be explained to him/her. Only currently enrolled students may apply. Credit will not be awarded for any course below the level of a course for which the student already has credit. A student who fails to pass such an examination will not be permitted to take another examination in the same course until four months will have elapsed, and until the student shall have presented evidence of sufficient further study of the subject to justify re-examination.

In the second instance, certain specified examinations taken through the College Level Examination Program are accepted for academic credit at Eastern Michigan University. Tests are given at centers operated for the College Board by Educational Testing Service. The College Board scores the tests and reports the scores to the university and to the student. A CLEP *Bulletin of Information for Candidates* may be obtained from College Level Examination Program, Box 1821, Princeton, New Jersey 08540. The bulletin lists centers, dates of examinations and fees. The following regulations govern granting of CLEP credit at Eastern Michigan University:

1. Students who have been granted undergraduate admission at EMU may be granted CLEP credit.

2. EMU will honor CLEP credits as transfer credits when received as part of a transcript from an accredited two- or four-year college or university.

3. CLEP credit may not be granted when its acceptance would duplicate college-level work already taken. Specifically excluded from credit by this provision are CLEP examinations which are equivalent to any of the following:

- a. Courses which have been taken at another college or university and which are transferable to EMU

- b. Advance Placement Program courses which are applicable at EMU

- c. Courses already taken or in progress at EMU

- d. Courses at a lower level than courses for which credit has already been granted in the same subject area.

Information concerning the subject areas in which credit by CLEP examination will be granted, the test score required and the amount of credit allowed may be obtained in the Office of the Vice-President for Instruction.

## WITHDRAWALS FROM CLASS

### *First three weeks*

Any change in the student's program occurring during this period is accomplished through the Office of the Director of Registration as a part of the registration adjustment process. Such changes are not recorded in the student's permanent record.

### *Fourth through tenth week*

All student-initiated withdrawals are automatically accepted and recorded as "W" during this period. The instructor's signature must be secured on the withdrawal form as evidence that the instructor and the student have discussed the contemplated action including possible alternatives and consequences.

### *After tenth week—Until beginning of Final Exam Period*

A "W" may be granted during this period to students under either of the following conditions:

(1) The student's work in the course at the time of the withdrawal request is A, B or C.

(2) Unexpected emergency circumstances, which have arisen after the 10th week of the semester, prevent the student from completing the work of the course. These circumstances must be specific and verifiable.

The decision on awarding the "W" will be made by the director of academic advising or the director's designee, based upon evidence submitted by the instructor as to the student's academic standing at the time of application for the "W," and conferences with the student. If the application is denied, and the student fails to complete the work of the course successfully, a grade of "E" will be recorded by the instructor.

### *Notes on Procedure*

For the fourth through the tenth week, a withdrawal form may be secured from the Academic Advising Office, or from the office of any academic department. This form, with the instructor's signature, is submitted to the Academic Advising Office for official processing.

After the tenth week, the withdrawal request must be initiated at the Academic Advising Office. The decision made on the request will be communicated in writing both to the student and to the instructor in question.

The student should not stop attending class until he/she has received official notice that his/her requested withdrawal has been approved. If a student discontinues attending a class without officially withdrawing from the class and does not take the final examination, University policy requires that the instructor assign a grade of "E" for the course.

When withdrawal from the class brings the student's academic load below the minimum number of hours necessary to qualify as a full-time student for University housing, scholarship aid, student loans or any other benefit he enjoys for which academic enrollment was a prerequisite, the University may at its option take any or all of the

following steps:

- (1) deny permission to withdraw
- (2) cancel the benefits as of that date
- (3) declare the student ineligible for present and future benefits of a similar nature
- (4) deny permission to re-enroll in subsequent semesters.

## WITHDRAWALS FROM THE UNIVERSITY

A student who finds it necessary to withdraw from the University, initiates the procedure in the Counseling Center. The forms completed in this office are forwarded to the appropriate offices for processing the withdrawal. The current *Withdrawal from the University* policy is stated below:

1. During the first ten weeks of instruction in each semester (adjusted for shorter academic sessions), the student will be assigned the grade of "W" in each of courses if he officially withdraws from the University.

2. Between the end of the tenth week of the semester and the day before the beginning of the final examination period, the assignment of grades will be based on circumstances surrounding the necessity for withdrawal from the University. A grade of "W" will be assigned under either of the following circumstances:

a. The student's work at the time of the withdrawal request is A, B, C or D.

b. Unexpected emergency circumstances, which have arisen after the 10th week of the semester, prevent the student from continuing in the University. If neither of the above circumstances prevail, a grade of "E" will be assigned.

On all withdrawals from the University after the tenth week of a semester, the Academic Advising Office will obtain from each instructor a report of the student's academic standing in the course at the time of the withdrawal request.

A student who has withdrawn from the University and desires to re-enroll in a subsequent semester or session must follow the admission procedure for former students described on page 13.

## FINAL EXAMINATIONS

The responsibility for the evaluation of a student's achievement in a course rests with the instructor of the course.

Whether or not that evaluation shall include a final examination shall be determined by the instructor in line with departmental and University policy.

If a final examination is not given, the scheduled examination period shall be used for other class activity.

If a final examination is given, the student shall take the examination with his own class and at the time indicated on the examination schedule. Failure to take the examination at the scheduled time will result in a grade of "E," except when the requisite conditions for a grade of "I" are present.

## GRADES

The grades used by the University with their corresponding values in points are as follows:

Grade	Significance	Honor Points per semester hour
A	Exceptionally high order	4
B	Distinctly above the average	3
C	Average	2
D	Below average	1
E	Unsatisfactory (denoting failure)	0
Cr	Passing grade on Pass-Fail Option	0
F	Failing grade on Pass-Fail Option	0
I	Incomplete	
W	Withdrawal	

*Credits earned by student teaching, correspondence or pass-fail option are not accorded honor points.*

An "I" is awarded only when the student's work has been of acceptable quality, but the required amount has not been completed because of illness, necessary absence or other satisfactory reasons. It is never applied to poor work or to non-attendance of class by the student. It implies that the student has informed the instructor of the reason for the requested incomplete. An "I" must be removed by completing the required work before the end of the first month of the next semester the student is enrolled in this University; otherwise, the course will be recorded with a grade of "E." In exceptional cases e.g. when the next period of enrollment is two or more semesters after the receipt of the "I," or the reasons for lack of completion of the work originally were such that the instructor recommends the course be repeated) the student may apply at the Office of the Vice-President for Instruction to re-enroll in the course under this provision. Upon successful completion of the course, a "W" will be recorded as the previous grade.

The grade of "W" will be assigned only when an official withdrawal has been completed except as indicated in the preceding sentence. If a student discontinues attending a class without officially withdrawing from the class, the grade of "E" will be assigned for the course. Credit for a course in which the grades of "E" or "F" have been received can be earned only by repeating the course.

This system of grades went into effect at the beginning of the fall term, 1925. Each hour of credit earned prior to that date is evaluated as credit for those purposes for which a "C" average is required and does not enter into computation of the scholarship index.

The work of a student teacher is not evaluated according to the above system of grades but according to one of the following statements:

- P-S-Credit for certification
- Credit, but not for certification
- U-No credit

Any attempt to change an individual grade must be initiated no later than the end of the eighth week of the regular semester (fall or winter) following the semester or session in which the grade was given. For instructor-requested changes, this means that the appropriate form has been submitted to the department head. For student appeals, it means that the instructor has refused to make change, and the issue has been formally turned over

to the departmental grievance board.

An extension beyond this limitation may be permitted only by the dean of the college in which the course was taken. Such extensions will be granted only on verifiable evidence of emergency circumstances, such as serious illness or military obligation, which prevented the petitioner from acting during the prescribed period.

Note that the grade of "I" is covered by a separate set of requirements.

## SCHOLARSHIP INDEX

The total number of honor points acquired, divided by the total number of semester hours taken which carry honor points, gives the scholarship index.

## ACADEMIC DISTINCTION

The term *summa cum laude* (3.90-4.00); *magna cum laude* (3.70-3.89); or *cum laude* (3.50-3.69) will appear on the diploma of an individual whose academic record warrants such a level of distinction.

## ACADEMIC PROBATION

An undergraduate student is placed on academic probation when his cumulative grade point average at EMU, or from all college sources, is less than 2.00 (a "C" average). Placement on academic probation is automatic, and applies whether or not a student states that he has received official notification of such probation from the University.

A student's probationary status results from his academic record for the semester he has just completed, viewed in relation to his total academic record. (Note that "plus" honor points from institutions other than EMU cannot be used to reduce an honor-point deficit incurred at EMU.)

The University's action of placing a student on academic probation should make him aware that he is not making satisfactory progress toward completing his degree requirements. He should also realize that he must take steps, such as seeking additional help and advice, to ensure he can improve the quality of his academic performance so that he can continue his college career.

While on academic probation, a student must earn a grade point average of at least 2.00 (a "C" average) in each succeeding period of his enrollment (including the spring and the summer session) until probation is removed. This requirement applies regardless of where the academic work is taken.

Academic probation will be removed when a student's cumulative grade point average at EMU and from all college sources is at least 2.00 (a "C" average).

Within the first thirty days of a semester—and preferably within the first week of a semester—the student on academic probation is required to have a conference with *his assigned academic adviser* to review the student's program of classes and his plans for the semester. Further conferences may be required, or the student's academic course load may be restricted, or the student may be informed of special conditions stipulated by the Academic Advising Office, acting for the University Academic Standards Committee, to help ensure satisfactory progress



toward graduation.

While on academic probation, no student may register for, remain in, or receive credit for a Group IV Professional Education course offered by the following departments or divisions within the College of Education: Curriculum and Instruction, Social Foundations, Student Teaching, Educational Psychology, Guidance and Counseling, and Special Education (but not Occupational Therapy). This includes all strictly Group IV methods classes listed by cross-reference in these departments, even though the courses are also listed by and taught in other departments. It does not include the following introductory courses: 100 Introduction to Education, 241 Introduction to Speech Correction and 251 Education of Exceptional Children.

No credit may be earned in any graduate level course (500 and above) on-campus or off-campus, while an undergraduate student is on academic probation.

### ACADEMIC DISMISSAL

An undergraduate student is academically dismissed from the University when his cumulative honor-point deficit is excessive, or when he fails to meet the conditions of academic probation described above. The University Academic Standards Committee may take many factors into account in making a decision in a particular student's case, but ultimately a decision is based on a student's record of academic achievement.

A student on academic probation who fails to meet the required grade point average of 2.00 (C average) in each period of his enrollment while on probation will be academically dismissed.

A student not on academic probation whose cumulative grade point deficit at the end of any enrollment period is 13 or more will be academically dismissed. Thus, even though a student has not previously been on academic probation, it is possible for him to be dismissed because of the effect of one extremely bad semester.

*Exceptions* to the above policies may be made under the following conditions:

a. A student on academic probation who earns less than the required grade point average of 2.00 (C average) in any semester or session for which he is enrolled, may be retained on academic probation provided this is the recommended judgment of the Academic Standards Committee.

b. A freshman may, with the approval of the Academic Standards Committee, be permitted two full semesters of enrollment even though the grade point deficit is greater than 13 during the first semester.

c. A student on academic probation, whose grades for the current enrollment period include an "I", will be retained only at the discretion of the Academic Standards Committee.

### Readmission

A student is academically dismissed for two successive enrollment periods (one of which must be a full semester), unless unusual or extenuating circumstances exist. Readmission and re-enrollment cannot take place until this time period has elapsed. Readmission is not automatic; normally each student must have a readmission interview.

During this period a student may well gain the needed

maturity for pursuing a degree, through work experience, travel or course work at other accredited collegiate institutions. The student will be required to support eligibility for readmission through:

1. Documentation of his activities during the dismissal period which relate to the reasons for dismissal and which support his readiness to resume his academic career at Eastern Michigan University.

2. Earning a minimum grade point average of 2.00 (C average) if courses are taken at other accredited collegiate institutions.

3. Taking the SAT for re-evaluation in conjunction with Items 1 and 2, if considered necessary by the Academic Advising Office.

A student who is readmitted and is dismissed a second time will normally not be readmitted again.

*To apply for readmission a student must:* Obtain a petition for readmission form in the Academic Advising Office. Complete the form and return it to the Office of Academic Advising well in advance of the beginning of the semester for which readmission is desired, in any case no later than 14 calendar days prior to the first day of classes of a semester or session.

If any courses have been completed at other collegiate institutions since leaving Eastern, transcripts of such work must be included with the petition for readmission. If a student is enrolled in such courses at the time the petition for readmission is submitted, the transcripts must be received in the Academic Advising Office no later than the first day of classes of a semester or session. The grade-point average for all such work must be at least a 2.00 (C average).

A student who has been discharged from active military duty must include a copy of his separation record (DD Form 214) with the petition for readmission. If a student applies for readmission prior to his discharge, he may be readmitted conditionally pending receipt of his separation record.

### CLASSIFICATION

For purposes of figuring class levels, the following classifications are used.

Class	Semester
Freshman	2
Sophomore	3
Junior	4 or 5
Senior	85 or 90

### ACADEMIC SUPPORT SERVICES

Academic Support Services are designed to provide help and guidance to students in a variety of circumstances. Each serves specific needs and results from a concern for the student's total welfare.

1. **The Academic Advising Service**, located in Pierce Hall, provides assistance to students in the preparation of class schedules. This office also assists students who may be having difficulty with a class, by informing them if changing or dropping classes be necessary.

2. **The Counseling Center** is staffed with professional counselors with whom students can talk in confi-

about academic, emotional or social problems. It is located at 117 Goodison Hall.

3. **The Reading Development and Study Center** provides assistance to the student who wishes help in the diagnosing of problems relating to reading and study habits. It is located in 117 Goodison Hall.

4. **The Writing Clinic**, supervised by the English Department in 603F-Pray-Harrold, advises and assists any student who needs to develop writing skills.

5. **A Learning Resources Center**, located in room 102 University Library, provides tutorial help for students with academic problems involving understanding of assignments, and assists in the location of study materials.

6. **A Library Orientation Office** provides instruction in the use of library resources, and publishes instructional sheets on various subjects to help students to learn how to use the library materials. Specialized bibliographies on subjects of interest are also prepared here. It is located in room 217 University Library.

7. Individual departments have programs which are designed to assist students having difficulty with subject matter. Tutoring is provided for both groups and individuals.

8. **Residence Halls** are staffed with counselors who help students with study problems. Resident unit administrators (RUA) will direct students to the adviser.

9. **Guidance and Counseling Tutorial Program.** The Department of Guidance and Counseling in the College of Education provides individual and group counseling to any student at Eastern Michigan University. This service is particularly helpful to students who are seeking information or who are attempting to make decisions regarding personal-social, educational and vocational goals. It is located in 13 Boone Hall.

10. **The Cooperative Career Planning Program** is designed to help students in the determination of their career goals. It sponsors programs to emphasize developing career opportunities and to provide complete career or occupational information. Through an office at 321 Goodison Hall, several sources of information are coordinated to provide easily accessible information to help students become aware of career opportunities.

## PLACEMENT

Through its Placement Center, the University offers its graduates and alumni active aid in securing positions after graduation and in obtaining professional advancement. Complete records are kept of graduates and are added to as professional experience is gained and as additional advanced academic preparation is taken. The Placement Center desires to serve both the graduates and the hiring officials by bringing to each job offered the best qualified person and by providing jobs that fit qualifications of the individual graduate. The Placement Center serves as the channel through which much information about the performance of Eastern Michigan University graduates is brought back into the instructional program of the University. It is recommended that each graduate register at the Placement Center and develop a placement folder.

## STUDENT AND SUMMER EMPLOYMENT

Eastern Michigan University offers a centralized placement service for students interested in employment opportunities. This service is available through the Student Employment Office at the Placement Center.

Thousands of students each year obtain part-time positions through Student Employment while attending the University. While the majority of these positions are on campus, a large number are in the surrounding community. They range from odd jobs and babysitting to extended part-time, highly skilled positions. The Student Employment Office of the Placement Center attempts to fit the positions to the student's interests, skills, class schedule, etc., as much as possible.

Summer employment opportunities have traditionally been with camps and resorts, but more and more businesses and industries, governmental agencies, etc., are using college students during their summer vacation periods. Summer employment opportunities start to be listed about Christmas time. Many employers visit the campus to interview students for summer positions.

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 Aids, 212 Pierce Hall.

## SNOW HEALTH CENTER

The services of Snow Health Center are available to all enrolled students and their spouses for both out-patient and in-patient care.

These services include: physician and nursing services, pharmaceuticals, laboratory services, immunizations, tuberculin testing, allergy injections, minor surgical procedures and x-ray, as well as infirmary care and referral services to area physicians and hospitals. In addition, medical specialty clinics in allergy, dermatology, gynecology, internal medicine and orthopedics are scheduled on a regular basis.

The Health Center and infirmary are open 24 hours a day when classes are in session, providing full-time nursing services. Physicians are on duty from 8:00 a.m. to 10:00 p.m. during the week; from 8:00 a.m. to 12 noon and 4:00 p.m. to 6:00 p.m. on Saturdays, 10:00 a.m. to 12 noon and 4:00 p.m. to 6:00 p.m. on Sundays. Medical officers are on duty from 10 p.m.-7 a.m. daily, including weekends.

Between 8:00 a.m. and 6:00 p.m. weekdays, there is no charge for office visits. After 6:00 p.m. weeknights and on weekends after 10:00 p.m. there is a \$5.00 charge.

The student is responsible for payment of prescriptions, laboratory services, x-rays, immunizations, tuberculin testing, allergy injections, surgical procedures, office visits with medical specialty clinic physicians and the services of a physician or night medical officer after 6:00 p.m., referrals to area physicians and hospitals and transportation for off-campus medical care.

Insurance coverage individually held, or through parents' plans, will be utilized for in-patient and out-patient care when applicable. A voluntary Student Health Insurance plan, designed to help defray medical expenses in

case of accident or illness, is available to students. Information can be obtained in the Snow Health Center Insurance Office.

The Health Center staff physicians work closely with the University Counseling Center in referring students with emotional or psychiatric problems for counseling and treatment. Arrangements for psychiatric consultation are made through the Counseling Center.

## LOANS, SCHOLARSHIPS AND GRANTS

Eastern Michigan University attempts to assist, to the limit of available funds, every capable student who desires an education.

Eastern Michigan University is a participant in the National Direct Student Loan Program, the College Work Study Program, the State of Michigan Guaranteed Loan Program, the Educational Opportunity Grant Program and the Law Enforcement Education Program. For information concerning loans, scholarships and grants-in-aid, students should consult with the dean of admissions and financial aids.

## STUDENT HOUSING

Eastern Michigan University is a residence college, and all undergraduate students are required to live in residence halls to the extent that space permits. By authority of the Board of Regents, the president may make exceptions for a given academic year or semester.

For the 1973-74 academic year, all junior and senior students shall be exempted, and freshman and sophomore students who are of 21 years of age or older prior to the beginning of the fall semester, who are married, who commute from the home of their parents, or who have completed two years of active military duty, will be exempted on application. All other single freshman and sophomore students are required to live in the residence halls.

Although any student may apply for University housing, admission to the University does not guarantee the availability of University housing. To qualify for admission and continued enrollment, each student, at the freshman and sophomore level, must submit either an application for residence halls, or submit an application for exemption and receive approval to live off-campus. Students are encouraged to make early application.

### Residence Halls for Men and Women

The University provides a variety of physical environments and living styles from which to choose. Each choice commonly brings more than a simple room and board arrangement to the student. Significant student development resources are numerous for the Residence Hall Program participant: full-time professional counselors, administrators, and advisers; peer advisers and counselors; opportunities for participation in educational, recreational and social activities; part-time employment; convenient access to campus educational facilities and services; the

general advantages of being a full-time member of the University community.

All new students and former students who do not have a residence hall deposit on account with the University from the previous semester, must submit their application to the University Cashier's Office with a \$35.00 residence hall deposit. This deposit is not applied toward the initial residence hall payment and is refunded upon contract fulfillment at the conclusion of the student's period of occupancy, or if cancellation is received by the Housing Office prior to the cancellation date published in the residence hall contract and Residence Hall Program booklet.

Cancellation requests must be communicated in writing to the Housing Office. The postmark will be used as the determining factor when the request is received by mail.

Residence hall fees for room and board are \$1,155 per academic year for 20 meals per week; the 15-meal option is \$1,085. Rates for rooms in Jones-Goddard are \$1,085 for the 20-meal plan; \$1,055 for 15 meals per week. NOTE: A single-occupancy room option at \$225 additional per academic year will be available, providing actual occupancy rates in the residence halls are below specified level. Room and board rates vary from year to year, and the University reserves the right to revise rates and services as need may dictate. The University reserves all rights regarding the assignment and assignment of rooms or the termination of occupancy in accordance with University policies, regulations and procedures.

Students assigned to halls are required to sign a contract agreeing to live in a hall for the entire academic year or from the time of assignment to the end of the next semester. *This contract is binding.* Residents may change to another form of student housing during the period their hall contract is in effect.

## University Apartments

The University owns and operates 449 furnished and two-bedroom apartments for student families. To apply for a University apartment, either husband or wife must be a full-time student or accepted for a full academic program. The number of children in the family establishes priority for a two-bedroom apartment assignment. However, families with more than three children cannot be assigned.

Priority for assignment is given to applicants who have been on the waiting list for the longest period of time at the particular date involved. Married students who wish to apply for a University apartment should obtain an application from the Housing Office, complete the application and return it to the Cashier's Office along with a \$35.00 apartment deposit.

Some on-campus apartments for single students are available in Munson and Brown Halls. They are for occupancy by 1, 2, 4 or 6 students for periods of 8, 10 or 12 months. Rates range from \$55 to \$118 per student per month, depending on the length of lease and number of occupants per apartment. Priority in leasing these apartments is given to graduate students, seniors and juniors and occupants of the former residence halls during the 1972-73 academic year.

The University cannot guarantee apartment availability. It is recommended that application and deposits be filed at least six to eight months in advance of desired date of occupancy.

**Off-Campus Housing**

A variety of living arrangements are available for students who desire to live in the off-campus community. Students who meet the eligibility requirements and who plan to live off-campus are responsible for making their

own arrangements for securing housing.

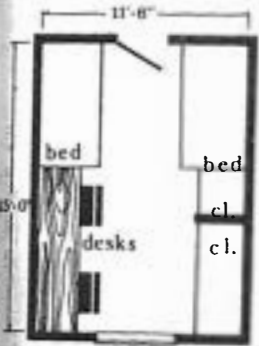
The housing office maintains an off-campus housing bulletin board which contains listings of firms and individuals who have contacted the housing office and offer rooms, apartments or houses in the Ypsilanti area.

Students are responsible for abiding by local, state and federal laws affecting all citizens of the community. The University Student Conduct Code is applicable to students residing off-campus as well as on-campus.

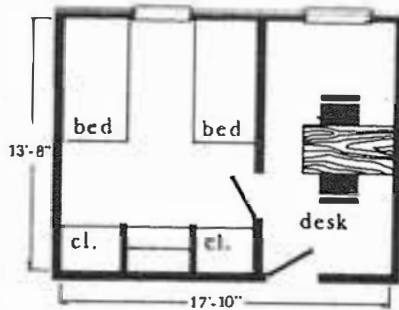
The University Housing Office, located in the lower level of Dining Commons #1, is available to assist students who desire advice concerning off-campus problems.

**TYPICAL RESIDENCE HALL ROOM FLOOR PLANS**

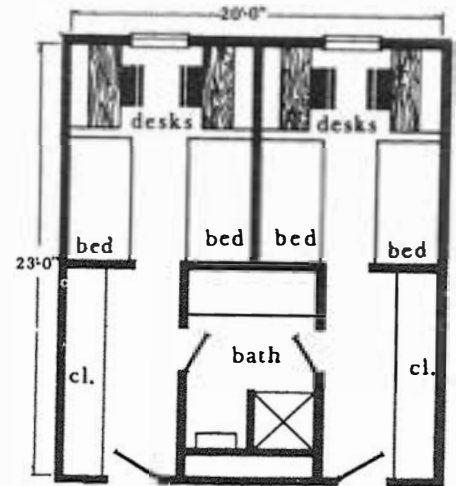
Wise Hall



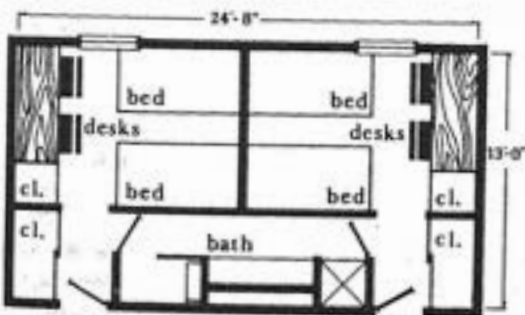
Jones Hall



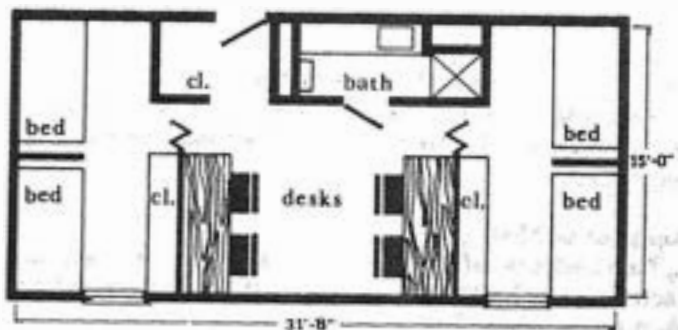
Residence Hall Towers  
Hill, Hoyt, and Pittman Halls



Best, Phelps-Sellers and  
Walton-Putnam Halls



Downing, Buell, and Goddard Halls



# DEGREES, CERTIFICATES AND REQUIREMENTS FOR GRADUATION

## DEGREES

The Board of Regents of Eastern Michigan University, on recommendation of the president and the faculty, confers the following degrees:

### Specialist in Arts

Information concerning this degree may be obtained by writing to the Graduate School.

### Master of Arts, Master of Science, Master of Fine Arts, Master of Business Administration, Master of Business Education and Master of Art Education

Information concerning the requirements for the various fields in which the master's degree is offered appears in the Graduate Catalog of Eastern Michigan University.

### Bachelor of Science

The student who fulfills the requirements of a four-year curriculum qualifies for the Bachelor of Science degree unless a special degree is designated for the curriculum. For detailed requirements see catalog section entitled "General Curricular Requirements."

### Bachelor of Arts

The student who qualifies for a Bachelor of Science degree may have the option of electing the Bachelor of Arts degree by presenting:

1. One year of college credit in one foreign language.
2. At least 75 semester hours in Groups I, II and III. (See page 34).

### Bachelor of Fine Arts

The requirements of the curriculum leading to the Bachelor of Fine Arts degree may be found on page 35.

### Bachelor of Art Education

The requirements of the curriculum leading to the Bachelor of Art Education degree may be found on page 149.

### Bachelor of Business Education

The requirements of the curriculum leading to the Bachelor of Business Education degree may be found on page 150.

### Bachelor of Business Administration

The requirements of the curriculum leading to the Bachelor of Business Administration degree may be found on page 122.

### Bachelor of Music

The Bachelor of Music degree requirements have just been approved. Interested persons should inquire of the head of the Music Department.

### Bachelor of Music Education

The requirements for the curriculum leading to the degree of Bachelor of Music Education may be found on pages 153 to 155.

## TEACHING CERTIFICATES

Teaching certificates are conferred by the State Board of Education upon recommendation of Eastern Michigan University.

The University will recommend for provisional certification only those individuals who have satisfied the curricular requirements in one of the teacher education degree programs.

The Michigan State Board of Education issues one-year provisional certificates which always expire on July 30. Certificates issued in January are valid for only five and one-half years.

Following are the certificates issued:

### State Elementary Provisional Certificate\*

Qualifies the holder to teach in elementary grades (kindergarten—8 and major and minors in grade 9) in a public school in Michigan.

### State Secondary Provisional Certificate\*

Qualifies the holder to teach all subjects in grades 7 and 8 and major and minor in grades 9-12.

### State Secondary Provisional Vocational Home Economics

Qualifies the holder to teach home economics in schools offering programs which are reimbursed by federal and state funds allocated for that purpose.

### State Secondary Provisional Certificate in Office and Distributive Education

Qualifies the holder to teach office and/or distributive subjects in schools offering programs that are reimbursed by federal and state funds allocated for that purpose.

### State Secondary Provisional Certificate in Trade and Industrial Education

Qualifies the holder to teach trade and industrial subjects in schools offering programs which are reimbursed by federal and state funds allocated for that purpose.

## GENERAL INFORMATION CONCERNING CERTIFICATES

1. Teaching certificates will be granted only to persons who are 18 years of age or older.

\*A holder of this certificate who has completed the curricular requirements in art, industrial arts, science, music, physical education, recreation or education is eligible to teach in the area of his specialty in grades K-12, providing student teaching experience includes both elementary and secondary grades.

Permanent or continuing teaching certificates will be granted only to individuals who are citizens of the United States or who have declared their intention of becoming citizens.

A graduate of a Michigan county normal school may receive not more than 25 semester hours credit toward provisional certificate.

## PROCEDURE FOR PERMANENT AND CONTINUING CERTIFICATION

The holder of an elementary provisional or a secondary provisional certificate, issued prior to July 1, 1970, who has fully met the requirements of teaching successfully for at least three years in the grades covered by the provisional certificate and who has earned at least 10 semester hours of acceptable college credit may be issued a permanent certificate until June 30, 1976. If a Provisional Certificate is issued after June 30, 1970, a Continuing Certificate requiring 18 semester hours in a planned course of study follows the Permanent Certificate. This course of study requirement can be met by admission to one of the graduate degree programs administered through the Graduate School. The 18 hour planned course of study for the Continuing Certificate must be approved in advance by the Office of Academic Records and Teacher Certification.

The procedure to be followed is:

The candidate will:

1. obtain an application blank from Eastern Michigan University. This may be done after three years of successful teaching subsequent to the date of issue of the provisional certificate and the completion of ten or 18 semester hours of acceptable college credit.

In addition, the candidate will:

1. fill out the application as required and return it to the University.
2. The University will:
  1. evaluate the credits earned and contact the school district of the candidate for recommendations concerning teaching experience to ascertain if the requirements for the permanent or continuing certificate have been met.
  2. recommend the candidate to the State Board of Education for permanent or continuing certification if the candidate's qualifications are found satisfactory. The Michigan State Department of Education will mail the permanent or continuing certificate properly executed to the candidate.

## OTHER PROFESSIONAL CERTIFICATES

### Certificate in Medical Technology

The American Society of Clinical Pathologists awards a certificate for registration as a medical technologist upon successful completion of the medical technology

curriculum and the successful completion of the national examination conducted by the Board of Registry of Medical Technologists.

### Certificate in Occupational Therapy

The American Occupational Therapy Association issues a certificate in occupational therapy upon successful completion of the occupational therapy curriculum and the successful completion of the board examinations administered by the American Occupational Therapy Association. This certificate qualifies the holder for professional registration with the American Occupational Therapy Association.

## REQUIREMENTS FOR GRADUATION

Each student will be responsible for the requirements or their equivalents of the Eastern Michigan University catalog in force at the time of his initial registration at a college or university or a subsequent catalog including the one in effect at the time of his graduation.

In the event the student does not complete the degree requirements within seven years of the date of his original registration at Eastern Michigan University, he may be required to have his credits re-evaluated by the dean of academic records and teacher certification in keeping with catalog requirements in force during the year of his graduation.

### Application For Graduation

A formal application for graduation must be filed in the Academic Records and Teacher Certification Office during the first week of his final session by the candidate for graduation and/or certification. The application should be filed after final registration is complete but as near the beginning of the final session as possible. Off-campus students who plan to finish in a summer session should notify the dean of academic records and teacher certification from six months to a year in advance.

Failure to meet an application deadline may necessitate the candidate's graduation being delayed until the following graduation period.

Application blanks may be obtained in the Academic Records and Teacher Certification Office.

### Financial Obligations

A student is eligible for graduation and/or re-enrollment only after all of his financial obligations to the University have been met.

### Placement Services

Completion of a personnel folder for filing in the Placement Center is suggested before graduation. Candidates for graduation in all curriculums should check with the Placement Center to make certain that all placement forms have been completed.



# GENERAL CURRICULAR REQUIREMENTS

Eastern Michigan University offers its undergraduate students thirty-four different curriculums. Twelve of these are teaching curriculums leading to a bachelor's degree and a teacher's certificate. Other four-year programs lead to the Bachelor of Arts degree, the Bachelor of Science degree, the Bachelor of Music degree or the Bachelor of Business Administration degree. Also available are eight pre-professional curriculums, most of which cover two years, and two two-year curriculums in business and industrial technology.

For all four-year curriculums, the following general curricular requirements pertain:

## TOTAL HOUR AND GROUP REQUIREMENTS

Each curriculum leading to the bachelor's degree requires a minimum of 124 semester hours of academic credit and must include:

- Group I . . . . . at least 5-8 semester hours
- Group II . . . . . at least 10-12 semester hours
- Group III . . . . . at least 9-12 semester hours  
(Including three semester hours in government)
- Humanities Area (see page 29)
- Groups I, III, V . . . . . at least 11 semester hours
- Group IV . . . . . at least 20 semester hours  
(Teacher Education curriculums only)
- Group VII . . . . . at least 4 semester hours  
(Physical Education or equivalent)

The above group requirements are minimal and the student should consult the curriculum of his choice to determine the complete requirements for any one group.

The subjects included in the various groups are as follows:

### Group I—Language and Literature

Ancient language and literature; modern language and literature; English language and literature; and most courses as indicated in speech and library science.

### Group II—Science

Agriculture; astronomy; biology; botany; chemistry; geography (certain courses as indicated); geology; mathematics; physics; physiology; hygiene; psychology; zoology.

### Group III—Social Science

Geography and library science (certain courses as indicated); history; political science; philosophy; economics; sociology.

### Group IV—Education

Education (includes methods courses and student teaching.)

### Group V—Fine Arts

Art; music.

### Group VI—Practical Arts

Business administration; business education; home economics; industrial education; military science; and courses in library science as indicated.

**Group VII—Physical Education and Health Education**  
Physical education; health education; recreation; military science.

## BACHELOR OF SCIENCE DEGREE REQUIREMENTS

The student who fulfills the requirements of a four-year curriculum qualifies for the Bachelor of Science degree unless a special degree is designated for the curriculum.

## BACHELOR OF ARTS DEGREE REQUIREMENTS

The student who qualifies for a Bachelor of Science degree may have the option of electing the Bachelor of Arts degree by presenting:

1. one year of college credit in one foreign language;
2. at least 75 semester hours in Groups I, II and III.

## BACHELOR OF FINE ARTS DEGREE REQUIREMENTS

See page 35.

## BACHELOR OF ART EDUCATION DEGREE REQUIREMENTS

See page 149.

## BACHELOR OF BUSINESS ADMINISTRATION DEGREE REQUIREMENTS

See page 122.

## BACHELOR OF BUSINESS EDUCATION DEGREE REQUIREMENTS

See page 150.

## BACHELOR OF MUSIC DEGREE REQUIREMENTS

See head of Music Department

## BACHELOR OF MUSIC EDUCATION DEGREE REQUIREMENTS

See pages 153 to 155.



## BASIC STUDIES REQUIREMENTS

The Basic Studies Program sets up minimum requirements which all students in the University must meet in our broad areas of study: language, science and mathematics, social sciences and the humanities. Although the requirements for each of the first three areas fall completely in Groups I, II and III respectively, the humanities requirements, because of the very breadth of the area, are divided among two or three subject groups.

A minimum total of forty semester hours in the basic studies areas is required. Translated into specific courses the subject groups, the basic studies requirements are:

	<b>Semester Hours</b>
Language Area . . . . .	5-8

Regulations governing the selection of courses in this area are:

1. All students are required to take a course in speech (121 Fundamentals of Speech or 124 Fundamentals of Speech).
2. Students who score below 550 on the verbal part of SAT or below 25 on the English section of ACT and who also earned less than a 2.5 high school grade point average are required to take 121 English Composition.
3. Students who had scores higher than those in paragraph 2, above, may substitute, for the English language composition course, a basic language course in foreign language (121, 122, 131, 132, 133, 221 or 222 French, German or Spanish; but not conversation courses 233 or 234), according to the norms appearing on page 68.
4. Students who score 350 or below on the verbal part of SAT or 14 or below on the English section of the ACT and who also earned 2.5 or below on their high school grade point average are required to take 120 English Composition Laboratory.

the course pattern for this area is:

Speech 121 or 124 . . . . .	2-3
English Composition 121 or Foreign Language 121, 122, 131, 132, 133, 221 or 222 . . . . .	3-5
English Composition Laboratory 120 . . . . .	1

Science Area . . . . .	5-8
Alternate 1:	10-12

One laboratory-science course in biology, chemistry, earth science, physics or psychology (102, 301). One mathematics course. Electives in this area (including courses in any of the above-listed sciences, or courses in mathematics, or courses in psychology) to total the required minimum hours.

Alternate 2:	
Two laboratory-science courses in biology, chemistry, earth science, physics or psychology (both of which may be taken in the same department). Electives in this area to total the required minimum hours.	
Science Area . . . . .	9-12

Alternate 1:	
Political Science 112 or 202 . . . . .	3
History of Civilization 101 and 102 . . . . .	6
Total . . . . .	9

Alternate 2:	
Political Science 112 or 202 . . . . .	3
History of Civilization 101 or 102 . . . . .	3
Two-course (one-year) sequence in economics, geography, sociology or cultural anthropology . . . . .	6
Total . . . . .	12

### Humanities . . . . . 11-12

Alternate 1:	
Reading of Literature 101 and 102 . . . . .	6
Fine arts (art, music, dramatic arts) . . . . .	2-3
Philosophy or religion . . . . .	3
Total . . . . .	11-12

Alternate 2:	
Intermediate foreign language courses (221, 222 or 341, 342) . . . . .	6
Fine arts (art, music, dramatic arts) . . . . .	2-3
Philosophy or religion . . . . .	3
Total . . . . .	11-12

Additional electives in groups I, II, III, or V . . . . .	3
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A student exempted by a department on the basis of a test (testing out) from any course that would apply toward the basic studies requirements (40 hours) may use a corresponding number of hours as free electives in any subject or discipline.

## REQUIREMENT IN GOVERNMENT

Each student must complete a three semester hour course in government in accordance with Act 106, Public Acts of 1954.

## REQUIREMENTS IN MAJORS AND MINORS

Each student must complete a major subject of at least 30 semester hours and a minor subject of not less than 20 semester hours with the following exceptions:

1. A student on the elementary teaching curriculum may present three minors of not less than 20 semester hours each, at least two of the minors being subject fields taught in elementary grades.

2. A student who completes the specialized curriculums for teachers of art, teachers of business education, teachers of industrial education and teachers of music, or the professional curriculums in applied science, business administration, home economics in business, industrial technology and occupational therapy will automatically satisfy major-minor requirements.

Hours of credit counted on a minor may not also be applied to a major or another minor, or vice versa. Basic Studies courses may be applied toward a major or a minor where appropriate.

Transfer students may be required to complete satisfactorily three semester hours in their minor field and as much as six semester hours in their major field at Eastern Michigan University in satisfying the requirements for graduation unless exempted by the departments concerned.

Credits in 120-121 English Composition courses, which are required, and credits in education courses, do not count toward majors and minors except in cases where such courses are specifically required as a part of that major or minor.

## PHYSICAL EDUCATION ACTIVITY AND MILITARY SCIENCE REQUIREMENTS

All students shall present for graduation four semester hours (eight activity hours) in physical education activity courses. However, veterans with at least one year of active duty may substitute their military service credit in lieu of activity courses. Because credit in activity courses is computed in activity hours rather than semester hours, it should be understood that two activity hours are equal to one semester hour.

Minimum requirement for the bachelor's degree is 124 semester hours including military science credit for physical education.

This requirement may be met in the following ways:

1. Students who do not elect the military science options below shall complete eight activity hours in physical education activity courses. This requirement may be modified or waived if, for reason of age or physical disability, the student is unable to participate in physical education activity courses. Physical disability shall be determined by the Health Service and, in conference with representatives of the Health, Physical Education and Recreation Department, a decision as to appropriate modification or waiver of the requirement will be made to insure maximum benefit to the student.

2. The one semester hour of credit received for Military Science 100 may, at the option of the student, be used either as elective credit, or be applied toward the physical education requirement. Students who complete the entire Basic ROTC program will receive six semester hours and may count a maximum of two of them toward the physical education requirement. By completing the Advance ROTC program, a student is deemed to have satisfied the entire physical education requirement.

3. Students who have been in military service will be granted credit in military science as follows:

(a.) Those who have served for one year in the Army, Navy, Air Force, Marine Corps, Coast Guard (including attendance at service academies) will be given credit for the first two years of military science.

(b.) Those who have served for six months in time of peace in the Army, Navy, Air Force, Marine Corps, Coast Guard (including attendance at service academies), will be given credit for the first year of military science.

(c.) Students who have completed three years junior ROTC will be given credit for the first year of military science.

4. Veterans who are awarded credit for military science under category (a.) above, are, nevertheless eligible, if otherwise qualified, to enter the advanced course voluntarily and should consult the Military Science Department on special opportunities which are available. (*See Military Science Department Advance Program*).

## RESIDENCE REQUIREMENTS

1. Candidates for the bachelor's degree must earn at least 30 semester hours at Eastern Michigan University. Of these 30 hours, a minimum of 15 hours must be taken on the campus of Eastern Michigan University. The remaining 15 hours may be taken off campus.

2. Of the last 30 semester hours, prior to the granting of a bachelor's degree, at least 10 hours must be taken in courses offered by Eastern Michigan University. These hours may be taken either on or off campus.

## SCHOLARSHIP

1. No student will be graduated from any curriculum with a scholarship index, based on the work of that curriculum, is less than 2.0. Credit earned at Eastern Michigan University must average at least 2.0.

2. To be eligible for graduation a student must maintain a minimum average of 2.0 in each major and minor.

## CORRESPONDENCE CREDIT

1. No more than 15 semester hours of correspondence credit may be applied toward a bachelor's degree.

2. Correspondence credit may not be applied to any of the residence requirements.

3. Correspondence credit does not carry honor credit and may not be used in the figuring of scholarship indices.

## MICHIGAN COUNTY NORMAL SCHOOL CREDIT

A graduate of a Michigan county normal school may apply not more than 25 semester hours of county normal credit toward any bachelor's degree.

## COURSE LEVEL

At least two-thirds of the work beyond the second year must be in courses not open to first year students.

## LIMIT ON HOURS IN ONE SUBJECT

Not more than 60 semester hours in any one concentration may be applied toward the minimum 124 hours required for a bachelor's degree.

# CENTER OF EDUCATIONAL RESOURCES

Interim Director, Carl W. Hintz

Associate Director for Technological Media, Coordinator of Instructional Television, and Assistant Professor: LaVerne Weber

Associate Professors: Eugene A. Holtman, assistant librarian for Technical Services; Leona P. Berry, archivist and special collections librarian; Grace K. Maxfield, head, catalog department; Carol E. Selby, humanities division

Assistant Professors: Mary Clare Beck, documents librarian; Haydee M. Cabrera, assistant catalog librarian; Nelly E. Doll, assistant science and technology librarian; Margaret K. Eide, head, social sciences division; Walter Fishman, director, audio-visual center; Sibylla M. Gibson, assistant catalog librarian; Ruth A. Gray, head, circulation department; Joanne J. Hansen, head, science and technology division; Jeanne L.F. Henle, assistant head, catalog department; Hide I. Ikehara, assistant catalog librarian; Jessamine S. Kallenbach, assistant humanities librarian; Cecil R. McLeod, head, book and card preparation department; Twyla W. Mueller, head, acquisitions department; Richard G. Itmanns, coordinator of production services, audio-visual center; Hannelore B. Rader, assistant humanities librarian; Frances H. Saupe, assistant head, acquisitions department; Frances Simpson, instructional materials center librarian; Florence L. Stevens, head, education and psychology division; Elma M. Stewart, assistant science and technology librarian; Charles W. Wright, coordinator of technical services, audio-visual center

Faculty: Ann Andrew, assistant education and psychology librarian; Sarell W. Beal, assistant social sciences librarian; Robin A. Branstator, orientation librarian; Troy J. Brazell, assistant humanities librarian; Mary Jane Butterfield, assistant social sciences librarian; Carol A. Sims, assistant education and psychology librarian; Helen M. Wilkinson, assistant catalog librarian

The Center for Educational Resources incorporates books, audio-visual materials and instructional television, all serving to complement the classroom as important contributors to the learning experience.

The Library and the Audio-Visual Center are housed in a new, spacious, modern and air-conditioned building. Organized on the divisional system, the book collection is available from open stacks. Special collections include a large Instructional Materials Center in conjunction with 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. The collection numbers over 520,000 items, including documents, microforms and bound periodicals. Special facilities are available for small study groups, for copying of materials and for the use of typewriters.

The Audio-Visual Center supplements books, journals and documents with over 14,000 films, filmstrips, tape and disc recordings and slides. Equipment for use by students and faculty is also available.

The Instructional Television Center, located in Ford Hall, contains a large collection of video tapes for use in classroom instruction. Expert assistance is available to develop use of television in classrooms and laboratories.

An orientation program is designed to acquaint students with functional resources in a progressive manner so that learning may continue at the highest level when the college days of formal study are over. This program includes both group and individualized instruction by a well-prepared staff of professional librarians.

The Charles M. Wilson Collection of Recorded Sound is a recent acquisition. It is composed of over 2,500 cylinders and several hundred discs, dating back to 1890. These "sounds" are available for students and faculty alike as they are copied onto cassette tapes.

The Gordy-Motown Collection, acquired recently, is composed of all recordings of the Motown Record Company for which the Eastern Michigan University Library has become the depository.

# COLLEGE OF ARTS AND SCIENCES

DEAN: Donald F. Drummond

## DEPARTMENTS

**Art**

**Biology**

**Chemistry**

**Economics**

**English Language and Literature**

**Foreign Languages and Literatures**

**Geography and Geology**

**History and Philosophy**

**Mathematics**

**Music**

**Physics and Astronomy**

**Political Science**

**Psychology**

**Sociology**

**Speech and Dramatic Arts**

## LIBERAL ARTS AND PROFESSIONAL CURRICULUMS

The University offers liberal arts and professional curriculums, some four-year and some two-year, in the following areas:

1. Bachelor of Science Degree.
2. Bachelor of Arts Degree.
3. Bachelor of Fine Arts Degree.
4. Applied Science.
5. Criminal Justice and Criminology.
6. Dietetics.
7. Medical Technology.
8. Pre-Dentistry.
9. Pre-Engineering.
10. Pre-Forestry.
11. Pre-Law.
12. Pre-Medicine and Osteopathy.
13. Pre-Mortuary Science.
14. Pre-Pharmacy.
15. Pre-Social Work.

In a sense, the basic degree offered by the University is the Bachelor of Science degree. It presents the least restrictive program that meets the University's requirements for graduation. In the main, it offers the student the most flexibility in the use of his electives and in his selection of a major and a minor.

All other curriculums add requirements, specify additional courses, or have some planned program of concentration (such as majors, minors or "cores") that are required for or limited to just that curriculum. For example, some majors and minors listed later in the catalog apply only on an Elementary Education or Special Education Curriculum and would not be satisfactory as a major or minor on the Bachelor of Science degree alone.

When a student says that he wants a "liberal arts" degree, he usually refers to a Bachelor of Science degree program. If in addition he wishes to complete at least a year of college credit in a foreign language and to elect 75 hours (and usually also his major and minor) in groups I, II and III, he may instead select the Bachelor of Arts curriculum as a "liberal arts" degree. All curriculums, whatever the degree awarded, include at least those general requirements that satisfy the Bachelor of Science degree.

In addition to the curriculums listed above under the College of Arts and Sciences, there are other curriculums described later in the catalog. The Business curriculums begin on page 122, the Education curriculums begin on page 140, and the curriculums offered in the Applied Science departments of home economics and industrial education are listed beginning on pages 182 and 189.

### Curriculum for the Bachelor of Science Degree

Adviser Chairman, **Edgar L. Jones, Jr.**

The student will complete, as a minimum, a major-subject of at least 30 semester hours, and one minor subject of at least 20 semester hours.

The basic studies requirements, to be met by all students, are listed below. These requirements may, if

proper sequences are followed, apply also on the major and minor.

By using electives to meet the additional requirements outlined under the junior-senior high curriculum, the student may also qualify for a secondary provisional teaching certificate if he has chosen both an acceptable teaching major and minor.

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and humanities—is required of all students.

	Semester Hours
Group I Drama, Language, Literature and Speech . . . . .	5-8
121 or 124 Fundamentals of Speech . . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or	
A foreign language course (121 through 222)	
Group II Science . . . . .	10-12
Either of the following	
Two laboratory science courses from the biology, chemistry, geography, physics or psychology departments (both may be in the same department) or	
One laboratory science course from the above departments and one mathematics course	
Electives in the above sciences or mathematics.	
Group III Social Science . . . . .	9-12
101 or 102 History of Civilization . . . . .	3
Either of the following . . . . .	3-6
The remaining 101 or 102 History of Civilization or	
A two course sequence in sociology, economics, geography or cultural anthropology	
Either of the following . . . . .	3
112 American Government or	
202 State and Local Government	
Humanities Area Requirements . . . . .	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the basic studies:	
A course in philosophy or religion . . . . .	3
A fine arts course in art, music or dramatic arts . . . . .	2-3
Either of the following . . . . .	6
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group VII Physical Education and Health . . . . .	4
Physical education activity courses (eight activity hours) All students may take . . . . .	4
Note: Two semester hours of military science may be applied toward this requirement.	
Additional electives . . . . .	85-90
Total . . . . .	111

### Curriculum for the Bachelor of Arts Degree

Adviser Chairman, **Edgar L. Jones, Jr.**

A minimum of 75 semester hours must be elected from Groups I, II and III, below, including at least one year college credit in one foreign language.



Curriculum for the Bachelor of Fine Arts Degree

Adviser Chairman, **Kingsley M. Calkins**

This program, designed for students who plan to enter occupations in which a substantial background in art is required, calls for a concentration of 54 semester hours in art.

The student will complete, as a minimum, a major subject of at least 30 semester hours, and one minor subject of at least 20 semester hours.

The basic studies requirements, to be met by all students, are listed below. The requirements may, if proper sequences are followed, apply also on the major and minor.

By using electives to meet the additional requirements outlined under the junior-senior high curriculum, the student may also qualify for a secondary provisional certificate if he has chosen both an acceptable teaching major and minor.

A minimum total of 40 semester hours in the basic studies areas—Groups I, II, III and the humanities—is required of all students.

	<b>Semester Hours</b>
Group I Drama, Language, Literature and Speech . . . . .	5-8
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or	
A foreign language course (121 through 222) (Degree requires completion of one year college credit in one foreign language)	
Group II Science . . . . .	10-12
Either of the following	
Two laboratory science courses from the biology, chemistry, geography, physics or psychology departments (Both may be in the same department) or	
One laboratory science course, from the above departments and one mathematics course	
Electives in the above sciences or mathematics.	
Group III Social Science . . . . .	9-12
101 or 102 History of Civilization. . . . .	3
Either of the following . . . . .	3-6
The remaining 101 or 102 History of Civilization or	
A two course sequence in sociology, economics, geography or cultural anthropology	
Either of the following . . . . .	3
112 American Government or	
202 State and Local Government	
Humanities Area Requirements . . . . .	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the basic studies:	
A course in philosophy or religion . . . . .	3
A fine arts course in art, music or dramatic arts . . . . .	2-3
Either of the following . . . . .	6
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language or 341, 342 Survey (or more advanced foreign language literature courses)	
Group VII Physical Education and Health . . . .	4
Physical education activity courses (eight activity hours) . . . . .	4
Note: Two semester hours of military science may be applied toward this requirement.	
Additional electives . . . . .	85-76
Total . . . . .	124

	<b>Semester Hours</b>
Group I, Drama, Language, Literature and Speech . . . . .	5-8
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or	
A foreign language course (121 through 222)	
Group II Science . . . . .	10-12
Either of the following	
Two laboratory science courses from the biology, chemistry, geography, physics or psychology departments (Both may be in the same department) or	
One laboratory science course from the above departments and one mathematics course	
Electives in the above sciences or mathematics.	
Group III Social Science . . . . .	9-12
101 or 102 History of Civilization. . . . .	3
Either of the following . . . . .	3-6
The remaining 101 or 102 History of Civilization or	
A two course sequence in sociology, economics, geography or cultural anthropology	
Either of the following . . . . .	3
112 American Government or	
202 State and Local Government	
Humanities Area Requirements . . . . .	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies:	
A course in philosophy or religion . . . . .	3
A fine arts course (Group V courses below automatically meet this requirement) . . . . .	2-3
Either of the following . . . . .	6
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group V Fine Arts . . . . .	54
107 Art Survey I . . . . .	3
108 Art Survey II . . . . .	3
122 Two Dimensional Design . . . . .	3
123 Drawing I . . . . .	3
124 Drawing II . . . . .	3
210 Life Drawing . . . . .	3
216 History of Contemporary Art . . . . .	3
231 Three Dimensional Design . . . . .	3
305 Graphics . . . . .	3
307 Ceramics or 320 Jewelry . . . . .	3
310 Sculpture . . . . .	3
313 Painting—Oil . . . . .	3
314 Painting—Watercolor . . . . .	2
Electives in art to complete 54 hours . . . . .	16

Group VII Physical Education and Health Physical education activity courses (eight activity hours) . . . . .	4
Note: Two semester hours of military science may be applied toward this requirement.	
*Electives (No more than six hours in art) . . . . .	31-22
Total . . . . .	124

*Students completing the above 54 hour concentration on this curriculum will have satisfied all major and minor requirements for graduation.*

**Applied Science Curriculum  
Bachelor of Arts or Bachelor of Science Degree**

Adviser Chairman, **James Barnes**

This program, designed for students who plan to enter occupations in which a substantial background in mathematics and science is required, calls for concentration of 16-18 semester hours each in two of three departments—chemistry, mathematics and physics—and 36 hours in the other. To qualify for a Bachelor of Arts degree, the student must complete one year of college level credit in one foreign language.

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the humanities—is required of all students.

	<b>Semester Hours</b>
Group I Drama, Language, Literature and Speech . . . . .	5-8
121 or 124 Fundamentals of Speech . . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or A foreign language course (121 through 222)	
Group II Science . . . . .	68-71
Required Courses . . . . .	51
<b>Chemistry</b>	
131 General Chemistry I . . . . .	4
132 General Chemistry II . . . . .	3
241 Materials Science . . . . .	3
180 Chemistry Laboratory Techniques . . . . .	2
281 Quantitative Analysis . . . . .	4
<b>Mathematics</b>	
120 Calculus with Analytic Geometry I . . . . .	4
121 Calculus with Analytic Geometry II . . . . .	4
122 Elementary Linear Algebra . . . . .	2
220 Calculus with Analytic Geometry III . . . . .	3
221 Calculus with Analytic Geometry IV . . . . .	3
<b>Physics</b>	
223 Mechanics, Sound and Heat . . . . .	5
224 Electricity and Light . . . . .	5
270 Introduction to Modern Physics . . . . .	3
272 Modern Physics Laboratory . . . . .	1
456 Electronics for Scientists . . . . .	4
Additional courses are required for a major. Select one group . . . . .	18-20

*\*Note carefully that no more than 60 semester hours in Group V art courses may be applied to the minimum of 124 hours required for the bachelor's degree.*

<b>**Chemistry</b>	
371 Organic Chemistry . . . . .	3
372 Organic Chemistry . . . . .	3
373 Organic Chemistry Laboratory . . . . .	2
461 Physical Chemistry . . . . .	3
462 Physiochemical Measurements . . . . .	2
***Electives . . . . .	7
<b>Mathematics</b>	
320 Differential Equations . . . . .	3
425 Mathematics for the Scientist I . . . . .	3
426 Mathematics for the Scientist II . . . . .	3
***Electives . . . . .	11
<b>Physics</b>	
430 Intermediate Mechanics I . . . . .	3
452 Electrical Measurements . . . . .	4
471 Nuclear Physics . . . . .	4
One of the following laboratory courses:	
432 Mechanics Laboratory . . . . .	1
442 Optics Laboratory . . . . .	1
Electives . . . . .	6
Group III Social Science . . . . .	9-12
101 or 102 History of Civilization . . . . .	3
Either of the following . . . . .	3-6
The remaining 101 or 102 History of Civilization or A two course sequence in sociology, economics, geography, or cultural anthropology	
Either of the following . . . . .	3
112 American Government or 202 State and Local Government	
Humanities Area Requirements . . . . .	11-12
In addition to the courses above, the selected courses below from Group I, III and V must be taken to complete the basic studies.	
A course in philosophy or religion . . . . .	3
A fine arts course in art, music or dramatic arts . . . . .	2-3
Either of the following . . . . .	6
101, 102 Reading of Literature or 221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group VI Practical Arts . . . . .	
122 Technical Drawing . . . . .	3
223 Descriptive Geometry . . . . .	3
Group VII Physical Education and Health . . . . .	
Physical education activity courses (eight activity hours) . . . . .	
Note: Two semester hours of military science may be applied toward this requirement.	
Electives . . . . .	21-22
Total . . . . .	112

*\*\*Students wishing to become professional chemists please see Professional Curriculum in Chemistry, page 300-400.*

*\*\*\*Electives must have approval of this department. Electives in physics must come from physics courses numbered 300-400.*

Medical Technology Curriculum  
Bachelor of Science Degree

Adviser Chairman, **Charles Anderson**

This curriculum consists of a three-year program at Eastern Michigan University followed by a twelve-month internship at an affiliated school of medical technology. Junior or community college students may complete up to two years in their college, take the third year of work at the University, and, in those instances in which the University has affiliation with a school of medical technology in their home community, may return there for the internship in the fourth year. The University has such an agreement with St. Clair County Community College and the Port Huron Hospital; Flint Community Junior College, McLaren General Hospital and Saint Joseph Hospital; Jackson Junior College and W. A. Foote Hospital.

In addition, the University has affiliations with several hospitals in the Detroit and suburban area, so that students attending community colleges there may, with careful pre-planning of their programs, follow the same plan.

A major is allowed in medical technology with 30 semester hours of credit for the year of internship. In addition, a 20 semester hour minor (chemistry) is inherent in this program, thus automatically fulfilling the major and minor requirements for graduation.

At least 30 semester hours of the academic program must be completed at Eastern Michigan University.

To be eligible for internship in the fourth year, the student must have a transcript of his college credits evaluated by the Board of Schools of the American Society of Clinical Pathologists. Arrangements to have this done should be made with the dean of records and teacher certification during the last semester of the third year.

Medical technology schools affiliated with the University and their directors are:

Detroit Memorial Hospital, Detroit **J. D. Langston, M.D.**  
McLaren General Hospital, Flint **Kurt W. Mikat, M.D.**  
Oakwood Hospital, Dearborn

**Rosser L. Mainwaring, M.D.**  
Pontiac General Hospital . . . . . **William R. Dito, M.D.**  
Port Huron Hospital, Port Huron

**Clemens M. Kopp, M.D.**  
Providence Hospital, Southfield

**Edwin M. Knights, Jr., M.D.**  
Saint Joseph Hospital, Flint . . . . . **Wayne L. Eaton, M.D.**  
Wayne County General Hospital, Eloise

**W. Schmidt, M.D.**  
W. A. Foote Hospital, Jackson. . . **Henry A. Kallet, M.D.**

Upon completion of the curriculum and successful achievement of the registry examination, the candidate will receive the Certificate in Medical Technology from the American Society of Clinical Pathologists.

**First Year**

<b>First Semester</b> . . . . .	15-17
121 English Composition or a foreign language course (121 through 222) (see page 68) . . .	3-5
105 College Algebra . . . . .	3
105 Biological Science . . . . .	4
131 General Chemistry I . . . . .	4

Physical education activity (2) or military science. . . . . 1

<b>Second Semester</b> . . . . .	15-16
121 or 124 Fundamentals of Speech. . . . .	2-3
112 American Government or 202 State and Local Government . . . . .	3
222 General Zoology . . . . .	4
132 General Chemistry II. . . . .	3
180 Chemistry Laboratory Techniques . . . . .	2
Physical education activity (2) or military science. . . . .	1

**Second Year**

<b>First Semester</b> . . . . .	18-14
110 Physical Science (if no high school physics) . . . . .	4
331 General Microbiology . . . . .	3
330 General Microbiology Laboratory. . . . .	2
281 Quantitative Analysis. . . . .	4
Physical education activity (2) . . . . .	1
Electives . . . . .	4-0
<b>Second Semester</b> . . . . .	14-18
360 Parasitology . . . . .	3
270 Organic Chemistry or 371 Inorganic Chemistry . . . . .	3-4
271 Organic Chemistry Laboratory (if 270 is taken) . . . . .	1
101 or 102 History of Civilization. . . . .	3
*Humanities area requirement . . . . .	3
Physical education activity (2) . . . . .	1
***Elective . . . . .	0-3

**Third Year**

<b>First Semester</b> . . . . .	16-14
*Humanities area requirements . . . . .	6-5
**Social science requirement . . . . .	3-0
***Electives . . . . .	7-9
<b>Second Semester</b> . . . . .	16-15
351 Biochemistry or 372 Organic Chemistry	3
352 Biochemistry Laboratory or 373 Organic Chemistry Laboratory. . . . .	1-2
*Humanities area requirement . . . . .	3
**Social science requirement. . . . .	3
***Electives . . . . .	6-4

*\*Humanities area requirements include:*

101, 102 Reading of Literature or 221, 222 Intermediate Foreign Language. . . . .	6
(or literature in a foreign language with a 222 prerequisite)	
A course in philosophy or religion . . . . .	3
A fine arts course in music, art or dramatic arts . . . . .	2-3

*\*\*Social science requirements include:*

Remaining 101 or 102 History of Civilization or a two-course sequence in economics, sociology, geography, or cultural anthropology. . . . .	3-6
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\*\*\*At least seven semester hours of the free electives should be taken in courses outside of Group II.

**Fourth Year**

A twelve-month period spent in lecture and laboratory training at an affiliated school of medical technology . . . . . 30  
 Total. . . . . 124

The following elective is strongly recommended: foreign language (It is desirable that four semesters of college work, or equivalent, in one language be taken. Two years of a high school foreign language are equivalent to two semesters in college.)

The following electives are recommended when the student's time and interest permit:

- 120 or 121 Typewriting
- 136 Introduction to Digital Computers
- 236 Introduction to Computer Programming
- 221 Mechanics, Sound and Heat
- 222 Electricity and Light
- 301 Genetics
- 324 Comparative Anatomy of Vertebrates
- 327 Vertebrate Physiology
- 401 Biological Techniques
- 404 Histology
- 485 Radiation Techniques in Chemistry and Biology

**Criminal Justice and Criminology Curriculum**

**Bachelor of Arts or Bachelor of Science Degree**

Adviser Chairman, **Edward Green**

This program provides professional education in fields dealing with the administration of criminal justice at the level of the police, the courts and corrections. It will prepare students for careers in operations and research in public service and private agencies concerned with crime and delinquency.

The program consists of courses in criminology and criminal justice, cognate social and behavioral sciences and field experience placements under professional supervision or special training programs in cooperating agencies of criminal justice. It is an inter-disciplinary major consisting of 15 hours of core courses, 11 hours in social services, 9-10 hours in psychology and 21 hours in social sciences. Special programs can be tailored in consultation with the faculty adviser. Courses in management and business organization appropriate to law enforcement administration are offered by the College of Business. Areas of knowledge and practice appropriate to corrections—guidance and counseling, family life and psychological testing—are offered by the departments of education, home economics and psychology, respectively.

The outline of the curriculum given below identifies the course requirements by an asterisk (\*) and shows their distribution among the group requirements.

	<b>Semester Hours</b>
Group I Drama, Language, Literature and Speech. . . . .	5-8
121 or 124 Fundamentals of Speech. . . . .	2-3

Either of the following (see page 68). . . . . 3-5  
 121 English Composition

or  
 foreign language composition

(Degree requires completion of one year credit in one foreign language)

Group II Science. . . . . 16-17

Two laboratory science courses from the biology, chemistry, geography, physics or psychology departments (Both may be in the same department)

or  
 One laboratory science course, from the above departments and one mathematics course

\*101 or 102 General Psychology. . . . . 3-4

\*207 Psychology of Adjustment. . . . . 3

\*360 Abnormal Psychology. . . . . 3

Group III Social Science. . . . . 3

101 or 102 History of Civilization. . . . . 3

Political Science

\*202 State and Local Government. . . . . 3

\*301 The American Legal System. . . . . 3

Sociology

\*105 Introductory Sociology. . . . . 3

\*214 Racial and Cultural

Minorities. . . . . 3

\*250 Elementary Social Statistics. . . . . 3

\*303 Sociology of Childhood and Youth

(Includes deviance and social process). . . 3

\*404 Methods of Sociological Research . . 3

\*406 Criminology. . . . . 3

\*407 Criminal Justice in Modern

Society. . . . . 3

\*412 Law and Society. . . . . 3

\*Two of the following: . . . . . 6

- 202 Social Problems
- 204 Marriage and the Family
- 306 Urban Community
- 402 Group Dynamics
- 448 Collective Behavior
- 450 The Family

Social Services

\*212 Social Welfare. . . . . 3

\*213 Field Observation. . . . . 2

\*Electives to be selected in consultation with the curriculum adviser. . . . . 6

Humanities Area Requirements. . . . . 11-12

In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the basic studies:

A course in philosophy or religion . . . . . 3

A fine arts course in art, music or

dramatic arts . . . . . 2-3

Either of the following . . . . . 6

- 101, 102 Reading of Literature
- or
- 221, 222 Intermediate Foreign Language
- or
- 341, 342 Survey (or more advanced foreign language literature courses)

Group VII Physical Education and Health. . . . . 4

Physical education activity courses (eight activity hours). . . . . 4

(M25 or swim test required for men)

Note: Two semester hours of military science may be applied toward this requirement.

Additional Electives . . . . .	38-33
Total . . . . .	124

### Pre-Dentistry Curriculum

Adviser Chairman, **John M. Sullivan, Chemistry**

Students electing this curriculum should be aware of the exact admission requirements of the dental schools to which they plan to apply. A compilation of the admission requirements of all dental schools in the United States is available at the adviser's office in the Chemistry Department.

It is possible for a student with a strong high school background to complete the dental school requirements after two years. However, the vast majority of students entering dental school have completed either three or four years of college, and over half have earned a bachelor's degree. Pre-dental students are therefore urged to follow a course pattern in line with the requirements for the bachelor's degree. Upon completion of the pre-dental requirements, students should change their curriculum to the degree program of their choice.

Students should take the Dental Aptitude Test one year before they plan to enter dental school. Information and application forms are available from their adviser.

The following is a typical program for a student with a normal high school background. However, there is some flexibility, and students need not necessarily take the courses in this sequence. Any student whose high school biology, chemistry or mathematics background was exceptionally strong should consult his adviser about the possibility of by-passing the first course in these areas.

#### First Year

	Semester Hours
<b>First Semester</b> . . . . .	15
121 English Composition . . . . .	3
131 General Chemistry I . . . . .	4
105 Biological Science . . . . .	4
105 College Algebra . . . . .	3
Physical education activity (2) or military science . . . . .	1
<b>Second Semester</b> . . . . .	15-16
121 Fundamentals of Speech . . . . .	2
132 General Chemistry II . . . . .	3
180 Chemistry Laboratory Techniques . . . . .	2
107 Trigonometry (if not taken in high school) . . . . .	2
Physical education activity (2) or military science . . . . .	1
Electives . . . . .	5-6

#### Second Year

<b>First Semester</b> . . . . .	15-16
222 Zoology . . . . .	4
371 Organic Chemistry . . . . .	3
Electives . . . . .	8-9
<b>Second Semester</b> . . . . .	15-16
372 Organic Chemistry . . . . .	3
373 Organic Chemistry Laboratory . . . . .	2
Electives . . . . .	10-11

### Third Year

<b>First Semester</b> . . . . .	15-16
324 Comparative Anatomy of Vertebrates . . . . .	4
221 Mechanics, Sound and Heat . . . . .	4
Electives . . . . .	7-8
<b>Second Semester</b> . . . . .	15-16
222 Electricity and Light . . . . .	4
Electives . . . . .	11-12

### Pre-Engineering Curriculum

Adviser Chairman, **Alfred Roth**

Courses common to most branches of engineering.

#### First Year

	Semester Hours
<b>First Semester</b> . . . . .	15
121 English Composition . . . . .	3
120 Calculus with Analytic Geometry I . . . . .	4
122 Technical Drawing . . . . .	3
131 General Chemistry I . . . . .	4
Physical education activity (2) or military science . . . . .	1
<b>Second Semester</b> . . . . .	16
121 Calculus with Analytic Geometry II . . . . .	4
122 Elementary Linear Algebra . . . . .	2
223 Descriptive Geometry . . . . .	3
223 Mechanics, Sound and Heat . . . . .	5
180 Chemistry Laboratory Techniques . . . . .	2

#### Second Year

<b>First Semester</b> . . . . .	15
220 Calculus with Analytic Geometry III . . . . .	3
224 Electricity and Light . . . . .	5
231 Statics . . . . .	3
201 Principles of Economics I . . . . .	3
Physical education activity (2) . . . . .	1
<b>Second Semester</b> . . . . .	16
221 Calculus with Analytical Geometry IV . . . . .	3
229 Strength and Elasticity of Materials . . . . .	4
202 Principles of Economics II . . . . .	3
237 Introduction to Computer Programming and Numerical Methods . . . . .	3
241 Materials Science . . . . .	3

#### Suggested Electives\*:

121 Fundamentals of Speech . . . . .	2
112 American Government . . . . .	3
101 or 102 History of Civilization . . . . .	3
105 Introductory Sociology . . . . .	3
200 Types of Philosophy . . . . .	3
201 The Comparative Study of Religion . . . . .	3
101 Reading of Literature . . . . .	3

The sequence of courses given here assumes a high school preparation including three semesters of algebra, plane and solid geometry, a year of physics and a year of chemistry. A deficiency in any of these subjects, with the

\*These courses are suggested as possible electives because they will transfer to and fit easily into the programs of, for example, the University of Michigan School of Engineering.



exception of solid geometry, will necessitate a change of program in order to provide the necessary background as soon as possible. It is recommended that students who are deficient in any of these subjects plan to make them up during the summer in a high school program, junior college or at Eastern in order to complete the engineering program in the customary time.

For the two-year program, students must complete two semester hours (four activity hours) in physical education activity courses or receive a similar amount of credit using the military science options appearing on page 30. However, if changing to a four-year curriculum, the student must satisfy the activity hour requirements of that curriculum.

The following third-year courses are available:

**Aeronautical Engineering:** 320 Mathematics, Differential Equations; 420 Mathematics, Advanced Calculus.

**Chemical and Metallurgical Engineering:** Make the following replacement in the first semester of the sophomore year: 231 Statics with 132 General Chemistry II. The program for the second semester will be made by replacing 229 Strength and Elasticity of Materials with 281 Quantitative Analysis.

Further available courses include; 371 Chemistry, Organic Chemistry; 372 Chemistry, Organic Chemistry; 461 Chemistry, Physical Chemistry.

**Civil Engineering:** 206 Surveying; 326 Geology, Structural Geology.

**Electrical Engineering:** 456 Electronics for Scientists; 452 Physics, Electrical Measurements; 320 Mathematics, Differential Equations.

**Industrial Engineering:** 240 Business Accounting.

**Mechanical Engineering:** 430 Physics, Intermediate Mechanics I; 431 Physics, Intermediate Mechanics II; 460 Physics, Heat and Thermodynamics.

### Pre-Forestry Curriculum

Adviser Chairman, **Max E. Adler**

This curriculum is designed to meet the needs of the majority of students who will later major in such diverse fields as wildlife management, fisheries, biology, forestry and conservation education. However, students entering one of these fields are reminded that forestry schools set their own requirements for admission, and thus it is imperative that exact requirements be obtained from current catalogs of the schools in which they are interested in completing their professional training. Therefore, some flexibility is allowed in the following suggested sequence of courses to meet the needs of individual students.

#### First Year

	Semester Hours
<b>First Semester</b> . . . . .	16
*120 Calculus with Analytic Geometry I. . . . .	4
119 Fundamentals of Chemistry . . . . .	4
121 English Composition . . . . .	3

*\*If the student received a grade below "B" in high school trigonometry and advanced algebra, he should elect 105 Algebra and 107 Trigonometry before electing this course.*

**105 Biological Science . . . . .	4
Physical education activity (2) or military science. . . . .	1
<b>Second Semester</b> . . . . .	15
120 Fundamentals of Chemistry. . . . .	4
221 General Botany . . . . .	4
105 Introductory Sociology . . . . .	3
Physical education activity (2) or military science. . . . .	1
***Electives . . . . .	3

#### Second Year

<b>First Semester</b> . . . . .	16
221 Mechanics, Sound and Heat . . . . .	4
201 Principles of Economics I . . . . .	3
222 General Zoology . . . . .	4
101 or 102 History of Civilization. . . . .	3
121 Fundamentals of Speech . . . . .	2
<b>Second Semester</b> . . . . .	16
222 Electricity and Light . . . . .	4
202 Principles of Economics II . . . . .	3
215 Journalism . . . . .	3
302 Systematic Botany or 310 Plant Physiology. . . . .	3
206 Surveying . . . . .	3

The general requirement for admission with junior standing to a professional school is 60 semester hours credit. Some schools do not include credit for physical education activity or military science within that minimum and the student planning to enroll in such a school should increase his load accordingly.

Also, many professional schools require attendance at a summer camp between the sophomore and junior or between the junior and senior years. Thus, it is imperative that the student complete prerequisites for these courses early and take this into account when planning his financial affairs for his junior and senior years.

In some cases a student will find it advantageous to earn a bachelor's degree before entering professional training. The student may do so by continuing for two more academic years at E.M.U. and observing the requirements prescribed for that degree (including physical education activity hours requirements). A student electing to follow this plan should allow an extra year to complete his graduate work in the professional school, however.

### Pre-Law Curriculum

Adviser Chairman, **David Hortin**

For admission requirements, the student should consult the catalog of the law school in which he is interested. Most law schools require applicants to have a bachelor's degree. Therefore, the prospective pre-law student

*\*\*105 Biological Science is required as a prerequisite for 221 Botany and 222 Zoology unless the student is exempted by test. Freshmen entering the pre-forestry program should take the biology placement test during orientation week. If not exempted from 105 Biological Science, the student should take the course during his first semester on the campus and delay 221 General Botany until the following semester.*

*\*\*\*Students may elect 108 Earth Science, 121 General Drawing or other elective.*

urged to plan a program leading to a bachelor's degree and to select and declare his major no later than the beginning of his junior year.

The law schools do not usually require specific courses for admission and, in general, state that no single pre-law program can be recommended as the best one. Law school admissions officers emphasize their interest in the quality of the student's record and the challenge and the breadth of his program. One catalog says that, "the lawyer's range of knowledge should be as broad as it is humanly possible to make it without undue dilution."

The breadth of the program should not result in mere scattered elections. Some concentration in subjects such as history, English literature and composition, economics and political science is frequently suggested, and these fields are often selected as majors by pre-law students, but they are not the only fields selected. Courses in foreign language, philosophy, mathematics, the sciences, psychology, sociology, speech, constitutional law and business law are often good choices for the more than 30 hours of electives available to the pre-law student. Many law schools require up to six semester hours of accounting at the college level or equivalent extra instruction after admission. Any demanding course that will sharpen the student's command and mastery of the use of language, develop his critical understanding of human values and institutions or stretch his capacity for independent, searching, creative thinking will be of value to him.

Competition for admission to all professional schools is intensifying. If a student contemplating law school is not achieving at least a 2.5 grade point average by his junior year, he is well-advised to plan a program that will also prepare him for an alternate vocational goal.

Almost all law schools require applicants to submit scores on the Law School Admission Test, usually taken during the fall semester of the senior year. The pre-law student can get application forms for the test and information about it by writing to Law School Admission Test, Educational Testing Service, Box 944, Princeton, New Jersey 08640, or they are available from the pre-law adviser. The tests are usually given in October, December, February, April and July of each year at selected locations throughout the United States and abroad. Applications for the test must reach ETS at least three weeks before the date of the test.

Pre-law students should follow either the Bachelor of Science Curriculum on page 34 or the Bachelor of Arts Curriculum on page 34.

Entering freshmen who have not made tentative choices of their major will be assigned to one of the pre-law advisers for undecided students while they explore in search of a major, then they will be assigned to an adviser in their major field. The choice must be made by the junior year.

## Pre-Medicine and Osteopathy Curriculum

Adviser Chairman, **Elizabeth V. Giles**

The medical and osteopathy schools establish their own requirements for admission. The course requirements are similar, but differ enough so that the student should consult the catalogs of the various schools in which he or she is interested. The latest edition of *Medical School Ad-*

*mission Requirements*, available at the reference desk of the general library, should also be consulted. The introductory chapters of this book should be read by every prospective pre-medical student.

An important admission requirement for all medical schools, the Medical College Admission Test, is given in May and October in various centers throughout the nation. This is usually taken during the junior year.

Although a few outstanding students may be admitted to medical school with only three years of college, most candidates earn the bachelor's degree prior to admission. If a student plans to apply for admission to medical school without completing the degree, he/she should plan his/her schedule to include the following general requirements:

	Semester Hours
121 English Composition . . . . .	3
Electives in English language or literature. . . . .	3
105 Biological Science . . . . .	4
222 General Zoology . . . . .	4
301 Genetics and/or 323 Animal Embryology. . . . .	3-6
131, 132, 180 General Chemistry . . . . .	9
371, 372, 373 Organic Chemistry . . . . .	8
221 Mechanics, Sound and Heat and 222 Electricity and Light . . . . .	8

While medical schools do not prescribe a pre-medical curriculum, they expect a thorough understanding of modern concepts in biology, chemistry and physics, since major advances in medicine are based on principles rooted in these disciplines. Most pre-medical students elect a major in chemistry and a minor in biology, or vice versa, though this is not mandatory. Curriculum patterns detailing these major-minor sequences are available from the advisers or from the Office for Academic Advising. A less obvious requirement is mathematics. Although only a small number of medical schools demand a specific course sequence in mathematics, all value mathematical competence, and calculus is the most frequently suggested elective.

If students are not soon achieving at least a 2.75 grade point average, their chances of acceptance by a medical school are minimal and they should plan their program so that other professional or vocational goals are possible.

Because of the highly structured nature of the pre-medical program and the biology or chemistry majors, it is almost mandatory for the student to follow the first year as patterned below.

### First Year—Pre-Medicine

	Semester Hours
<b>First Semester . . . . .</b>	<b>14-16</b>
121 English Composition . . . . .	3
131 General Chemistry I . . . . .	4
*Math . . . . .	2-4
105 Biological Science (if exempt, take 222 General Zoology). . . . .	4
(with two years high school biology take exempt test)	
Physical education activity (2) or military science. . . . .	1

<b>Second Semester</b> . . . . .	16-17
132 General Chemistry II. . . . .	3
180 Chemistry Lab. Techniques. . . . .	2
Math (see below) . . . . .	3-4
222 General Zoology . . . . .	4
Physical education activity (2) or military science. . . . .	1
Elective. . . . .	3

**Pre-Mortuary Science Curriculum**

Adviser Chairman, **Elizabeth V. Giles**

The pre-mortuary program requires two academic years. Before entering the professional mortuary school, the student must complete at least 52 semester hours of college work, including the following required courses.

**Semester Hours**

121 English Composition . . . . .	3
English or literature elective . . . . .	3
105 Biological Science . . . . .	4
101 General Psychology. . . . .	3
240 Principles of Accounting . . . . .	3
131 General Chemistry I, 132 General Chemistry II and 180 Chemistry Laboratory Techniques. . . . .	9
Social science electives . . . . .	6
General electives . . . . .	20-28

**Pre-Pharmacy Curriculum**

Adviser Chairman, **Edward L. Compere, Jr.**

**One Year**

**Semester Hours**

<b>Group I Drama, Language, Literature and Speech</b> . . . . .	5
121 English Composition . . . . .	3
121 Fundamentals of Speech . . . . .	2
<b>Group II Science</b> . . . . .	17-21
105 Biological Science (unless exempt by examination) . . . . .	4
131 General Chemistry I . . . . .	4
132 General Chemistry II . . . . .	3
180 Chemical Laboratory Techniques . . . . .	2
221 General Botany . . . . .	4
222 General Zoology . . . . .	4
<b>Group VII Physical Education and Health</b> . . . . .	2
Physical education activity courses (four activity hours) Note: Two semester hours of military science may be applied toward this requirement.	
Electives . . . . .	8-4
<b>Total</b> . . . . .	32

*\*Students with strong high school preparation and at least "B" quality mathematics, including two years of algebra, and trigonometry, may take 120 Calculus with Analytic Geometry I during the first semester.  
Students with 1-1/2-2 years of less than high quality algebra take 105 Algebra.  
Students with only one year of algebra take 104, followed by 105 Algebra.  
Students without trigonometry take 107 Trigonometry.*

One year of college work will admit students to a professional school of pharmacy. Although the complete course in some pharmacy colleges has been lengthened to five years, the chief sequences of the professional course require three years. The accredited pharmacy schools throughout the United States have a standard rule that students in these schools must take the prescribed courses in a definite sequence. This necessitates three full years of work in the pharmacy school regardless of the number of years in college work preceding entrance to the pharmacy school. This is known as the "six semester rule." Thus, a minimum total of four or five years is required for a degree in pharmacy. With regard to the pre-professional program outlined above, many students may advantageously spend two years in such preparation in view of the trend toward an overall five year curriculum in pharmacy colleges. It is suggested that the eight hours of electives be chosen from the following fields: economics, history, mathematics, psychology and political science.

For those students who may wish to continue in graduate study and research, German and French should be included. Obviously, more than one year of pre-professional work would then be required.

**Social Welfare Curriculum**

**Bachelor of Arts or Bachelor of Science Degree**

Adviser Chairman, **Leroy W. Watts**

This program is designed to prepare students for graduate education in social work and for positions in social service requiring the bachelor's degree. Upon completion of the curricular requirements, including 53 semester hours of specified courses, the requirements of a major in social welfare and a minor in sociology will be fulfilled. The social welfare major is an interdisciplinary major consisting of the 23 hours of required social welfare and social work courses plus the six semester hours of psychology and the three semester hours of economics. The minor is a special 21-hour sociology minor. The outline of the curriculum given below identifies the specific courses for the social welfare major by an asterisk (\*) and for the sociology minor by two asterisks (\*\*) and shows their distribution among the group requirements.

**Semester Hours**

<b>Group I Drama, Language, Literature and Speech</b> . . . . .	5-6
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or A foreign language course (121 through 222)	
<b>Group II Science</b> . . . . .	13-14
*105 Biological Science . . . . .	4
*101 General Psychology . . . . .	3
One additional laboratory science course from the biology, chemistry, geography, physics or psychology departments or one math course . . . . .	3-4
*One of the following: . . . . .	3
321 Child Psychology 322 Psychology of Adolescence 360 Abnormal Psychology	
<b>Group III Social Science</b> . . . . .	5

101 or 102 History of Civilization. . . . .	3
Either of the following: . . . . .	3
112 American Government or	
202 State and Local Government	
**105 Introductory Sociology. . . . .	3
*Either of the following: . . . . .	3
201 Principles of Economics I or	
200 The American Economy	
**204 Marriage and the Family. . . . .	3
**214 Racial and Cultural Minorities. . . . .	3
**250 Elementary Social Statistics. . . . .	3
**404 Methods in Sociological Research. . . . .	3
**Two of the following: . . . . .	6
202 Social Problems	
306 Urban Community	
308 Social Psychology	
309 Culture and Personality	
406 Criminology	
*212 Social Welfare . . . . .	3
*213 Field Observation. . . . .	2
*314 Social Work I. . . . .	3
*315 Social Work II. . . . .	3
*317 Community Service Experience. . . . .	2
*408 Social Work III. . . . .	3
*409 Social Work IV. . . . .	3

*410 Field Experience I. . . . .	4
*411 Field Experience II. . . . .	4
Humanities Area Requirements. . . . .	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the basic studies.	
A course in philosophy or religion. . . . .	3
A fine arts course in art, music or dramatic arts. . . . .	2-3
Either of the following. . . . .	6
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group VII Physical Education and Health. . . . .	4
Physical education activity courses (eight activity hours). . . . .	4
Note: Two semester hours of military science may apply toward this requirement.	
Electives. . . . .	34-29
Total. . . . .	124

*Students completing the above curriculum have met the major and minor requirements for graduation. No outside minor is needed.*





## DEPARTMENTS

### ART

**Department Head:** Kingsley M. Calkins

**Professors:** Dorothy H. Lamming, John P. Loree, John N. Pappas, John E. Van Haren

**Associate Professors:** Marvin C. Anderson, Barry Avedon, Jane M. Dart, Richard T. Fairfield, Charles Fensch, Sharon R. Rich, David W. Sharp, Doris Ann Smith, Susanne G. Stephenson, David D. Tammany

**Assistant Professors:** Igor Beginin, Sandra Braun, Robert E. Chew, Jan Michael Field, Lawrence L. Freeman, Elaine C. Godfrey, Frederick C. Hunter, Sheldon S. Iden, Judy Loeb, Roger R. Mayer, Margers Raudzens, Richard E. Washington, Jay R. Yager, Michael Zahratka

**Instructors:** Lynne G. Cohen, John Orentlicher, Beverly A. Shankwiler, Ellen Wilt

**Artist-in-Residence:** Charles McGee

Students may elect the following 30 hour major, but the 54 hour major is preferred; see Curriculum for Teachers of Art, page 149. See page 144 for Arts Group Major and Minor. See page 35 for the Bachelor of Fine Arts Degree.

#### MAJOR AND MINOR

**Major** (30 semester hours)

	Semester Hours
Required courses.....	21
107 Art History Survey I.....	3
108 Art History Survey II.....	3
122 Two Dimensional Design.....	3
123 Drawing I.....	3
124 Drawing II.....	3
231 Three Dimensional Design.....	3
305 Graphics or 310 Sculpture or 312 Oil Painting.....	3
Elect six hours from the following.....	6
210 Life Drawing.....	3
232 Advanced Drawing.....	3
235 Design in Materials.....	3
306 Graphics.....	3
311 Sculpture.....	3
413 Oil Painting.....	3
Elect three or four hours from the following.....	3-4
215 History of 19th Century Art.....	3
216 Contemporary Art.....	3
301 Commercial Design.....	2
307 Ceramics.....	3
314 Painting—Watercolor.....	2
320 Jewelry.....	3

**Minor** (20-24 semester hours)

An additional four hours beyond the minimum 20 hours for graduation must be completed to meet North Central Association requirements (24) for teaching this minor at the junior-senior high level. Methods courses may be included in that 24-hour total.

	Semester Hours
Required courses.....	20

Elect fourteen or fifteen hours from the following:.....	14-15
101 Introduction to Art, or 123 Drawing I... ..	3
122 Two-Dimensional Design.....	3
210 Life Drawing.....	3
231 Three-Dimensional Design.....	3
300 Creative Art, or 301 Commercial Design.....	3-2
Elect one of the following three courses.....	3
212 History of Art.....	3
213 History of Art.....	3
216 History of Contemporary Art.....	3
Electives in art.....	3-2

#### GRADUATE STUDY

The Art Department offers graduate work leading to the master's degrees in art education and fine arts. For descriptions of graduate courses and programs in the Art Department please consult the Graduate Catalog.

#### COURSES

The art staff endeavors to fit the content of the course to the goal of the student, giving consideration to individual occupational needs and to cultural background.

Certain student work may be retained by the staff for exhibit, demonstration or publication.

**101 Introduction to Art. Three sem hours**  
An introductory course in drawing, painting and basic composition for the purposes of developing ability and an understanding of form, line and color. Frequent opportunity is afforded for group criticism. *Non-Art Major—restricted to early elementary or later elementary and occupational therapy curriculum.*

**107 Art History Survey I. Three sem hours**  
A survey of the development of the visual arts from cave art to the early Renaissance.

**108 Art History Survey II. Three sem hours**  
A continuation of Art History Survey I from the Renaissance through modern times.

**122 Two-Dimensional Design. Three sem hours**  
Emphasis on composition: emotional, expressive, decorative, intellectual. Studio projects, lecture, group criticism. Variety of media, color theory and color problems.

**123 Drawing I. Three sem hours**  
A beginning drawing course for students who plan to specialize in art. A variety of media and approaches help the student to achieve the control necessary in drawing. Individual problems are assigned and group criticism is frequent. *Art majors and minors only.*

**124 Drawing II. Three sem hours**  
Emphasis is on study of composition as an extension of the principles explored in Drawing I. Imaginative organization is stressed. Extensive experimentation with various media. Subjects such as the human figure are introduced as drawing problems.  
*Prereq: 123 Drawing I.*



- 200 Art Appreciation.** **Three sem hours**  
A course for non-specializing students. The aim is to acquaint students with art philosophies, their elements, principles and values. *Does not count toward art major.*
- 210 Life Drawing.** **Three sem hours**  
Knowledge of form (anatomy and designed forms). Study of natural form from the model to augment and diversify creative form.  
*Prereq: 123 Drawing I, 124 Drawing II or permission of the department.*
- 212 History of Ancient Art.** **Three sem hours**  
A survey of the arts of the ancient Near East and of Western art through the Roman Empire.
- 213 History of Renaissance Art.** **Three sem hours**  
A continuation of 212 History of Art; a survey of Western art from the Gothic through the Rococo period.
- 215 History of 19th Century Art.** **Three sem hours**  
Begins with a survey of European art in the late 18th Century as the beginning of the modern period, and concludes with Post-Impressionism at the end of the 19th Century.  
*Prereq: 107 Art History Survey I, 108 Art History Survey II.*
- 216 History of Contemporary Art.** **Three sem hours**  
A survey of the visual arts of the 20th Century, from Post-Impressionism through the latest contemporary developments.  
*Prereq: 215 History of 19th Century Art or permission of the department.*
- 222 African and Afro-American Art.** **Three sem hours**  
Surveys the visual arts of African and Afro-American artists. Discussion of the form and content of African art in relation to its function in tribal life. Historical survey of Afro-American artists with emphasis on current works.
- 231 Three-Dimensional Design.** **Three sem hours**  
Organizational problems in relationships of texture, space, line, volume, mass.  
*Prereq: 122 Two-Dimensional Design or permission of the department.*
- 232 Advanced Drawing.** **Three sem hours**  
Exploratory experiences preparatory to 313 Painting. An integration of the elements of design and techniques of drawing of the previous courses. This is the fourth in the introductory series.  
*Prereq: 210 Life Drawing.*
- 235 Design in Materials.** **Three sem hours**  
Consideration of surface organization in fabrics, walls, architecture, etc. Emphasis on the design relationships between materials and their treatment.  
*Prereq: 122 Two-Dimensional Design.*
- 300 Creative Arts.** **Three sem hours**  
Planned especially to meet the needs of the prospective teacher. Problems in two- and three-dimensional media, including materials suited to the elementary grades. Appreciation of contemporary arts and teaching practices peculiar to the art field.  
*Prereq: 101 Introduction to Art or 123 Drawing I.*
- 301 Commercial Design.** **Two sem hours**  
Lettering and type design and illustration, with emphasis on layout, preparation of art work for reproduction and reproduction processes. Problems related to commercial art media and procedures used in newspaper and magazine advertising, posters and cover design.
- 302 Commercial Art.** **Two sem hours**  
Advanced design and illustration as applied to multicolor magazine and book illustration, direct mail advertising and other areas of two-dimensional commercial design.  
*Prereq: 301 Commercial Design.*
- 303 Commercial Art.** **Two sem hours**  
The study of structural problems and visual techniques in connection with three-dimensional commercial design problems, such as display, product design and interiors.  
*Prereq: 302 Commercial Art.*
- 304 Photographic Design.** **Three sem hours**  
A course to introduce the student to photography as an art medium. Students will be given a variety of technical experiences in photography with the aim of developing an appreciation and knowledge of the aesthetic potential of photography. Student must supply his own camera equipment.  
*Prereq: 122 Two-Dimensional Design and 123 Drawing I.*
- 305 Graphics.** **Three sem hours**  
Acquaintance with graphic techniques; woodcut and lithography.  
*Prereq: Junior standing and 210 Life Drawing.*
- 306 Graphics.** **Three sem hours**  
Advanced graphic techniques with emphasis on development of individual style through experimentation; etching and silk screen.  
*Prereq: 305 Graphics.*
- 307 Ceramics.** **Three sem hours**  
Basic ceramics, including wheel throwing and handbuilding techniques, compounding earthenware and stoneware clay bodies, formulating glazes, firing electric and gas kilns.  
*Prereq: Junior art major or minor or permission of the department.*
- 308 Ceramics.** **Three sem hours**  
Advanced ceramic techniques, emphasis on personal expression, compounding of individual clay bodies and glazes, loading and firing of kilns.  
*Prereq: 307 Ceramics.*
- 310 Sculpture.** **Three sem hours**  
Exploratory experiences in volume and space; the use of clay, stone, wood, metal, etc.  
*Prereq: 231 Three-Dimensional Design.*
- 311 Sculpture.** **Three sem hours**  
Continuing experiences in volume and space; development of further skills with sculpture materials and concepts.  
*Prereq: 310 Sculpture.*
- 312 Color Theory.** **Three sem hours**  
A studio-lecture course dealing with principles of color interaction, color theory and phenomena; six hours per week. Two hours lecture and criticism, four hours studio guidance, outside problems.  
*Prereq: 122 Two-Dimensional Design and 123 Drawing I.*
- 313 Painting—Oil.** **Three sem hours**  
Painting problems; development of technique and con-

cepts through experimentation with painting media.

*Prereq: 122 Two-Dimensional Design and 124 Drawing II.*

**314 Painting—Watercolor. Two sem hours**

Intensive exploration of various water-based techniques—gouache, tempera, inks, etc.

*Prereq: 122 Two-Dimensional Design and 124 Drawing II.*

**316 Life Drawing. Three sem hours**

Advanced study problems; the human form as composition and design; varied media.

*Prereq: 210 Life Drawing.*

**320 Jewelry. Three sem hours**

Design and creation of jewelry by fabricating, casting, lapidary, stone setting and combination of metal and wood. Emphasis on the aesthetic aspect of decorative art objects.

*Prereq: 231 Three-Dimensional Design or permission of the department.*

**321 Jewelry. Three sem hours**

Processes and techniques applied toward a professional development in jewelry design. Advanced processes: casting, setting of precious stones.

*Prereq: 320 Jewelry.*

**322 Jewelry. Three sem hours**

Advanced problems: raising metal into hollow forms, cutting and polishing of gem stones, gem identification and advanced metal joining and forming processes.

*Prereq: 321 Jewelry.*

**331 Multi-Media Workshop. Three sem hours**

Investigations and experiments in direct use of industrial materials and kinetic media. Emphasis on media that have little art history.

*Prereq: 231 Three-Dimensional Design.*

**404 Lettering. Two sem hours**

A survey of basic letter forms; problems include letter and type indication of rough comprehensive layout as well as finished lettering for reproduction purposes. Lettering and type are used as they apply to labels, packaging, magazine and newspaper advertising.

*Prereq: 301 Commercial Design.*

**405 Graphics. Three sem hours**

An advanced laboratory course primarily designed for art majors specializing in graphics. Individual assignments from the instructor in creative use of the more fundamental techniques learned in previous courses.

*Prereq: 306 Graphics.*

**406 Graphics. Three sem hours**

An advanced laboratory course for art majors taking their sequence in graphics. Projects will include lithography, etching and aquatint processes plus individual assignments from the instructor in terms of the student's specific needs.

*Prereq: 405 Graphics.*

**407 Ceramics. Three sem hours**

Intensive work for art majors specializing in ceramics with an emphasis on larger scaled, increasingly complex techniques and forms. Historical and contemporary works examined.

*Prereq: 308 Ceramics.*

**408 Ceramics. Three sem hours**

Summation of the undergraduate ceramics program; emphasis on individual style, production techniques, studio management, exhibition programs.

*Prereq: 407 Ceramics.*

**411 Sculpture. Three sem hours**

Advanced sculpture problems, including steel and open-form construction; intensive study of contemporary methods and techniques of sculpture.

*Prereq: 311 Sculpture or permission of the department.*

**412 Advanced Sculpture. Three sem hours**

Advanced sculpture problems; development of individual style in three-dimensional form.

*Prereq: 411 Sculpture.*

**413 Painting—Oil. Three sem hours**

Further development of painting skills and aesthetic understanding of the two-dimensional surface complex. Emphasis on development of individual style.

*Prereq: 313 Painting.*

**414 Advanced Painting—Watercolor I. Two sem hours**

Further development of painting skills and aesthetic understanding of the two-dimensional surface complex. Emphasis on development of individual style.

*Prereq: 314 Painting.*

**416 Art Methods and Materials. Two sem hours**

*Required of art majors in the second semester of the junior year.* Designed to meet the needs of the classroom. Choosing, exploring, presenting materials for creating experiences in relation to growth and development of the child.

**417 Teaching of Art. Two sem hours**

Understanding the purpose and responsibility of the art teacher; developing the creative potential in children; discussion of student teaching experience. Opportunities to observe and evaluate various types of art programs in the public schools. Problems, discussion, reading, panel, field trips.

*Prereq: Senior standing and art education major.*

**419 Advanced Life Drawing. Three sem hours**

The study of the human form as part of the development of a personal style in art.

*Prereq: 316 Life Drawing.*

**420 History of Primitive Art. Three sem hours**

A survey of art forms in Africa, North and South America and Oceania.

**421 History of Oriental Art. Three sem hours**

A survey of the art of the Far East, with significant examples chosen from India, China, Japan and the influences forming their styles.

**423 Advanced Painting—Watercolor II. Two sem hours**

Further development of individual style in watercolor.

*Prereq: 414 Advanced Painting—Watercolor I.*

**424 Advanced Painting—Watercolor III. Two sem hours**

Further development of individual style in watercolor.

*Prereq: 423 Advanced Painting—Watercolor II.*

**425 Advanced Oil Painting. Three sem hours**

Further development of individual painting style.

*Prereq: 413 Painting—Oil.*

**426 Medieval Art History.** **Three sem hours**  
The development of Medieval Art from the Early Christian through the Gothic periods.

**427 Baroque Art.** **Three sem hours**  
Principal developments in Italian and Northern art of the Seventeenth Century. Emphasis on major themes and aesthetic problems.

**428 Seminar—Modern Art.** **Two sem hours**  
Readings, reports and group discussions of painting and sculpture from 1900 to the present. Course focus will remain flexible at the discretion of the department.  
*Prereq: 216 History of Contemporary Art.*

**431 Multi-Media Workshop.** **Three sem hours**  
Advanced investigation and experiments in direct use of

industrial materials and kinetic media. Emphasis on media that have little art history.

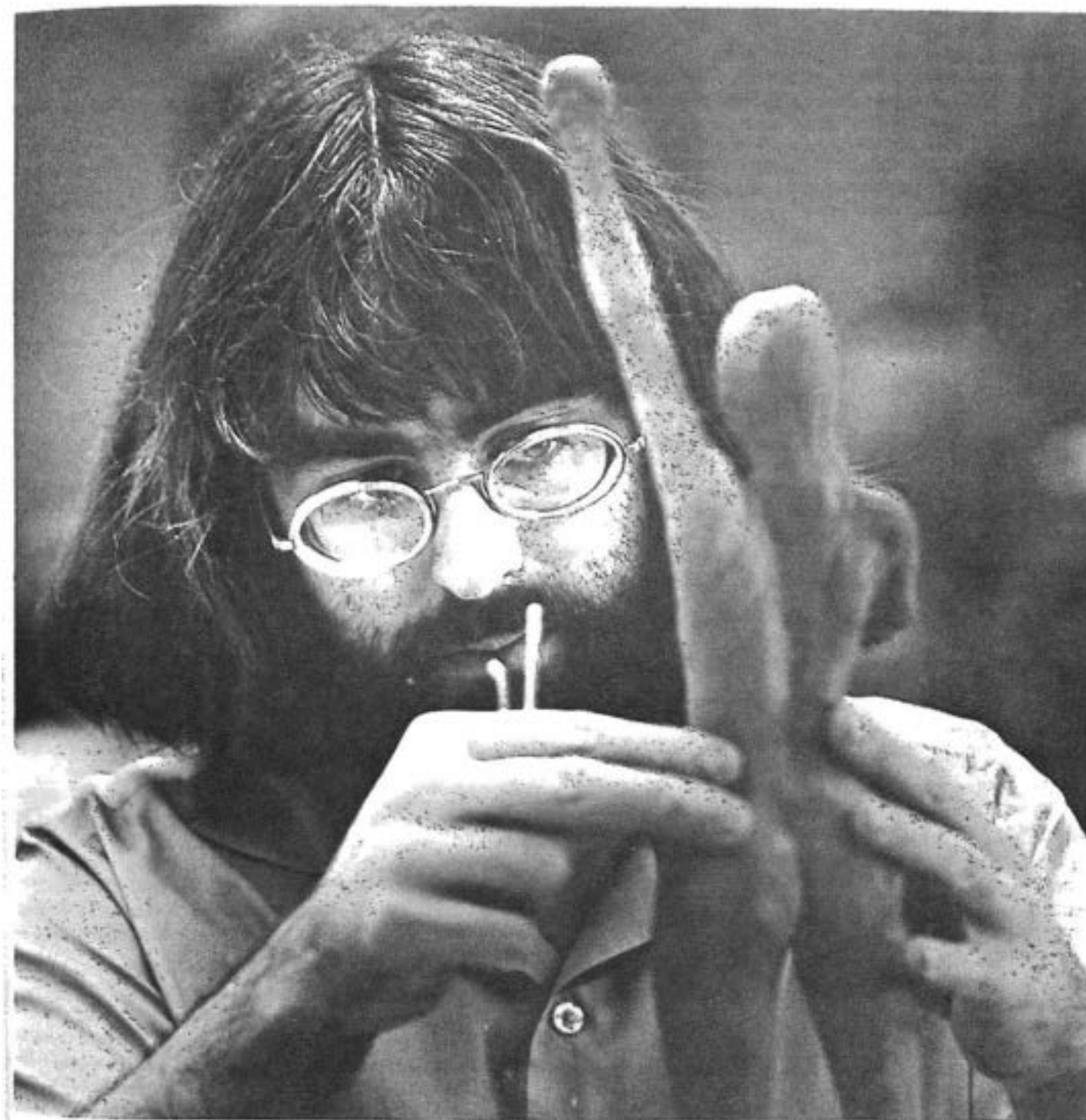
*Prereq: 331 Multi-Media Workshop.*

**497 Directed Studio Problems.** **One sem hour**  
Advanced study on an individual basis; restricted to juniors and seniors with permission of the department.

**498 Directed Studio Problems.** **Two sem hours**

**499 Directed Studio Problems.** **Three sem hours**  
For advanced study on individual basis in areas in which the department does not have regular course work. Normally such work is restricted to proficient students in the senior year under the general conditions prescribed for honors courses.

*Prereq: Permission of the department.*



## BIOLOGY

**Department Head:** Bert M. Johnson

**Professors:** Robert O. Belcher, Donald F.M. Brown, Herbert H. Caswell, Jr., William E. Fennel, Richard A. Giles

**Associate Professors:** Najati S. Ghosheh, Dennis C. Jackson, Stephen C.Y. Liu, Merlyn C. Minick, Lawrence P. Richards, Paul A. Volz, Dale C. Wallace, Shih-An Yu

**Assistant Professors:** Forrest M. Begres, Howard D. Booth, Pearl E. DiMattia, Joan W. Irish, Paul W. Millske, Nancy L. Neale, Frank L. Sinclair, William D. Sperling, Suzanne J. Stevens, Elizabeth L. Waffle

### MAJOR AND MINORS

**Biology Major** (30 semester hours)

The Department of Biology offers a major in biology, which permits concentrated study in aquatic biology, college biology teaching, general biology, microbiology or physiology.

Students applying for teaching certification cannot select any area of concentration except general biology.

	Semester Hours
Required Courses. . . . .	12
105 Biological Science. . . . .	4
(Unless exempted by examination, in which case an additional elective in area of concentration may be taken.)	
221 General Botany. . . . .	4
222 General Zoology. . . . .	4
Area of Concentration. . . . .	18
(Select one area from aquatic biology, college biology teaching, general biology, microbiology, physiology)	
	30

*All biology majors are required to take chemistry through organic (131, 180, 219).*

**Areas of Concentration**

<b>1. Aquatic Biology.</b> . . . . .	18
410 Limnology. . . . .	3
595 Workshop in Water Chemistry and Application of Instrumentation . . . . .	2
Practicum in Field Methods. . . . .	3
*A taxonomic course in botany. . . . .	3
*A taxonomic course in zoology. . . . .	3
Electives. . . . .	4

It is recommended that the student electing this area of concentration plan to complete minors in chemistry and botany or zoology.

<b>2. College Biology Teaching.</b> . . . . .	18
301 Genetics. . . . .	3
302 Genetics Lab. . . . .	2
312 Plant Anatomy or	
324 Comparative Anatomy . . . . .	3-4
320 General Physiology. . . . .	4
Taxonomic Field Course. . . . .	3
420 Ecology. . . . .	3

*\*Must be approved by Guidance Committee in aquatic biology.*

It is recommended that the student electing this area of concentration minor in chemistry, botany or zoology.

<b>3. General Biology.</b> . . . . .	18
301 Genetics. . . . .	3
320 General Physiology. . . . .	4
420 Ecology or 410 Limnology. . . . .	3
One Taxonomic Field Course. . . . .	3
Electives in biology. . . . .	5
(Any Group II biology course, except 205, 207 and 209)	
<b>4. Microbiology.</b> . . . . .	18
301 Genetics or 420 Ecology. . . . .	3
330 General Microbiology Lab. . . . .	2
331 General Microbiology. . . . .	3
444 Microbial Physiology. . . . .	3
One or two of the following. . . . .	3-6
304 Mycology. . . . .	3
360 Parasitology. . . . .	3
451 Freshwater Algae. . . . .	3
480 Protozoology. . . . .	3
Electives. . . . .	4-1

Those electing this area of concentration are urged to minor in chemistry, botany or zoology.

<b>5. Physiology.</b> . . . . .	18
320 General Physiology. . . . .	4
Two of the following. . . . .	6
310 Plant Physiology. . . . .	3
327 Vertebrate Physiology. . . . .	3
444 Microbial Physiology. . . . .	3
Electives. . . . .	8-12
Selected from:	
331 General Microbiology. . . . .	3
301 Genetics. . . . .	3
304 Mycology. . . . .	3
311 Plant Pathology. . . . .	3
312 Plant Anatomy. . . . .	3
313 Biometry. . . . .	3
323 Embryology. . . . .	3
324 Comparative Anatomy. . . . .	4
401 Biological Techniques. . . . .	2
404 Histology. . . . .	3
420 Ecology. . . . .	3
451 Biochemistry. . . . .	3
452 Biochemistry Lab. . . . .	2
480 Radiation Biology. . . . .	3

Students electing this area of concentration are strongly advised to take minors in chemistry and botany or zoology.

420 Science for Elementary Grades and 403 Methods and Materials for Teaching Biology are Group IV courses and will not count as electives on a biology major or minors.

Courses designated as Taxonomic Field Courses are	
300 Natural History of Invertebrates	
302 Systematic Botany	
310 Natural History of Vertebrates	
421 Entomology	
422 Ichthyology	

- 425 Ornithology
- 485 Mammalogy
- 450 Aquatic Tracheophyta
- 451 Freshwater Algae
- 480 Protozoology

**Biology Minor (20-24 semester hours)**

Required Courses.....	12
105 Biological Science.....	4
(unless exempted by examination)	
221 General Botany.....	4
222 General Zoology.....	4
Electives to total 20 semester hours.....	12-8
(Any Group II biology courses except 205 and 209)	

Students minoring in biology are advised to take 119 Fundamentals of Chemistry or 131 General Chemistry I.

An additional four cognate hours of sciences must be completed to meet North Central Association requirements (24) for teaching this minor at the junior-senior high level and the methods course may be included in that total.

**Botany Minor (20 semester hours)** Open only to those who are majoring in biology. Courses will be chosen from botany and biology areas in consultation with an appropriate adviser or guidance committee. Contact departmental office for assignment to guidance committee or adviser.

Students in the curriculum for secondary education who elect a minor in botany or zoology with a biology major must complete a second minor outside of the Biology Department to qualify for teaching certification.

**Zoology Minor (20 semester hours)** Open only to those majoring in biology. Courses will be chosen from zoology and biology areas in consultation with an appropriate adviser or guidance committee. Contact departmental office for assignment to guidance committee or adviser.

Students in the curriculum for secondary education who elect a minor in botany or zoology with a biology major must complete a second minor outside of the Biology Department to qualify for teaching certification.

**Minor in Conservation and Resource Use (24 semester hours)**

This program is administered jointly by the heads of the Biology Department, the Economics Department, the Geography Department and the Sociology Department.

	<b>Semester Hours</b>
Required Courses:	13
108 Earth Science.....	4
*207 Elements of Ecology.....	2
224 Principles of Conservation.....	4

\*The prerequisite for 207 Elements of Ecology is 105 Biological Science or exemption by test. Students planning to take this minor who are not exempted from 105 Biological Science should elect it for basic studies credit in the freshman year. Biology majors minoring in conservation will take 420 Ecology on the major and substitute an additional approved elective on the minor.

\*\*200 The American Economy..... 3

Electives sufficient to bring total to 24 hours, selected from among the following courses:

114 National Parks.....	1
211 Geography of the United States and Canada.....	3
215 Economic Botany.....	3
201-202 Principles of Economics.....	6
223 Weather and Climate.....	3
229 Rocks of Michigan.....	2
232 Nature Interpretation.....	3
375 Economic History of the United States..	3
306 Urban Community.....	3
332 Urban Geography.....	3
334 Population.....	3
339 Economic Geography.....	3
424 Climatology.....	2

Appropriate field and summer courses may be substituted as electives as approved by the adviser chairman.

Students are urged to meet the required course in government with 202 State and Local Government.

Students electing this minor must confer with the adviser chairman for this program to obtain an approved schedule of electives. No substitutes on the approved program will count toward its completion unless approved by the adviser chairman.

## Undergraduate Requirements for Admission to Graduate Program

The department also offers a graduate program leading to a Master of Science in Biology. To meet the admission requirements for this program, the undergraduate must plan his bachelor's degree work to include at least 20 semester hours in biology (with at least 7 hours in botany and 7 hours in zoology), one year of college chemistry, one year of college physics and must achieve an academic record of B (3.0) or better during his junior and senior years.

## Off Campus Programs

### COURSES IN TROPICAL BIOLOGY

The courses listed below are taught at Sandy Point, Great Abaco Island, Bahamas. Laboratory facilities and living quarters for staff and students are available on the premises. All travel arrangements from Miami, Florida, to Sandy Point are made in advance by Eastern Michigan University. The student will arrange his own transportation from Ypsilanti to Miami. The cost per student

\*\*Students who prefer to elect 201-202 Principles of Economics may substitute 201 for 200 The American Economy and count 202 as an elective on the minor. Students who are required to take 201-202 Principles of Economics for other purposes on their curriculums, as in business administration, may not count it on this minor and must substitute an additional elective for 200 The American Economy.



for air fare (round trip) Miami to Sandy Point, lodging, meals and tuition will be about \$350.00 (subject to price changes). One week of these courses will be spent on the Ypsilanti campus and two weeks at Sandy Point. 428 Tropical Ecology, two semester hours, and 491 Special Problem in Biology, one semester hour, are combined to make a three credit hour class for this three-week period.

**428 Tropical Ecology.** **Two sem hours**  
A study of several important biotic communities of the tropics. Investigation is in both marine and terrestrial environments. Lectures plus much laboratory and field work are required.

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

**491 Special Problems in Biology.** **One sem hour**

## FIELD COURSES AT FISH LAKE

### Environmental Education Center

Many field-oriented courses are taught at Eastern Michigan University's Fish Lake Environmental Education Center in Lapeer County, taking advantage of a tract of 240 rolling acres surrounding Fish Lake, and adjoining the 4,000 acre east parcel of the Lapeer State Game Area. The center is located in section 13 of Mayfield Township between Fish Lake Road and Five Lakes Road on the north side of Vernor Road.

During the spring session, a full resident program of field courses is offered. These courses are primarily at the undergraduate level; however, certain courses and independent studies are suitable for graduate students. Room and board fees are essentially the same as on campus. Resident student enrollment is limited due to limitations imposed by the facility; therefore, class cards for these classes must be obtained from the Department of Biology Office. Registration and tuition payments are made during the regular spring registration. Limited numbers of commuters can also be accommodated.

During the summer session, a series of field-oriented workshops are held, essentially for in-service teachers and other graduate students in cooperation with the Division of Field Services. Deadline for registration for the summer is June 1.

During fall and winter semesters, other workshops are held on Saturdays. Descriptions of these workshops can be obtained upon request from Eastern Michigan University, Division of Field Services. These materials will also include information about housing and food costs, when these services are available. Tuition is \$32.00 per credit hour for field service courses.

### COOPERATIVE FIELD COURSES AT HIGGINS LAKE

The courses listed below are taught at the Conservation Training School at Higgins Lake, under joint auspices of Eastern Michigan University, Central Michigan University, Western Michigan University and the Michigan Department of Conservation. They are normally scheduled for the week between the end of the spring semester and the start of the summer session. Only one course can be

elected at a time, and each one carries one semester hour of credit.

All registrations for these courses are now handled by the Division of Field Services, Central Michigan University, Mt. Pleasant. Applications should be sent there directly, accompanied by a deposit of at least ten dollars to be applied toward the fee. Applications should be sent before May 15 and are accepted in the order received. Enrollment is limited, and students who have not applied in advance usually cannot be admitted. Students desiring to receive their credits from Eastern Michigan University and who indicate this fact in their applications will be enrolled on EMU forms, eliminating the need for transcripts.

The fee of approximately eighty-two dollars covers tuition, board and room. For further information, consult the head of the Department of Biology.

**230 Ecology.** **One sem hour**  
A course, taught principally in the field, identifying and illustrating basic ecological concepts with particular emphasis on their importance in the resolution of some current environmental problems.

**231 Conservation.** **One sem hour**  
General principles of conservation, illustrated by field trips to resource-management projects in the vicinity.

**223 Field Bird Study.** **One sem h**  
Identification of birds and their songs and nesting habits studied in laboratory and field.

**234 General Field Botany.** **One sem h**  
This course stresses field identification and ecological relationships of the higher plants. There is much opportunity for practice in the use of keys.

**235 Field Entomology.** **One sem h**  
Identification and control of insects of importance to conservation activities will be stressed. *Not currently offered.*

**236 Field Mammalogy.** **One sem**  
Field trips to study habits, food, behavior, life history, conservation, etc. of the mammals common to our area.

**237 Aquatic Biology.** **One sem**  
Stresses field recognition of the organisms found in aquatic environments, and their interrelationships one another and their physical environment.

### COOPERATIVE FIELD COURSE AT KENSINGTON METROPOLITAN PARK

**232 Nature Interpretation.** **Three sem**  
A field course conducted at the nature center and the nature trails in Kensington Metropolitan Park under the joint auspices of Eastern Michigan University and Huron-Clinton Metropolitan Authority. Combines intensive field and museum work in natural history with practical training and experience in interpreting natural subjects and settings to individuals and groups. Previous work in natural history and course work in biological sciences. Administered through the Division of Field Services. For further information, consult the head of the Department of Biology. Course meets five hours Monday through Friday, for three weeks.



## GRADUATE STUDY

The Biology Department offers graduate work leading to the master's degree in biology. For descriptions of graduate courses and programs in the Biology Department please consult the Graduate Catalog.

COURSES  
Biology**105 Biological Science. Four sem hours**

A lecture and laboratory course in the basic principles of the biological world and their practical applications to the affairs of man. A terminal course for those not wishing to continue in science, it is also an introduction to basic courses in botany and zoology. *Students who have had 221 General Botany or 222 General Zoology may not elect this course.* Two one-hour lectures, one one-hour recitation, plus audio-tutorial laboratory experience.

**205 Field Biology. Four sem hours**

A lecture, laboratory and field course in the behavior, ecology and broad classification of plants and animals, giving training in recognition of common plants and animals of Michigan. The course is designed to give background material to the nonspecialist interested in outdoor life, to those interested in nature interpretation and to the elementary school teacher.

*Prereq: 105 Biological Science or equivalent, or permission of the department. Not open to students having credit in 221 General Botany or 222 General Zoology except by permission of the department.*

**207 Elements of Ecology. Two sem hours**

The interactions of plants and animals with their physical and biological environment. Consideration is given to the way in which principles of ecology are applied in conservation practices. Lectures and readings are supplemented by field trips to locations of ecological interest in the area.

*Prereq: 105 Biological Science or equivalent.*

**204 Principles of Conservation. Four sem hours**

Introduces the basic resources of water, soil, vegetation, animal life, land as space, land in its unaltered condition, minerals and human powers, and develops the principles which they may be wisely utilized and conserved with major emphasis on the renewable resources.

**301 Genetics. Three sem hours**

The basic principles of inheritance with their application to plants and animals, including man.

*Prereq: 221 General Botany or 222 General Zoology or equivalent.*

**302 Genetics Lab. Two sem hours**

Laboratory course designed to accompany or follow 301 Genetics in which the student will work with organisms which have proved to be most fruitful in extending our understanding of genetic principles, especially *Drosophila* and *Neurospora*. Practice in gathering and analyzing data from living populations will be provided. *Highly recommended for majors.* Others with interest in genetics would find it useful.

*Prereq: 301 Genetics previously or concurrently.*

**313 Biometry. Three sem hours**

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

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

**320 General Physiology. Four sem hours**

A lecture and laboratory course in introductory general physiology. The course is devoted to the study of basic physiological mechanisms or processes common to all living organisms. Basic processes at the cellular level are emphasized rather than the applications of such processes to a particular organism.

*Prereq: 105 Biological Science, 221 General Botany, 222 General Zoology and 219 Organic Chemistry.*

**329 General Cytology. Three sem hours**

A general course covering the microscopic structure, chemical composition and function of cytoplasmic and nuclear components of the cell and their relation to heredity, reproduction and development.

*Prereq: 221 General Botany, 222 General Zoology and 219 Organic Chemistry.*

**401 Biological Techniques. Two sem hours**

Offers practice and theory in the preservation of biological specimens for research, medical technology and educational uses, with the emphasis on microscopic slide techniques.

*Prereq: 221 General Botany and 222 General Zoology.*

**403 Methods and Materials for Teaching Biology. Two sem hours**

Gives the student the specific knowledge and training concerning the principles, classroom methods and the preparation of classroom materials used in the teaching of biology.

*Prereq: 222 General Zoology and 221 General Botany.*

**405 Organic Evolution. Two sem hours**

The processes involved in the origin and evolution of life and the implication for biology and our current world view.

*Prereq: 221 General Botany, 222 General Zoology, 301 Genetics. 230 Historical Geology is desirable.*

**410 Limnology. Three sem hours**

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

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

**411 Limnological Methods. Two sem hours**

Introduction to field and laboratory techniques in limnology.

*Prereq or Coreq: 410 Limnology, and permission of the department.*

**420 Ecology. Three sem hours**

A laboratory and field course dealing with the interrelationships of plant and animal populations and their physical environment. Biological principles involved in terrestrial adaptations will be stressed. Individual student field problems will be required.

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

**427 Introductory Molecular Genetics. Three sem hours**  
This course is designed as a follow-up to introductory genetics and will concentrate on the molecular aspects of the subject. The properties of genetical material will be discussed at molecular level.

*Prereq: 301 Genetics, organic chemistry; biochemistry desirable.*

**480 Radiation Biology. Three sem hours**  
The molecular, cellular, organismal and supraorganismal effects of corpuscular and electromagnetic radiations. Topics will cover the basic mechanisms of biological reactions to radiation, mutational effects of radiation, mammalian response to radiation, radiational studies with plants and radiation safety.

*Prereq: Plant or animal physiology, one year physics, one year chemistry. Genetics is desirable.*

**485 History of Biology. Two sem hours**  
Traces the development of major concepts in biology from the Greek natural philosophers to the present.

*Prereq: At least two courses in biology.*

**491 Special Problems in Biology. One sem hour**

**492 Special Problems in Biology. Two sem hours**  
Individual work in some area of biology under direction of a staff member. Preliminary draft of proposed study must be approved by the department prior to enrollment. *Open only to majors and minors in the department. May be elected more than once, after resubmission and approval.*

## Botany

**209 Ornamental Plants. Two sem hours**  
This is a general cultural course intended to acquaint the student with ornamental shrubs and trees, common weeds and house plants. Stress is placed on identification and methods of propagation. Much time is spent in the greenhouse and on short field trips.

**215 Economic Botany. Three sem hours**  
A study of plants useful to man, especially those which yield food, fibers, wood, rubber, drugs and other products of value. It is a lecture-demonstration course supplemented by reading. *Open to all students without prerequisite, though previous training in biology, botany or agriculture is desirable.*

**221 General Botany. Four sem hours**  
The structure and function of seed plants and of representative lower plants, together with the fundamentals of plant heredity, ecology and evolution. Two one-hour lectures, one one-hour recitation plus audio-tutorial laboratory experience.

*Prereq: 105 Biological Science or exemption. Cannot be taken concurrently with 222 General Zoology except by approval of the department.*

**302 Systematic Botany. Three sem hours**  
Covers the essentials of the collection, identification and classification of flowering plants. The student will become familiar with the major plant groups, both from lecture and herbarium study and from field experience in varied habitats near Ypsilanti. *Counts as taxonomic field course.*  
*Prereq: 221 General Botany.*

**304 Mycology. Three sem hours**  
A study of molds, rusts, mildews, edible and poisonous mushrooms and other fungi. Their life histories; their economic importance, methods of identification and preservation of specimens are topics studied.  
*Prereq: 221 General Botany.*

**310 Plant Physiology. Three sem hours**  
Deals with major plant functions presented by lecture, demonstration and experimentation in laboratory and in greenhouse.  
*Prereq: 221 General Botany, 219 Elementary Organic Chemistry or equivalent.*

**311 Plant Pathology. Three sem hours**  
A study of plant diseases caused by fungi, bacteria, viruses, nematodes, phanerogams and environmental stresses, with emphasis on the biology of the causal organisms, principals of pathogenesis, practical techniques of applied plant pathology and disease control.  
*Prereq: 310 Plant Physiology desirable.*

**312 Plant Anatomy. Three sem hours**  
Knowledge of basic plant histology is essential to the biologist. The course emphasizes recognition of primary and secondary tissues as variously combined in root, stem, leaf and flower of a wide variety of representative seed plants.  
*Prereq: 221 General Botany.*

**330 General Microbiology Laboratory. Two sem hours**  
An introduction to the techniques of isolating, cultivating and identifying bacteria and other microbes. Includes experiments on physiological, serological and pathological properties and physical, chemical and biological effects on growth and death of microbes.  
*Prereq: Must be accompanied or preceded by 331 General Microbiology.*

**331 General Microbiology. Three sem hours**  
An introductory course on the nature and biology of bacteria and other microbes (metabolism, genetics, growth and death); their ecological relationship in natural and controlled environments, and the interactions of pathogenic microorganisms and their animal, human and plant hosts.  
*Prereq: 105 Biological Science or equivalent, 119 Fundamentals of Chemistry desirable, 330 General Microbiology Laboratory optional.*

**345 Medical Mycology. Four sem hours**  
The medical and public health importance of diseases caused by fungi. Diagnostic methods and significant characteristics of the causal agents of mycoses are studied. Fungi included are the contaminants, dermatophytes and systemics. *221 General Botany and 304 Mycology recommended.*

**430 Plant Morphology of Algae and Fungi. Four sem hours**  
A lecture and laboratory course on comparative morphology of the algae (freshwater and marine) and fungi. A study of the structure and life cycles of representative organisms with emphasis on the relationship of morphology to reproduction, environmental adjustment, classification and evolution.  
*Prereq: 15 hours of biology including 221 General B*

**431 Plant Morphology of Mosses Through the Vascular Plants. Four sem hours**

A lecture and laboratory course on comparative morphology of the mosses, liverworts, ferns and other vascular plants. A study of the structure and life cycles of representative forms with emphasis on the relationship of morphology to reproduction, environmental adjustment, classification and evolution, etc.

*Prereq: 15 hours of biology, including 221 General Botany;*

*430 Plant Morphology of Algae and Fungi recommended but not essential.*

**442 Microbial Ecology. Three sem hours**

Interactions among microbes (fungi, bacteria, some phages) other living organisms and the environment, with emphases on parasitism, mutualism, commensalism and biogeo-chemical recycling of matter. Includes both laboratory and field exercises.

*Prereq: 221 General Botany or 222 General Zoology, and 331 General Microbiology.*

**444 Microbial Physiology. Three sem hours**

A lecture and laboratory course of physiological studies on bacteria and fungi. Emphasis will be placed on nutrition, metabolism, fermentation, physiology of parasitism and biosynthesis of polymers by microbes.

*Prereq: 331 General Microbiology and 330 General Microbiology Laboratory.*

**450 Aquatic Tracheophyta. Three sem hours**

Field and laboratory work in identification of herbaceous and shrubby vascular plants growing in aquatic habitats and in both vegetative and reproductive phases. *Counts as taxonomic field course.*

*Prereq: 221 General Botany.*

**451 Freshwater Algae. Three sem hours**

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

*Prereq: 221 General Botany or equivalent.*

## Zoology

**222 General Zoology. Four sem hours**

A general survey of the groups of invertebrate and vertebrate animals according to the evolutionary sequence. Emphasis is placed upon the classification and structures, on such aspects as physiology, life-histories, habits, distribution and economic relations. Two one-hour lectures, one one-hour recitation, plus audio-tutorial laboratory experience.

*Prereq: 105 Biological Science or exemption. Cannot be taken concurrently with 221 General Botany except approval of the department.*

**Human Physiology. Three sem hours**

A study of the functioning of the human body. Lecture, laboratory and demonstration.

*Prereq: 105 Biological Science, 200 Anatomy for Occupational Therapy Students (or equivalent). Not open to biology majors, but can be taken on biology minor in which case 105 Biological Science is prereq. May not be*

*taken for credit in addition to 327 Vertebrate Physiology or 200 Anatomy and Physiology.*

**300 Natural History of Invertebrates. Three sem hours**

A field course designed to give training in the recognition, collection, identification and preserving of common invertebrates of Michigan, exclusive of the insects, with emphasis on their natural history, ecology and economic importance. *Counts as taxonomic field course.*

*Prereq: 222 General Zoology.*

**306 Physical Anthropology. Two sem hours**

The relationships of contemporary races of mankind with extinct hominids and the living and fossil primates are stressed against a background of geologic time and modern theories of evolution.

*Prereq: 105 Biological Science or equivalent.*

**310 Natural History of Vertebrates. Three sem hours**

A survey of the vertebrates, emphasizing their adaptations and their natural history (*i.e.*, those aspects of their ecology which cannot be readily studied by the experimental method either in the laboratory or in the wild). Laboratory work will stress the taxonomic classification, identification and distribution of local and other forms. Field work, sometimes conducted under adverse weather conditions and/or at night, will emphasize accurate observation and permanent recording of original data on local species. *Counts as taxonomic field course.*

*Prereq: 222 General Zoology.*

**323 Animal Embryology. Three sem hours**

Fundamental facts and principles of the reproduction and development of animals with laboratory studies of the frog, chicken, pig and other forms.

*Prereq: 222 General Zoology.*

**324 Comparative Anatomy of Vertebrates. Four sem hours**

The anatomy of the vertebrate organ systems is studied on a comparative basis, which emphasizes the evolutionary development of the groups. Laboratory work includes detailed dissection of the shark and cat. Three one-hour lectures and two two-hour laboratory periods.

*Prereq: 222 General Zoology.*

**327 Vertebrate Physiology. Three sem hours**

A study of physiological phenomena of the vertebrate body at the cellular and organ level with laboratory experiments to illustrate. Two one-hour lectures, one four-hour laboratory.

*Prereq: 222 General Zoology, 219 Elementary Organic Chemistry or equivalent. Some physics is desirable.*

**360 Parasitology. Three sem hours**

A survey of animal parasites which affect man and his environment. Emphasis is on the zoological inter-relationships. Lectures and laboratory.

*Prereq: 222 General Zoology.*

**404 Histology. Three sem hours**

An introduction to the structure and properties of vertebrate organs and their component tissues with some experience in the techniques for their microscopic study.

*Prereq: 222 General Zoology.*

**421 Entomology. Three sem hours**

A survey of the world of insects, their structure, function,

behavior and ecology. The identification and classification of local insects will be stressed. A student field project will be required. *Counts as taxonomic field course.*  
*Prereq: 222 General Zoology or permission of the department.*

**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.*

**425 Ornithology. Three sem hours**

A course in bird biology for the secondary teacher and students with advanced interest in biology. Field identification and census methods will be used to introduce the study of bird populations, behavior and ecology. A survey of major North American bird families will be made in the laboratory. A student field project will be required. *Counts as taxonomic field course.*

*Prereq: 222 General Zoology or permission of the department.*

**430 Invertebrate Zoology. Four sem hours**

Phylogenetic and anatomical study of one or more representative types from each phylum of invertebrates, with special emphasis on taxonomy, classical literature and current research. Three lectures and two two-hour labs weekly.

*Prereq: 222 General Zoology.*

**460 Economic Zoology. Two sem hours**

The species, varieties and breeds of animals that are used as beasts of burden, supply food, clothing, sport and recreation or serve as pets.

*Prereq: One course in college zoology.*

**480 Protozoology. Three sem hours**

Survey of the protozoa with emphasis on their life cycles, morphology and ecology. Both free living and parasitic

forms will be discussed. Techniques of collecting, culturing and preserving protozoans and their identification will be emphasized in the laboratory. *Counts as taxonomic field course.*

*Prereq: 222 General Zoology.*

**485 Mammalogy. Three sem hours**

Some aspects of the biology of mammals: origin and evolution, anatomy, classification, adaptations and zoogeography. Natural history and other aspects of their ecology are studied in the field, including behavior, migration, reproduction 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 Natural History of Vertebrates or 420 Ecology or 324 Comparative Anatomy of Vertebrates.*

### Elementary Science

(see required courses on page 144)

**103 Science for the Elementary Teacher. Three sem hours**

Important biological concepts, especially relating to the interrelationships of organisms within their environment will be stressed. Considerable emphasis will be placed on the investigative or "discovery" type approach. The methodology involved in the newer approaches to teaching science will be an integral part of the course.

*Prereq: Participation in the elementary teacher education project.*

**205 Field Biology.**

(See Biology).

**402 Science for Elementary Grades. Three sem hours**

Intended for those who are planning to teach in the elementary grades. An attempt is made to prepare the student to organize the problems, collect the materials, direct the activities of the elementary science class. Methods of presenting simple experiments to children and conducting field trips will be demonstrated. Two hour lectures and one two-hour laboratory.

## CHEMISTRY

Department Head: Clark G. Spike

Professors: Charles T. Anderson, Ronald W. Collins, Edward L. Compere, Jr., Omer Robbins, Jr., Ronald M. Scott, John M. Sullivan, Masanobu Yamauchi

Associate Professors: Giles F. Carter, Elizabeth V. Giles, Bruce B. Graves, John W. Moore, O. Bertrand Ramsay, Bruce D. West, Jerry R. Williamson, Stewart D. Work

Assistant Professors: Stephen W. Brewer, Kenneth W. Hicks, Ralph R. Powell, Krishnaswamy Rengan, Stephen E. Schullery

### CURRICULUMS

#### Professional Curriculum in Chemistry

This curriculum provides the necessary background for those planning to become professional chemists. The curriculum meets the requirements established by the American Chemical Society for professional education in chemistry at the bachelor's level. The Department of Chemistry has been approved by the A.C.S. as providing the facilities, faculty and course offerings essential for a professional program. Students successfully completing this curriculum are prepared to enter technical positions in industrial or governmental research or to undertake graduate study in chemistry. Further work on the graduate level is highly recommended for those who are capable.

A total of 26 semester hours in mathematics and physics, required by the curriculum as prerequisites for advanced chemistry courses, fulfills the required minor. No additional minor is required.

Following is a list of the required courses arranged in recommended sequence. This sequence a) assures satisfaction of prerequisite requirements, b) has no semesters with more than one chemistry laboratory course and c) allows the student maximum freedom in his senior year in the selection of advanced electives.

Ten semester hours, or an equivalent reading knowledge, of a foreign language, preferably German, are recommended for A.C.S. certification\*

#### First Year

#### Semester Hours

First Semester	Semester Hours
131 General Chemistry I. . . . .	4
120 Calculus with Analytical Geometry I. . . . .	4

Second Semester	Semester Hours
132 General Chemistry II. . . . .	3
180 Chemistry Laboratory Techniques. . . . .	2
121 Calculus with Analytical Geometry II. . . . .	4
122 Elementary Linear Algebra. . . . .	2

#### Second Year

First Semester	Semester Hours
81 Quantitative Analysis. . . . .	4
71 Organic Chemistry. . . . .	3
20 Calculus with Analytical Geometry III. . . . .	3
23 Mechanics, Sound and Heat. . . . .	5

Second Semester	Semester Hours
72 Organic Chemistry. . . . .	3
73 Organic Chemistry Laboratory. . . . .	2
21 Calculus with Analytical Geometry IV. . . . .	3
24 Electricity and Light. . . . .	5

#### Third Year

First Semester	Semester Hours
461 Physical Chemistry. . . . .	3
374 Organic Chemistry Laboratory. . . . .	2

Second Semester	Semester Hours
463 Physical Chemistry. . . . .	3
462 Physical Chemistry Laboratory. . . . .	2

#### Fourth Year

432 Advanced Inorganic Chemistry. . . . .	3
481 Instrumental Analysis. . . . .	4

Advanced elective courses (Two advanced courses from the list below must be selected; at least one must be from the Chemistry Department)\*

#### Approved Advanced Electives:

##### Chemistry:

451-452 Biochemistry
472-473 Qualitative Organic
485 Radioisotope Techniques in Chemistry and Biology
496-497 Special Topics
498-499 Special Problems
530 X-Ray Crystallography
532 Structural Inorganic
553 Enzymology
555 Biopolymers
561 Advanced Physical Chemistry
565 Nuclear Chemistry
571 Advanced Organic
572 Stereochemistry of Organic Compounds
575-576 High Polymer Chemistry
581 Analytical

##### Mathematics:

237 Introduction to Computer Programming and Numeric Methods
320 Differential Equations I
337 Computer Programming Languages
425 Mathematics for the Scientist I
Other 400 level courses with department approval

##### Physics:

430 Intermediate Mechanics I
440 Optics
450 Electricity and Magnetism
452 Electrical Measurements
456 Electronics for Scientists
460 Heat and Thermodynamics
470 Atomic Physics
471 Nuclear Physics
475 Introduction to Quantum Mechanics
476 Solid State Physics

If 105 College Algebra must be taken due to deficient high school preparation, the mathematics prerequisites for this sequence will still be met if the student begins the calculus sequence in his second semester.

\*NOTE: During the semester prior to graduation, students wishing A.C.S. certification of their degree must make formal application to the department head. If the student does not desire an A.C.S. certified degree in chemistry, a 40 semester hour chemistry major can be obtained by completing all of the above listed courses except the foreign language and one of the advanced electives.

The basic studies requirements for the Bachelor of Science or Bachelor of Arts degree must also be completed. A minimum total of 124 semester hours of academic credit (including four semester hours of physical education) is required for graduation.

### Metallurgical Chemistry Curriculum

This curriculum provides the necessary background for industrial research and development in chemical metallurgy or other areas of chemistry involving a minimum of organic chemistry. Graduate study in chemistry or metallurgy would probably require additional course work in organic chemistry or metallurgy respectively. Below is a list of the required science and mathematics courses in a recommended sequence. All comments under "Professional Chemistry Curriculum" apply except those concerning A.C.S. certification.

#### First Year

#### Semester Hours

##### First Semester

131 General Chemistry. . . . .	4
120 Calculus with Analytical Geometry I. . . . .	4
123 Metal Processes. . . . .	3

##### Second Semester

132 General Chemistry. . . . .	3
180 Chemistry Laboratory Techniques. . . . .	2
121 Calculus with Analytical Geometry II. . . . .	2
122 Elementary Linear Algebra. . . . .	2

#### Second Year

##### First Semester

281 Quantitative Analysis. . . . .	4
223 Mechanics, Sound and Heat . . . . .	5
220 Calculus with Analytical Geometry III . . . . .	3

##### Second Semester

270 Organic Chemistry . . . . .	4
271 Organic Chemistry Laboratory. . . . .	1
221 Calculus with Analytical Geometry IV . . . . .	3
224 Electricity and Light . . . . .	5

#### Third Year

##### First Semester

461 Physical Chemistry. . . . .	3
237 Computer Programming. . . . .	3
241 Materials Science. . . . .	3
242 Materials Science Laboratory. . . . .	1

##### Second Semester

463 Physical Chemistry. . . . .	3
462 Physical Chemistry Laboratory. . . . .	2
341 Principles of Metallurgy. . . . .	3

#### Fourth Year

##### First Semester

432 Advanced Inorganic Chemistry. . . . .	3
342 Experimental Metallurgy. . . . .	1

The following electives are recommended when the student's time and interest permits:

476 Solid State Physics. . . . .	3
498 Special Problems in Chemistry. . . . .	2
530 X-Ray Crystallography. . . . .	3
561 Advanced Physical Chemistry. . . . .	3
481 Instrumental Analysis. . . . .	4

## MAJOR AND MINOR

### Major (30 semester hours)

This major is provided for students who do not intend to become professional chemists. It is designed for students who plan to teach chemistry in a secondary school, who desire a general cultural education with an emphasis on chemistry, who are preparing for work in another field such as pre-medicine, pre-dentistry or pre-law or who are interested in combining chemistry with an allied field.

Required courses:	Semester Hours
131 General Chemistry I. . . . .	4
132 General Chemistry II. . . . .	3
180 Chemistry Laboratory Techniques. . . . .	2
281 Quantitative Analysis. . . . .	4
371-372-373 Organic Chemistry. . . . .	8
361 Fundamentals of Physical Chemistry. . . . .	3
362 Physicochemical Measurements. . . . .	1
Electives in chemistry from courses above	
200 . . . . .	5

(Transfer students must elect at least six semester hours in this department for major.)

The methods class for those students who plan to teach chemistry at the junior-senior high level is Physics Methods in Science Teaching, usually offered only in the fall semester.

### Minor (20-24 semester hours)

Required courses:	Semester Hours
131 General Chemistry I. . . . .	4
132 General Chemistry II. . . . .	3
180 Chemistry Laboratory Techniques. . . . .	2
270-271 Organic Chemistry (or equivalent). . . . .	5
Electives from courses above 200. . . . .	6

An additional four cognate hours of sciences must be completed to meet North Central Association requirements (24) for teaching this minor at the junior-senior high level. The methods course may be included in total.

(Transfer students must elect at least three semester hours in this department for minor.)

**Program for Teachers of General Science** (see page 119)  
**Program for Teachers of Physical Science** (see page 119)

### Honors Program in Chemistry

The Chemistry Department offers an honors program for capable and interested students. This program provides a more rewarding educational experience for students by placing them together in special honors sections of the following courses: 132 General Chemistry, 180 Chemistry Laboratory Techniques, 281 Quantitative Analysis, 371 and 372 Organic Chemistry and 373 Chemistry Laboratory. These smaller sections of chemistry permit a more informal classroom atmosphere with greater student-teacher interaction, coverage of more advanced topics and greater use of modern instrumentation than is normally possible. Students completing the honors sequence will be especially prepared to take the more advanced chemistry courses including a research project in their senior year should they so desire.

Eligibility for the honors program is based on the student's interest and his or her performance in 131 General Chemistry I. A student need not be a chemistry major.



be eligible. Prospective honors students will be selected from 131 General Chemistry I classes by their instructors and the Chemistry Department Honors Committee prior to registration time for the winter term, and be invited to register in the honors 132 General Chemistry II and 180 Chemistry Laboratory Techniques sections in the winter term. Alternatively, students may apply to the Honors Committee for permission to enroll in an honors section. Eligibility to enroll in the subsequent sections in the honors sequence is dependent on the student's continued interest and satisfactory course work performance. For more detailed information regarding the honors program, the student should contact a chemistry major adviser, a member of the Honors Committee, or the department head.

## GRADUATE STUDY

The Chemistry Department offers graduate work leading to the master's degree in chemistry. For descriptions of graduate courses and programs in the Chemistry Department, please consult the Graduate Catalog.

## COURSES

### Chemistry

**101 Science for Elementary Teachers. Three sem hours**  
A course designed for students who plan to teach in elementary school. Lectures deal with some basic principles of chemistry while the laboratory work emphasizes the discovery approach as it may be used in an elementary classroom. Only simple equipment and easily obtained chemicals are used in the experiments. Lecture: one hour per week. Laboratory: four hours per week.  
*Prereq: Physics and Astronomy. 100 Science for Elementary Teachers.*

**118 Contemporary Materials. Three sem hours**  
An overview of materials used in everyday life with emphasis on materials in construction, the automobile and the household. An introduction to understanding why metals, plastics, wood, glass and rubber behave as they do.

**119 Fundamentals of Chemistry. Four sem hours**  
A study of the basic principles of chemistry designed for students who are taking neither a major nor a minor in chemistry. The course emphasizes an understanding of our surroundings through application of these basic principles. Lecture: three hours per week. Laboratory: two hours per week.

**120 Fundamentals of Chemistry. Four sem hours**  
Continuation of 119 Fundamentals of Chemistry, stressing organic chemistry and biochemistry. Completes the study of chemistry begun in 119 and is a terminal course. Lecture: three hours per week. Laboratory: two hours per week.  
*Prereq: 119 Fundamentals of Chemistry.*

**131 General Chemistry I. Four sem hours**  
The first semester of a basic lecture course covering the general principles of chemistry for science majors and students with interest and background in science. Lecture: two hours per week.  
*Prereq: High school chemistry, 1-1/2 years of high school chemistry.*

**132 General Chemistry II. Three sem hours**  
A continuation of 131 General Chemistry. The sequence 131, 132 and 180 constitutes the customary year of general chemistry. Lecture: three hours per week.  
*Prereq: 131 General Chemistry I. Coreq: 180 Chemistry Laboratory Techniques.*

**180 Chemistry Laboratory Techniques. Two sem hours**  
A course in basic practices of the chemistry laboratory. Qualitative analysis of common cations, volumetric quantitative analysis and a variety of synthesis, isolation and measurement techniques are included. Laboratory: six hours per week.  
*Prereq: 131 General Chemistry I.*

**232 Inorganic Chemistry. Two sem hours**  
A course in descriptive inorganic chemistry in which the chemistry of the elements is correlated with the periodic table, atomic structures and basic chemical principles. Lecture: two hours per week.  
*Prereq: 132 General Chemistry II.*

**241 Materials Science. Three sem hours**  
An understanding of why materials behave as they do. The relation of composition and structure to properties of materials: metals, plastics, ceramics, glass and composites. Lecture: three hours per week.  
*Prereq: 131 General Chemistry, 180 Chemistry Laboratory Techniques, Physics 221 or 223 Mechanics, Sound and Heat, Mathematics 120 Calculus with Analytic Geometry I.*

**242 Materials Science Laboratory. One sem hour**  
A laboratory course, parallel to 241 Materials Science, microstructures, imperfections and transformations (solidification, recrystallization, solid phase changes and corrosion) of materials.  
*Prereq: 180 Laboratory Techniques. Coreq: 241 Materials Science.*

**270 Organic Chemistry. Four sem hours**  
A comprehensive one semester survey course in organic chemistry intended primarily for chemistry minors. Includes aliphatic and aromatic compounds plus functional group chemistry. Chemistry majors and other students requiring a full year sequence of organic chemistry should enroll in 371 and 372 Organic Chemistry. Lecture: four hours per week.  
*Prereq: 131 General Chemistry I.*

**271 Organic Chemistry Laboratory. One sem hour**  
Provides instruction in the basic manipulative techniques of experimental organic chemistry and experience with organic chemicals. Includes several synthesis reactions. To accompany or follow 270 Organic Chemistry. Laboratory: One three-hour period per week.  
*Prereq: 180 Chemistry Laboratory Techniques.*

**281 Quantitative Analysis. Four sem hours**  
A lecture and laboratory course treating instrumental, gravimetric and volumetric analysis. Lecture: two hours per week. Laboratory: six hours per week.  
*Prereq: 132 General Chemistry II and 180 Chemistry Laboratory Techniques.*

**341 Principles of Metallurgy. Three sem hours**  
A course covering the winning and refining of metals,

their structure, diffusion, heat treatment, hardening and corrosion.

*Prereq: 131 General Chemistry I.*

**342 Experimental Metallurgy. One sem hour**

A laboratory course emphasizing metallography, testing of physical properties, treatment, finishing, and analysis of metals and alloys. Laboratory: six hours per week.

*Prereq: 242 Materials Science Laboratory or 341 Principles of Metallurgy. 341 Principles of Metallurgy prereq. or coreq.*

**351 Introductory Biochemistry. Three sem hours**

A lecture course for medical technology and dietetics students dealing with the structure, function and metabolism of biologically significant compounds and with the chemistry of physiological processes. *Does not count toward chemistry major. No credit for both 351 and 451.* Lecture: three hours per week.

*Prereq: 270 Organic Chemistry or equivalent.*

**352 Basic Biochemical Analysis. One sem hour**

A laboratory class to accompany 351 Introductory Biochemistry. Emphasis is placed on the special analytical techniques employed by biochemists such as chromatography, electrophoresis, fluorimetry, flame photometry, spectrophotometry. *This course is restricted to medical technology and dietetics students.* Laboratory: four hours per week.

*Prereq: 180 Chemistry Laboratory Techniques, 271 Organic Chemistry Laboratory or equivalent.*

*Coreq: 351 Introductory Biochemistry.*

**361 Fundamentals of Physical Chemistry. Three sem hours**

Foundations of physical chemistry. An introduction to some of the basic principles of physical chemistry, i.e., thermodynamics, kinetics and quantum theory. This course is applicable to the 30-hour chemistry major and chemistry minor. Credit cannot be applied to the 40-hour major. Lecture: Three hours per week.

*Prereq: 131 General Chemistry I, 132 General Chemistry II, 180 Chemistry Laboratory Techniques, Mathematics 120 and 121 Calculus with Analytic Geometry.*

**362 Physicochemical Measurements. One sem hour**

A one-semester laboratory course whose emphasis is on measurements of physical constants. Experiments are chosen to illustrate physical measurements in the areas of thermodynamics, kinetics and quantum mechanics. This course is applicable to the 30-hour chemistry major and the chemistry minor. Credit cannot be applied to the 40-hour major. Laboratory: Four hours per week.

*Prereq: 281 Quantitative Analysis.*

*Coreq: 361 Fundamentals of Physical Chemistry.*

**371 Organic Chemistry. Three sem hours**

A lecture course for students specializing in science and those preparing for dentistry or medicine. Lecture: three hours per week. *Not open to students who have had credit for 270 Organic Chemistry.*

*Prereq: 131 General Chemistry I.*

**372 Organic Chemistry. Three sem hours**

A continuation of 371 Organic Chemistry, and with it constituting the customary year of foundation work in organic chemistry. *This course must be accompanied by*

*373 Organic Chemistry Laboratory. Lecture: three hours per week.*

*Prereq: 371 Organic Chemistry.*

**373 Organic Chemistry Laboratory. Two sem hours**

A laboratory course covering basic techniques involved in organic chemistry. *This course must be taken concurrently with 372 Organic Chemistry.* Laboratory: six hours per week.

*Prereq: 180 Chemistry Laboratory Techniques.*

**374 Organic Chemistry Laboratory. Two sem hours**

A laboratory course covering advanced techniques of organic chemistry. Laboratory: six hours per week.

*Prereq: 372 Organic Chemistry and 373 Organic Chemistry Laboratory.*

**410 Scientific Glassworking. One sem hour**

Weekly lecture-demonstrations cover basic methods of manipulation and properties of glass as related to simple construction and repair of common laboratory glassware. Weekly projects are submitted to the instructor for evaluation after completion. Laboratory: two hours per week.

**432 Advanced Inorganic Chemistry. Three sem hours**

An advanced level treatment of the newer inorganic chemical developments, with emphasis on theoretical advances in the interpretation of bonding and reactivity of inorganic compounds. Lecture: three hours per week.

*Prereq: 461 Physical Chemistry or permission of the department; 232 Inorganic Chemistry is also recommended.*

**451 Biochemistry. Three sem hours**

A lecture course dealing with occurrence, metabolism, synthesis and functions of biologically important substances such as carbohydrates, proteins and fats. *No credit for both 351 and 451. Must be accompanied by 452 Chemistry Laboratory.* Lecture: three hours per week.

*Prereq: 270 Organic Chemistry, or equivalent, and General Chemistry II.*

**452 Biochemistry Laboratory. Two sem hours**

Provides laboratory experience in the isolation, purification and analysis of biochemically important compounds. Modern laboratory techniques are stressed. Laboratory: seven hours per week.

*Prereq: 271 Organic Chemistry Laboratory or equivalent.*

**461 Physical Chemistry. Three sem hours**

A course which considers the principles of thermodynamics, kinetics and atomic and molecular structure. Lecture: three hours per week.

*Prereq: 132 General Chemistry II, one year of physics and 220 Analytic Geometry and Calculus II.*

**462 Physical Chemistry Laboratory. Two sem hours**

A course involving the determination of the physical properties of substance, rate studies and measurement of thermochemical and electrical properties. Laboratory: seven hours per week.

*Prereq: 281 Quantitative Analysis, 461 Physical Chemistry.*

**463 Physical Chemistry. Three sem hours**

A continuation of the work begun in 461 Physical Chemistry. Lecture: three hours per week.

*Prereq: 461 Physical Chemistry and 221 Analytic Geometry and Calculus IV.*

**472 Spectrometric Organic Structure Determination.****Two sem hours**

The use of infra-red, ultra-violet, mass and nuclear magnetic resonance spectroscopy in organic structure determination. Emphasizes problem-working and practical application. Lecture: two hours per week.  
*Prereq: 372 Organic Chemistry.*

**473 Qualitative Organic Chemistry Laboratory.****Two sem hours**

The systematic identification of organic compounds is based on fundamental organic reactions and spectrophotometric measurements. Microtechniques are emphasized. Laboratory: six hours per week.  
*Prereq: 373 Organic Chemistry Laboratory.*  
*Coreq: 472 Spectrometric Organic Structure Determination.*

**481 Instrumental Analysis.****Four sem hours**

Theory and practice of chemical analysis and measurements by instrumental methods. Lecture: two hours per week. Laboratory: six hours per week.  
*Prereq: 281 Quantitative Analysis and 461 Physical Chemistry.*

**485 Radioisotope Techniques in Chemistry and Biology.****Three sem hours**

The course will introduce students to principles and practices of radiation safety, measurement of radioactivity with various detectors and to laboratory techniques of handling radioactivity. Laboratory: three hours per week.  
*Prereq: 180 Chemistry Laboratory Techniques and one science lab course above the introductory level. Permission of the department.*

**490 Literature of Chemistry.****One sem hour**

A course designed to provide an introduction to the use and nature of the chemical literature for those students

undertaking research or advance study. Lecture: one hour per week.

*Prereq: Junior standing. Prereq or coreq: one semester German or French.*

**491 History of Chemistry.****Two sem hours**

A course concerned with the development of chemical concepts from the Greek natural science to the present. Lecture: two hours per week.

*Prereq: Two years of college chemistry, including organic chemistry.*

**496 Special Topics in Chemistry.****Two sem hours**

An advanced level course in a specific area of chemistry covering new developments in that field. The area covered will be the area of specialization of the staff member teaching the course, and will thus vary as the need and interest change. Lecture: two hours per week.

*Prereq: Permission of the department.*

**497 Special Topics in Chemistry.****Two sem hours**

Same as 496 Special Topics in Chemistry. For students who wish to repeat the course under a different instructor for additional credit. Lecture: two hours per week.

*Prereq: Permission of the department.*

**498 Special Problems in Chemistry.****Two sem hours**

A course for advanced chemistry students involving participation in original research. The student is required to do preliminary library work on the historical background of his research problem and to participate in seminars discussing closely related work in the recent literature. A detailed progress report is required at the end of the semester.

*Prereq: Permission of the department.*

**499 Special Problems in Chemistry.****Two sem hours**

A continuation of 498 Special Problems.  
*Prereq: 498 Special Problems in Chemistry and permission of the department.*

## ECONOMICS

**Department Head:** Young-job Chung

**Professors:** Charles E. Helppie, John W. Simpson, Carl D. Snyder

**Associate Professor:** James R. Gibbons

**Assistant Professors:** Thomas C. Anderson, Neal P. Cohen, Ahmed El-Safty, Gwen A. Fountain, Mary F. McCarthy, Donald W. Pearson, Harold E. Simmons

### MAJOR AND MINOR

Major (30 semester hours)	Semester Hours
Required courses . . . . .	30
201 Principles of Economics I . . . . .	3
202 Principles of Economics II . . . . .	3
301 Intermediate Macroeconomic Analysis . . . . .	3
302 Intermediate Microeconomic Analysis . . . . .	3
310 Economic Statistics . . . . .	3
Electives in economics . . . . .	15
Note: For students intending to pursue graduate studies in economics, a cognate minor in mathematics is strongly recommended.	
Minor (20 semester hours)	Semester Hours
Required courses . . . . .	20
201 Principles of Economics I . . . . .	3
202 Principles of Economics II . . . . .	3
Electives in economics . . . . .	14

**Conservation and Resource Use Minor** (See page 49)

### GRADUATE STUDY

The Economics Department offers graduate work leading to the master's degree in economics. For descriptions of graduate courses and programs in the Economics Department, please consult the Graduate Catalog.

### COURSES

**200 The American Economy.** **Three sem hours**  
A one semester survey of the basic principles of economics for those students who seek a basic knowledge of the functioning of the present-day American economy but plan to take no other course in economics. *Not open to students with 201 or 202 Principles of Economics.*

**201 Principles of Economics I.** **Three sem hours**  
The first half of an introduction to basic principles of economics. Emphasis is on macroeconomic concepts of national income, fiscal and monetary policy and problems of unemployment, inflation and economic growth.

**202 Principles of Economics II.** **Three sem hours**  
The second half of an introduction to basic principles of economics. Emphasis is on microeconomic concepts of demand and supply and problems relating to prices and resource allocation.  
*Prereq: 201 Principles of Economics I or equivalent.*

**210 Mathematics for Economics.** **Three sem hours**  
A survey of major mathematics concepts and terms most used in the study of economics. Topics will include basic probability, elementary calculus and fundamental matrix algebra with their applications to economics. *Not open to students having Mathematics 120 Calculus with Analytic Geometry I and 121 Calculus with Analytic Geometry II or equivalent.*

**300 Contemporary Economic Issues.** **Three sem hours**  
An economic analysis of a contemporary economic problem. Each semester a single topic will be covered and the topic may change each semester as the interest and/or problem changes. Students may elect this course several times as long as different topics are studied but it may be taken only twice for credit toward a major or minor in economics.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**301 Intermediate Macroeconomic Analysis.** **Three sem hours**  
A study of national income analysis, employment theory and stabilization policies.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**302 Intermediate Microeconomic Analysis.** **Three sem hours**  
A study of the theory of the firm, prices and resource allocations.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**310 Economic Statistics.** **Three sem hours**  
An introduction to the statistical measurement and analysis of mass economic data; small samples and their use for description and inference; the statistical study of economic time series data; index construction and interpretation; and introductory regression analysis.

*Prereq: 210 Mathematics for Economics or Mathematics 104 Higher Algebra I or more advanced mathematics course.*

**320 Labor Problems.** **Two sem hours**  
A study of supply and demand factors in the labor market, collective bargaining, types and policies of labor organizations and employer organizations, recent legislation relating to labor.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**321 Black Workers and Labor Market.** **Three sem hours**  
A consideration of the special problems and unique employment situation of black workers arising from historical and market influences and from corporate, union and governmental policies.

*Prereq: 201 and 202 Principles of Economics or permission of the department.*

**323 Labor and Government.** **Three sem hours**  
An examination of the economic aspects of labor legislation and governmental administrative rulings which affect unions and union-employer relations.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**341 Money and Banking.** **Three sem hours**  
A study of the nature and role of money and credit banking system and other financial institutions and a relation of monetary policy to the level of economic activity.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**350 Government Finance.** **Three sem hours**  
An analysis and description of the theory, institutions and problems of financing the public sector. The study includes expenditures, taxes and other revenue sources, budgeting, debt management and grants-in-aid at all levels of government upon the level and the distribution

national income and upon the allocation of resources are examined.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**361 Corporation Finance. Three sem hours**

An examination of the structure, financial organization, income and policy decisions of corporations.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**365 Public Utility Economics. Two sem hours**

An analysis of the economic function and significance of public utilities and the role of public regulation.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**366 Economics of Transportation. Three sem hours**

A survey of economic aspects of all forms of transportation, with consideration of the role of government and the socio-economic effects of the transportation sector on the rest of the economy.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**370 Comparative Economic Systems. Three sem hours**

A comparative analysis of the theoretical models underlying various economic systems; an investigation into how some of these systems in practice attempt to solve existing economic problems; how each of the major economic systems views the other economic systems.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**371 Latin American Economic Problems.**

**Three sem hours**

A general survey of major problems for economic development in Latin America. Emphasis is placed on the discussion of problems common to the area rather than specific study of one or a few countries.

*Prereq: 201 and 202 Principles of Economics or permission of the department.*

**375 Economic History of the United States.**

**Three sem hours**

A study of the economic development of the United States.

**385 Economic Development. Three sem hours**

A survey of theories of underdevelopment and an examination of some of the problems of underdeveloped economies, with an emphasis on development planning and policy making.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**400 Problems in Economic Theory. Two sem hours**

A thorough study of selected problems in economic theory.

*Prereq: 301 Intermediate Macroeconomic Analysis or 302 Intermediate Microeconomic Analysis or permission of the department.*

**406 History of Economic Thought. Three sem hours**

The course offers a broad introductory survey of the development of economic thought from the age of Mercantilism to Keynes, with emphasis on the contributions of some of the major writers and schools of economic thought.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**415 Econometrics. Three sem hours**

The application of mathematical economic theory and statistical procedures to economic data.

*Prereq: 310 Economic Statistics or Mathematics 104 Higher Algebra I and three hours of higher mathematics.*

**432 Urban Economics. Three sem hours**

A study of the level, distribution, stability and growth of income and employment in urban areas, as well as analysis of contemporary urban problems, such as inner-city poverty, housing-land use, transportation and local public services with special reference to economic efficiency and programs.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**445 Business Cycles. Three sem hours**

An analysis of the nature and causes of business fluctuations. Consideration is given also to problems of forecasting business cycles, international aspects of the business cycle and governmental stabilization policies.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**480 International Economics. Three sem hours**

A description and analysis of the theory and special economic problems of international trade, factor movements, exchange mechanisms, balance of payments, regional economic integration, assistance agencies and adjustments to changing conditions.

*Prereq: 201 and 202 Principles of Economics or equivalent.*

**491 Research Seminar in Economics. Three sem hours**

An examination of selected issues in economic methodology, research procedures and techniques with the preparation of a major research paper and group analysis of its findings.

*Prereq: Junior standing; economics major or minor.*

**497, 498, 499 Independent Studies.**

**One, two and three sem hours**

Advanced study on an individual research basis in areas not covered in formal course work. Restricted to economics majors and minors.

*Prereq: Twelve hours of economics, and permission of the instructor.*



## ENGLISH LANGUAGE AND LITERATURE

**Department Head:** Milton P. Foster

**Professors:** Alice R. Bensen, Walter Brylowski, Thomas L. Dume, Francis D. Evenhuis, Ernest S. Gohn, F. Eugene Haun, Catherine A. Hebert, Hoover H. Jordan, Martin L. Kornbluth, Marjorie M. Miller, George B. Perkins, Paul W. Pillsbury, Edward E. Potter, Frank E. Ross, O. Ivan Schreiber

**Associate Professors:** Naomi Andrews, Franklin D. Case, Jeffrey L. Duncan, Arthur J. Harris, Betty Ingram, E. Jay Jernigan, Donald A. Lawniczak, Paul D. McGlynn, Ronald A. Mohl, Alfred L. Nelson, William F. Shuter, Ronald L. Trowbridge, Patrick T. White

**Assistant Professors:** Thomas P. Allen, James B. Angle, Paul S. Bruss, Virginia A. Cooper, B. Gilbert Cross, Bernard C. Decker, James Devers, David J. Geherin, William R. Hauer, Alethea K. Helbig, Thomas P. Hennings, Helen M. Hill, Robert Holkeboer, Eunice L. Howard, Sheila M. Ingersoll, Judith A. Johnson, Meredith M. Klaus, Robert G. Kraft, Helen S. Larcom, Russel R. Larson, Mary L. MacDonald, Atelia MacLeod, Frank McHugh, Agnes A. Perkins, James A. Reynolds, Glenn R. Ruihley, Lawrence R. Smith, Arie Staal, Curtis K. Stadtfeld, Marshall B. Tymn, Margaret J. Webb, Jeremy A. Wild

**Instructors:** Nadean H. Bishop, Mary S. Fulton, George Klein, J. Michael Madigan, Thomas V. Moore, Priscilla A. Manwaring, Robin Reed, Richard Wright.

### MAJORS OFFERED BY THE ENGLISH DEPARTMENT

**Major in Literature** (30 semester hours)

	Semester Hours
A. Required courses:	
101, 102 Reading of Literature. . . . .	6
210 Shakespeare. . . . .	3
B. Restricted electives: one course in each of the following groups: . . . . .	12
314 or 315 or 316	
317 or 318 or 319 or 327	
404 or 405 or 407 or 434	
408 or 409 or 410	
C. Electives in literature. . . . .	9

**Group Major in Literature, Language, Speech and Dramatic arts** (36 semester hours) for elementary teachers. See page 145.

**Group Major in English and American Literature and Language** (36 semester hours)

This major is designed primarily for students preparing to teach in junior and senior high schools. It is also available for students preparing to teach in elementary schools.

	Semester Hours
A. Basic literature courses:	
101, 102 Reading of Literature . . . . .	6
210 Shakespeare. . . . .	3
B. Basic language course: . . . . .	3
301 Introduction to English Language or	
302 Modern English Syntax	

C. Advanced writing course: . . . . .	3
215 Journalism or 222 Expository Writing or	
223 Narrative Writing or 322 Creative Writing	
D. Restricted electives: one course in each of the following groups: . . . . .	12
314 or 315 or 316	
317 or 318 or 319 or 327	
404 or 405 or 407 or 434	
408 or 409 or 410	
E. Additional electives chosen from literature, composition or English language. Three semester hours of freshman composition may be applied on this major. . . . .	9

Students planning to teach should consider Curriculum and Instruction 311 Teaching of Secondary Reading as a free elective. In some cases preference is being given to applicants who have such a reading course.

It is recommended that students anticipating graduate study in English elect 321 History of the English Language.

Students wishing to concentrate in the area of English language may elect one of the following two variations of the above major:

**Major in English Linguistics** (30 semester hours)

	Semester Hours
A. Required Courses: . . . . .	15
301 Introduction to the English Language	
302 Modern English Syntax	
320 Introduction to Linguistic Science	
321 History of the English Language	
425 Advanced English Syntax	
B. Electives chosen from the following: . . . . .	
121 English Composition	
210 Shakespeare	
305 Shakespeare	
314 Old English	
315 Chaucer	
420 Old English Poetry	
304 Language and Culture (Sociology)	
381 Symbolic Logic (Philosophy)	

**Major in English Language** (30 semester hours)

	Semester Hours
A. Required courses in advanced writing or journalism (Any three of the following courses): . . . . .	
215 Journalism	
222 Expository Writing	
223 Narrative Writing	
306 Feature, Interpretive and Editorial Writing	
B. Required courses in linguistics (Any three of the following courses): . . . . .	
301 Introduction to the English Language	
302 Modern English Syntax	
320 Introduction to Linguistic Science	
321 History of the English Language	
425 Advanced English Syntax	
C. Electives chosen from the following: . . . . .	
121 English Composition	
210 Shakespeare	
215 Journalism	
222 Expository Writing	
223 Narrative Writing	

- 301 Introduction to the English Language
- 302 Modern English Syntax
- 306 Feature, Interpretive and Editorial Writing
- 307 Editing High School Publications
- 314 Old English
- 315 Chaucer
- 320 Introduction to Linguistic Science
- 321 History of the English Language
- 322 Creative Writing Workshop
- 420 Old English Poetry
- 425 Advanced English Syntax

**MINORS OFFERED BY THE ENGLISH DEPARTMENT**

An additional four hours beyond the minimum 20 hours for graduation must be completed to meet North Central Association requirements (24) for teaching the following minors at the junior-senior high level. Up to four hours of composition, speech or English methods can be included in that total.

**Minor in Language and Literature (20-24 semester hours)**

	<b>Semester Hours</b>
101, 102 Reading of Literature. . . . .	6
210 Shakespeare. . . . .	3
One of the following: . . . . .	3
321 History of the English Language	
301 Introduction to the English Language	
302 Modern English Syntax	
320 Introduction to Linguistic Science	
One of the following: . . . . .	3
215 Journalism	
222 Expository Writing	
223 Narrative Writing	
322 Creative Writing Workshop	
Electives in literature, composition, or linguistics. . . . .	5-9

**Minor in Literature (20-24 semester hours)**

	<b>Semester Hours</b>
101, 102 Reading of Literature. . . . .	6
210 Shakespeare. . . . .	3
One of the following. . . . .	3
314, 315, 316, 317, 318, 319, 327	
One of the following: . . . . .	3
401, 404, 405, 407, 409, 410, 434	
Electives in literature. . . . .	5-9

Students on curriculums for elementary teachers may elect the following variation of this minor:

	<b>Semester Hours</b>
Required courses: . . . . .	21
101, 102 Reading of Literature. . . . .	6
307 Introduction to Children's Literature. . . . .	3
50 Critical Evaluation of Children's Literature. . . . .	3
Three of the following: . . . . .	9
210, 251, 351, 325	

Students seeking a minor concentration in English language study may elect the following variations of the minor in language and literature:

**Minor in English Linguistics (21-24 semester hours)**

**Semester Hours**

- A. Required courses (any two of the following courses): . . . . . 6
- 301 Introduction to the English Language
  - 302 Modern English Syntax
  - 320 Introduction to Linguistic Science
  - 321 History of the English Language
- B. Electives chosen from the following: . . . . . 15-18
- 121 English Composition
  - 210 Shakespeare
  - 301 Introduction to the English Language
  - 302 Modern English Syntax
  - 314 Old English
  - 315 Chaucer
  - 320 Introduction to Linguistic Science
  - 321 History of the English Language
  - 420 Old English Poetry
  - 425 Advanced English Syntax

**Minor in English Language (21-24 semester hours)**

**Semester Hours**

- A. Required courses in advanced writing or journalism (any two of the following courses): . . . . . 6
- 215 Journalism
  - 222 Expository Writing
  - 223 Narrative Writing
  - 306 Feature, Interpretive and Editorial Writing
- B. Required courses in linguistics (any two of the following courses): . . . . . 6
- 301 Introduction to the English Language
  - 302 Modern English Syntax
  - 320 Introduction to Linguistic Science
  - 321 History of the English Language
- C. Electives chosen from the following: . . . . . 9-12
- 121 English Composition
  - 215 Journalism
  - 222 Expository Writing
  - 223 Narrative Writing
  - 301 Introduction to the English Language
  - 302 Modern English Syntax
  - 306 Feature, Interpretive and Editorial Writing
  - 307 Editing High School Publications
  - 314 Old English
  - 320 Introduction to Linguistic Science
  - 321 History of the English Language
  - 322 Creative Writing Workshop
  - 425 Advanced English Syntax

**Minor in Journalism (24 semester hours)**

**Semester Hours**

- Required courses: . . . . . 9
- 215 Journalism
  - 306 Feature, Interpretive and Editorial Writing
  - 310 Contemporary Problems in Journalism
- Electives chosen from the following. . . . . 15
- 307 Editing and Advising High School Publications
  - 222 Expository Writing
  - 223 Narrative Writing

- 140 Introduction to Broadcasting (Speech and Drama)  
 344 Broadcast Continuity Writing (Speech and Drama)  
 446 Broadcasting in Society (Speech and Drama)  
 104 Graphic Arts Processes (Industrial Education)  
 369 Advertising (Marketing Department)  
 331 Fundamentals of Radio Production and Direction (Speech and Drama)  
 332 Fundamentals of Television Production and Direction (Speech and Drama)

### HONORS PROGRAM IN ENGLISH

The Department of English offers an honors program to stimulate able students by allowing them greater flexibility of program and independence of study than are permitted on the regular English majors. The department welcomes any serious student who will find this work an encouragement. Freshman students who have excellent high school records and good test scores will find special sections of both 121 English Composition and 101-102 Reading of Literature available. Sophomores who plan to become candidates for honors are encouraged to enroll in the 298-299 Survey of English Literature. Near the end of their sophomore year, those desiring honors shall address to the director of the honors program a written application for admission to the program. Upon approval they will enroll in 398-399 Junior Honors Seminar and then the following year in 498-499 Senior Honors Seminar. Their successful completion of regular course work, an honors essay and a comprehensive examination will bring recognition of honors in English as part of their permanent record. Transfer students who wish to join the program should feel that their application for admission is entirely welcome. For further information, call at the office of the Department of English Language and Literature.

#### 298 Survey of English Literature (Honors).

**Three sem hours**

A survey of English literature from the Middle Ages through the eighteenth century.

*Prereq: Superior performance in freshman literature courses and departmental approval.*

#### 299 Survey of English Literature (Honors).

**Three sem hours**

A survey of English literature from 1800 to the present.

*Prereq: Superior performance in freshman literature courses and departmental approval.*

#### 398 Junior Honors Seminar.

**Three sem hours**

A seminar designed to meet the individual needs of students, to give them more intensive instruction than is possible in other courses through oral and written reports on subjects related to their other course work in English, their special interests and their areas of deficiency in literary study.

*Prereq: Admission to the honors program.*

#### 399 Junior Honors Seminar.

**Three sem hours**

A continuation of 398 Junior Honors Seminar.

*Prereq: Admission to the honors program.*

#### 498 Senior Honors Seminar.

**Three sem hours**

An intensive study of the major kinds of literary study.  
*Prereq: Admission to the honors program.*

#### 499 Senior Honors Seminar.

**Three sem hours**

The theory and practice of literary criticism.  
*Prereq: Admission to the honors program.*

### ENGLISH COMPOSITION POLICIES

All students who score below 550 on the verbal part of the SAT or below 25 on the English section of the ACT and who earned less than a 2.5 high school grade point average are required to take 121 English Composition in their first year at Eastern Michigan University. Students **MAY NOT DROP** English composition.

Students who have scores higher than those listed above must take either 121 English Composition or a basic language course in a foreign language (121, 122, 131, 133, 221 or 222 French, German or Spanish), according to the norms appearing on page 68.

Students who score above 600 on the verbal part of the SAT or 27 on the English section of the ACT whose high school grade point average was 3.0 or above may choose to enroll in special sections of 121 English Composition for superior students.

Students who earned credit in English composition under the Advanced Placement Program (see page 1) are not required to take 121 English Composition.

### GRADUATE STUDY

The English Language and Literature Department offers graduate work leading to the master's degree in English. For descriptions of graduate courses and programs in the English, Language and Literature Department please consult the Graduate Catalog.

### COURSES

#### Composition and English Language

#### 120 English Composition Laboratory. **One sem**

A laboratory in the elements of English composition—conventions of syntax, diction, punctuation and graphing—to be required concurrently of those students enrolled in 121 English Composition who demonstrate a need for supplemental help. Grading in this course "S" for passing, "U" for failure, and thus does not affect a student's grade point average.

#### 121 English Composition. **Three sem**

The fundamental skills of reading, reasoning and with emphasis upon the reading and analysis of selections with a view of effective use of materials, mechanics, diction and style; frequent participation in conferences.

#### 215 Journalism. **Three sem**

An introduction to the news media with a particular emphasis on the role of the press in American democracy. A study of the content of the media and practice in the fundamentals of writing for mass audiences.  
*Prereq: Sophomore standing.*

**222 Expository Writing.** Three sem hours  
The analysis and writing of various types of essay with emphasis on improvement of style. Students who are interested may work toward publication.  
*Prereq: Sophomore standing.*

**223 Narrative Writing.** Three sem hours  
The study and practice of techniques of narration including description, character development, plot structure, dialogue and the short story. Some attention is given to the problems of publication.  
*Prereq: Sophomore standing.*

**301 An Introduction to the English Language.** Three sem hours  
A survey of representative areas of language study. Students will be introduced to phonetic and phonemic theory and transcriptional practices. Other areas of suggested study include English morphology, the writing systems, the spelling conventions, the dictionaries, American regional dialects, social or functional variation, the doctrine of "correctness," the English vocabulary.  
*Prereq: Sophomore standing.*

**302 Modern English Syntax.** Three sem hours  
An introduction to the syntax of standard English. Modern systematic approaches to syntax will be compared with traditional school grammar at salient points.  
*Prereq: Sophomore standing.*

**306 Feature, Interpretive and Editorial Writing.** Three sem hours  
Writing of feature and interpretive articles and editorials designed for newspapers or magazines. Emphasis on research, interviewing and logical presentation of informative material. Writing assignments and analysis of writing in the mass media.  
*Prereq: 215 Journalism.*

**307 Editing and Advising High School Publications.** Three sem hours  
A study of professional editing techniques with emphasis on the knowledge and skills required for advising high school publications.  
*Prereq: 215 Journalism.*

**310 Contemporary Problems in Journalism.** Three sem hours  
Emphasis on student investigation, reporting and writing on selected problems such as free press vs. fair trial, media accessibility and the people's right to know.  
*Prereq: Sophomore standing.*

**320 Introduction to Linguistic Science.** Three sem hours  
An introduction to linguistic theory and analytical procedures. Students will apply theoretical principles to problems of phonological and syntactic analysis in languages other than English.  
*Prereq: Junior standing.*

**321 The History of the English Language.** Three sem hours  
A study of the development of the language from its earliest stages to the present with attention to social influences as well as matters of sound, word-formation and sentence structure.  
*Prereq: Sophomore standing.*

**322 Creative Writing Workshop.** Three sem hours  
A seminar workshop for the writer who wishes to gain experience in various creative disciplines. Each student will be expected to write fiction, poetry and drama according to his individual interest and will concentrate on the genre of his choice for the major work of the course.  
*Prereq: Permission of the department.*

**425 Advanced English Syntax.** Three sem hours  
An advanced course in syntactic analysis exploring recent research in transformation theory, semantic feature analysis, case grammar and symbolic logic.  
*Prereq: 302 Modern English Syntax.*

## Literature

**101 The Reading of Literature.** Three sem hours  
A reading and discussion of narratives from representative literature of the present as well as of the past. The course aims to develop the student's understanding and enjoyment of literature. The selections include short stories, novels and an epic from American, British and continental literature.

**102 The Reading of Literature.** Three sem hours  
A continuation of course 101. The selections include poems and dramas from American, British and continental literature.  
*Prereq: 101 The Reading of Literature.*

**210 Shakespeare.** Three sem hours  
An intensive study of five of the principal tragedies with supplementary study of a Shakespeare handbook.  
*Prereq: Two courses in literature.*

**240 Great Dramas.** Three sem hours  
A reading and critical analysis of representative plays selected from Grecian, Elizabethan, Restoration-18th Century and the Modern periods.  
*Prereq: 101 and 102 The Reading of Literature.*

**245 Introduction to Film.** Three sem hours  
An introduction to the historical development of film as an art form, with attention to cinematography, editing, scenarios, lighting, acting and directing styles.  
*Prereq: 101 and 102 The Reading of Literature; Speech and Dramatic Arts 121 or 124 Fundamentals of Speech.*

**251 The Bible as Literature.** Three sem hours  
Introduction to the literary study of the Bible. The Old Testament is represented chiefly by specimens of narrative and prophetic writings; the New Testament, by selected incidents, parables and sayings from the life of Jesus as portrayed in the synoptic gospels. Discussion of Biblical influences upon English and American literature.  
*Prereq: Two courses in literature.*

**260 Afro-American Literature.** Three sem hours  
Representative American literature by black writers with emphasis upon the twentieth century. Readings in poetry, fiction, drama, autobiography and the essay.  
*Prereq: 101 and 102 The Reading of Literature.*

**305 Shakespeare: The Major Comedies and Histories.** Three sem hours  
A study of at least eight of the principal comedies and histories.  
*Prereq: Three courses in literature.*

- 314 Old English.** **Three sem hours**  
The reading of representative selections of prose and poetry in the original Old English, with an introduction to Old English grammar.  
*Prereq: Three courses in literature.*
- 315 The Age of Chaucer.** **Three sem hours**  
A study of *The Canterbury Tales* with collateral readings of other of Chaucer's works; Chaucer's contemporaries; the writers of the fifteenth century; the medieval drama.  
*Prereq: Three courses in literature.*
- 316 English Literature 1500-1600.** **Three sem hours**  
A study of prose and poetry of the Renaissance, Thomas More and the Oxford group, the beginnings of criticism, the Italian influence, the Sonneteers and minor poets, the University Wits, Spenser.  
*Prereq: Three courses in literature.*
- 317 English Literature 1600-1660.** **Three sem hours**  
A study of English literature from the beginning of the Century to 1660: Donne, Jonson, Bacon, minor Cavalier and Puritan poets, Burton, Browne, Taylor and other prose writers.  
*Prereq: Three courses in literature.*
- 318 English Literature 1660-1744.** **Three sem hours**  
A study of English literature from 1660 to the death of Pope; Dryden, Swift, Pope, Addison, Steele and lesser poets and prose writers.  
*Prereq: Three courses in literature.*
- 319 English Literature 1744-1798.** **Three sem hours**  
A study of English literature during the second half of the 18th century; poetry, essays, letters, novels; Johnson, Boswell, Goldsmith, Gray, Collins, Cowper, Burns, Blake and the lesser writers of the period.  
*Prereq: Three courses in literature.*
- 327 Milton.** **Three sem hours**  
An intensive study of the poetry and prose of John Milton.  
*Prereq: Three courses in literature.*
- 328 The American Novel 1798-1920.** **Three sem hours**  
A critical reading of the American novel from C.B. Brown and J. F. Cooper through World War I. A study of the development of the novel in America from its earliest appearance to its critical maturity.  
*Prereq: 101 and 102 The Reading of Literature.*
- 330 The Eighteenth Century Novel.** **Three sem hours**  
The novel from Defoe through Jane Austen. Emphasis on the development of such forms as the novel of the road, the psychological novel, the Gothic novel, the philosophical novel and the novel of manners.  
*Prereq: 101 and 102 The Reading of Literature.*
- 331 The Nineteenth Century Novel.** **Three sem hours**  
A critical reading of the English novel from Scott to Hardy; a study of its form and achievement, as well as its relation to other significant novels of the time.  
*Prereq: 101 and 102 The Reading of Literature.*
- 332 The Twentieth Century American Novel.** **Three sem hours**  
Reading and intensive study of certain significant American novels by representative writers of our time, from Henry James to the younger contemporary novelists who portray the many faces of America.  
*Prereq: 101 and 102 The Reading of Literature.*
- 333 The Twentieth Century British and European Novel.** **Three sem hours**  
A study of British and European novels significant in the thought and aesthetics of our century, by such writers as Joyce, Proust, Lawrence, Forster, Wolfe, Huxley, Kafka, Pasternak, Malraux, Camus, Silone, Murdoch, Golding, Sillitoe.  
*Prereq: 101 and 102 The Reading of Literature.*
- 340 English Drama 1558-1642.** **Three sem hours**  
A comprehensive study of English Drama from the accession of Queen Elizabeth in 1558 to the closing of the theatres in 1642.  
*Prereq: Three courses in literature.*
- 341 English Drama 1660-1779.** **Three sem hours**  
A study of the significant plays from the restoration of Charles II to the close of the 18th century.  
*Prereq: Three courses in literature.*
- 350 Critical Evaluation of Children's Literature.** **Three sem hours**  
The study in depth in each of the genres of children's literature with intensive work in the area of the student's special interest. *Applies toward minor in children's literature only, but may be taken as a free elective.*  
*Prereq: 207 Introduction to Children's Literature or equivalent.*
- 351 Folk Literature: Gods and Heroes.** **Three sem hours**  
A reading course in myths and ancient and medieval tales of Europe and the Near East with emphasis on the most frequently adapted in children's literature. *Applies toward minor in children's literature only, but may be taken as a free elective.*  
*Prereq: 101 and 102 Reading of Literature.*
- 352 Folk Literature: Ballads and Folk Tales.** **Three sem hours**  
A reading course in the traditional ballads and folk tales of Europe and North America with emphasis on those which appear in children's literature. *Applies to minor in children's literature only, but may be taken as a free elective.*  
*Prereq: 101 and 102 Reading of Literature.*
- 401 Modern American and British Poetry.** **Three sem hours**  
A study of the chief poets of England and America 1900.  
*Prereq: Three courses in literature.*
- 403 Modern Drama.** **Three sem hours**  
A study of the chief dramatists from Ibsen to the present.  
*Prereq: Three courses in literature.*
- 404 English Literature 1798-1832.** **Three sem hours**  
A study of the chief writers of the English Romantic movement: Wordsworth, Coleridge, Lamb, DeQuincey, Keats, Byron, Shelley, Keats.  
*Prereq: Three courses in literature.*
- 405 Victorian Poetry.** **Three sem hours**  
A study of Tennyson, Browning, the Pre-Raphaelites and the minor poets of the Victorian period.  
*Prereq: Three courses in literature.*



- 407 Victorian Prose. Three sem hours**  
A study of selected writing of Macaulay, Carlyle, Ruskin, Arnold, Mill, Huxley and others.  
*Prereq: Three courses in literature.*
- 408 American Literature 1608-1830. Three sem hours**  
A study of American writings of the colonial and early national periods from the beginnings to 1830, including backgrounds of religious and political controversy, the neoclassical influence and the emergence of native American literature.  
*Prereq: Three courses in literature.*
- 409 American Literature 1830-1890. Three sem hours**  
A study of the chief literary movements in America from 1830 to 1890: romanticism, transcendentalism and the rise of realism, with emphasis on such authors as Poe, Hawthorne, Melville, Emerson, Thoreau, Whitman, Twain, Howells, James.  
*Prereq: Three courses in literature.*
- 410 American Literature 1890 to Present. Three sem hours**  
A study of the forms of realism and naturalism in American prose, poetry and drama as expressions of the growth of American culture; the critical controversies; the contemporary attempts to create new forms of expression.  
*Prereq: Three courses in literature.*
- 420 Old English Poetry. Three sem hours**  
A study of Old English prosodic conventions with a close reading of representative poems from the various types and schools of Old English Poetry.  
*Prereq: 314 Old English.*
- 430 History of Literary Criticism. Three sem hours**  
A study of major documents of literary criticism to enhance the appreciation of literature through an awareness of various criteria employed for the evaluation of literature in successive historical periods.  
*Prereq: Three courses in literature.*

- 434 English Literature in Transition 1880-1914. Three sem hours**  
A study of such key figures as Meredith, Hopkins, Hardy, Pater, Yeats, Wilde, Shaw, Wells, Forster, the Edwardian poets, Conrad, Lawrence.  
*Prereq: Three courses in literature.*

- 481 Studies in the Humanities. Four sem hours**  
An interdisciplinary approach to arts and ideas. Includes independent studies; flexible scheduling of lectures, discussions and presentations; field trips for direct experiences in the arts, culminating in presentations of individual and group studies to the class. *Does not apply to English major or minor.*  
*Prereq: Junior standing or above.*

### Teaching of Literature

- 207 Introduction to Children's Literature. Three sem hours**  
(Group I or IV)  
A concentrated reading course designed to impart the knowledge necessary for an appreciation and understanding of children's literature and its use in the schools. In addition to reading the classics and the critically acclaimed works of both fiction and non-fiction by modern writers, students will study poetry, folklore and mythology, and examine the relationship between illustration and text. Does not count toward major or minor in curriculums for teachers in junior and senior high school.  
*Prereq: Sophomore standing.*
- 308 High School English. Three sem hours**  
(Group IV)  
For students preparing to teach English in high school. Attention is centered upon methods of improving the teaching of composition and literature. *Does not count toward majors or minors.*  
*Prereq: Three courses in literature.*

## FOREIGN LANGUAGES AND LITERATURES

**Department Head:** J. Henry Owens  
**Professors:** Eugene M. Gibson, Francisco Villegas  
**Associate Professor:** Brigitte D. Muller  
**Assistant Professors:** Jean S. Bidwell, William Cline, Nelson R. DeVega, Wilfred R. Hildebrandt, John R. Hubbard, Ana-Maria McCoy, Benjamin W. Palmer, Raymond E. Schaub  
**Instructors:** William Holloway, John C. Pisoni, Geoffrey M. Voght

### ENROLLMENT RESTRICTIONS

A student who enters the University with previous high school work in a foreign language and who wishes to continue the same language in the University will enroll in the course or courses for which he is qualified according to his high school record.\*

However, after consultation with his adviser and with a representative of the Department of Foreign Languages, a student may elect a lower course which he feels is better suited to his proficiency.

Foreign students will not be permitted to enter non-literature courses in their native language except by written permission of the department. This rule also applies to students born in the United States who have used a foreign language continually in their home.

### DEPARTMENTAL RESIDENCE REQUIREMENTS

Majors in a foreign language must complete courses 443 Syntax and 444 Advanced Conversation, and one course in literature (above 400) in that language at Eastern Michigan University.

Minors in a foreign language must complete courses 443 Syntax and 444 Advanced Conversation in that language; minors in the literature of a foreign language must complete one literature course (above 400) in that language; and minors in a foreign language and literature must complete 343 Composition, 344 Conversation and either 341 or 342 Survey of Literature at Eastern Michigan University.

### FRENCH

**Major** (30 semester hours)

Required courses for a major in French language and literature:

	Semester Hours
341, 342 Survey of French Literature. . . . .	6
343 French Composition and 344 French Conversation . . . . .	5
443 French Syntax and 444 Advanced French Conversation . . . . .	4
Literature courses beyond the 400 level. . . . .	6
Electives in French at any level. . . . .	9

Students majoring in French will also take 411 Methods of Teaching Modern Language if they are on the junior-senior high school curriculum.

The courses listed here meet the minimum requirement only. It is highly desirable that students specializing in French or planning to continue with graduate work carry

their work beyond the minimum. Many graduate schools require additional work in literature.

**Minors** (20 semester hours)

	Semester Hours
<b>I. Required courses for a minor in French language and literature:</b>	
341, 342 Survey of French Literature. . . . .	6
343 French Composition and 344 French Conversation. . . . .	5
Electives in French, at any level. . . . .	9
<b>II. Required courses for a minor in French language:**</b>	
343 French Composition and 344 French Conversation. . . . .	5
443 French Syntax and 444 Advanced French Conversation. . . . .	4
Electives in French, at any level. . . . .	11
<b>III. Required courses for a minor in French literature:</b>	
341, 342 Survey of French Literature. . . . .	6
Courses in French literature above 400. . . . .	6
Electives in French, at any level. . . . .	8

The Department of Foreign Languages has recently developed a new series of beginning courses, numbered 131, 132 and 133, in each of the three languages—French, German and Spanish. This new three-semester sequence of courses is an alternative to the two-semester sequence of 121 and 122. It is planned that 131 will be offered in the fall semester, 132 in the winter semester and 133 in the spring session. A student who completes 133 thus has completed the first-year language sequence and may elect 221 and 233, just as the student who completes 122 may do.

**\*Norms:**

- a) Students with less than two years of high school foreign language enroll in 121 course.
- b) Students entering with two years of high school foreign language:
  - 1) with no lapse of time, or less than 18 months, since the last foreign language class, enroll in 122 in a designated section.
  - 2) with a lapse of 18 months or more, enroll in 121 in designated section.
- c) Students entering with three years of high school foreign language:
  - 1) with no lapse of time, or less than 18 months, since the last foreign language class, enroll in 221 or 233 or both.
  - 2) with a lapse of 18 months or more, enroll in 221 or 233, or both.
- d) Students entering with four years of high school foreign language:
  - 1) with no lapse of time, or less than 18 months, since the last foreign language class, enroll in 222 or 234 or both. The 234 course will have a designated section for this group, with one extra hour of grammar per week without credit.
  - 2) with a lapse of 18 months or more, enroll in 221 or 233, or both.
- e) "Lapse of time" is measured from the last high school foreign language class to the student's first registration at Eastern Michigan University.

\*\* Minors in French on the elementary curriculum page 145.

## GRADUATE STUDY

The Foreign Languages and Literatures Department offers graduate work leading to the master's degrees in French and Spanish. For descriptions of graduate courses and programs in the Foreign Languages Department please consult the Graduate Catalog.

## COURSES

**121, 122 Beginning French. Five sem hours each**

The major objective is to read the written language. No composition or conversation, but the student is expected to pronounce with reasonable accuracy and to understand simple passages in the spoken language. Students are to spend one-half hour per day in the laboratory as a part of their home-work for the next class. By the completion of the course, the student should have a passive vocabulary of well over 3,000 words (Vanderbeke frequency), a command of idioms within a comparable range, and a thorough knowledge of grammatical structure. Priority in registration will be given to freshmen and sophomores and to majors and minors in another foreign language. (See enrollment restrictions page 68.)

**131, 132, 133 Beginning French. Three sem hours each**

The major objective is to read the written language. No composition or conversation, but the student is expected to pronounce with reasonable accuracy, and to understand the spoken language. Students are to spend three twenty-five minute periods weekly in the laboratory as part of their homework. Fall, winter and spring terms.

**221, 222 Intermediate French. Three sem hours each**

Rapid reading of large quantities of French prepares the student for practical use of the written language. *Students who plan to continue in French should take courses 233, 234 Elementary French Conversation concurrently with 221, 222.*

**233, 234 Elementary French Conversation.**

**Three sem hours each**

Students who plan to continue in French should take these courses concurrently with 221, 222 Intermediate French. The course meets three times per week. One day is devoted to grammar review, two days to conversation. As part of their home-work, students are to spend two half-hour periods per week in the laboratory listening and recording. *For students who plan to use the language orally or for teaching purposes.*

*Prereq: 122 Beginning French, 133 Beginning French or three years of high school French. (See enrollment restrictions, page 68.)*

**341, 342 Survey of French Literature.**

**Three sem hours each**

This is the preliminary course in French literature. It covers, during the two semesters, the major writers from the beginning of French literature to the middle of the present century and is a prerequisite for all later courses in literature. Students must have sufficient oral comprehension to follow lectures in French. *Not open to freshmen.*

*Prereq: 222 Intermediate French or permission of the department.*

**343 French Composition. Three sem hours**

Intended to provide a solid grounding in grammar and composition for the teaching of French.

*Prereq: 234 Elementary French Conversation or permission of the department.*

**344 French Conversation. Two sem hours**

Meets three times per week. The student will spend three half-hour periods per week in the laboratory.

*Prereq: 234 Elementary Conversation or permission of the department.*

**431 Molière. Three sem hours**

The work of the semester is devoted to France's greatest comic playwright. A study of source material, technique and influence is included. In French.

*Prereq: 341, 342 Survey of French Literature or permission of the department.*

**432 Corneille and Racine. Three sem hours**

A study of the major plays of the two great tragic authors of the seventeenth century. In French.

*Prereq: 341, 342 Survey of French Literature or permission of the department.*

**441, 442 Nineteenth Century French Novel.**

**Three sem hours each**

A study of the novel and the short story from the precursors of Romanticism to Marcel Proust. In French.

*Prereq: 341, 342 Survey of French Literature or permission of the department.*

**443 French Syntax. Two sem hours**

An advanced course in grammar and syntax with a large amount of drill on syntactical patterns.

*Prereq: 343 French Composition or permission of the department.*

**444 Advanced French Conversation. Two sem hours**

Meets three times a week. The student will be expected to spend one half hour per lesson in the laboratory, listening to recordings and making his own. The course may be repeated for credit.

*Prereq: 343 French Composition and 344 French Conversation or permission of the department.*

**447, 448 Nineteenth Century French Theater.**

**Three sem hours each**

The first semester will cover the theater from the Revolution to the war of 1870; the second semester will cover the realist, naturalist and neo-romantic movements into the early symbolism of the beginning of the twentieth century. In French.

*Prereq: 341, 342 Survey of French Literature or permission of the department.*

**451 Readings in French. One sem hour****452 Readings in French. Two sem hours**

Special projects in directed readings for majors and minors who have completed the available offerings in French, or who, because of most unusual circumstances, are granted departmental approval to substitute one or both of these for the regular courses.

*Prereq: 341, 342 Survey of French Literature or permission of the department.*

**461, 462 Modern French Poetry. Two sem hours each**

A detailed study of the evolution of modern French poetry from Baudelaire to the present. The first semester will

cover the period through Mallarmé, and the second will carry on from then to the current writers. In French. *Prereq: 341, 342 Survey of French Literature or permission of the department.*

**471, 472 Eighteenth Century French Literature.** **Three sem hours each**  
A thorough study of the major authors and movements of the Period of the Enlightenment in France. In French. *Prereq: 341, 342 Survey of French Literature or permission of the department.*

**481 History of the French Language.** **Two sem hours**  
A brief historical account of the development of the language from its Latin and Vulgar Latin origins with special attention to the Old French and Middle French periods. *Prereq: 343 French Composition.*

**491, 492 Seventeenth Century Literature.** **Three sem hours each**  
A study of the Golden Age of French literature from the accession to the throne of Henri IV to the death of Louis XIV. The theater is not treated in this sequence of courses. In French. *Prereq: 341, 342 Survey of French Literature or permission of the department.*

**GERMAN**

**Major (30 semester hours)**

**Semester Hours**

Required courses for a major in German language and literature:

343 German Composition and 344 German Conversation . . . . .	5
341, 342 Survey of German Literature. . . . .	6
443 German Syntax and 444 Advanced German Conversation. . . . .	4
Electives in German Literature. . . . .	6
(numbered above 400)	
Electives in German, at any level. . . . .	9

Students majoring in German on the junior-senior high school curriculum will also take 411 Methods of Teaching Modern Language.

**Minors (20 semester hours)**

**Semester Hours**

I. Required courses for a minor in German language and literature:	
343 German Composition and 344 German Conversation . . . . .	5
341, 342 Survey of German Literature. . . . .	6
Electives in German, at any level. . . . .	9
II. Required courses for a minor in German language:*	
343 German Composition and 344 German Conversation . . . . .	5
443 German Syntax and 444 Advanced German Conversation . . . . .	4
Electives in German, at any level. . . . .	11
III. Required courses for a minor in German literature:	
341, 342 Survey of German Literature. . . . .	6
Courses in German literature above 400. . . . .	6
Electives in German, at any level. . . . .	8

\*Minors in German on the elementary curriculums see page 145.

**COURSES**

**121, 122 Beginning German.** **Five sem hours**  
Instruction includes pronunciation, aural-oral practice, the fundamentals of grammar, written exercise reading. Students are to spend one-half hour per day in the laboratory as part of their homework for the next class.

**131, 132, 133 Beginning German.** **Three sem hours each**  
Instruction includes pronunciation, oral-aural practice and fundamentals of grammar, written exercise reading. Students are to spend one half-hour per day in the laboratory as part of their homework for next class.

**221, 222 Intermediate German.** **Three sem hours each**  
Rapid reading of large quantities of German preparation the student for practical use of the written language. Special emphasis on vocabulary building and idiomatic construction. *Students who plan to continue in German should take courses 233, 234 Elementary German Conversation concurrently with 221, 222.* *Prereq: 122 or 133 Beginning German, or three years high school German.*

**223 Scientific German.** **Three sem hours**  
Reading material will consist of scientific texts. For students majoring in the sciences and for pre-medical students. *Prereq: 122 or 133 Beginning German.*

**233, 234 Elementary German Conversation.** **Three sem hours each**  
*Students who plan to continue in German should take these courses concurrently with 221, 222 Intermediate German.* There is extensive work in simple conversation and grammar review. *These courses are intended for students who plan to use the language orally or for teaching purposes.* The course meets three times per week; one day is devoted to grammar review and two days to conversation. As part of their homework, students will spend one-half hour periods per week in the laboratory. *Prereq: 122 or 133 Beginning German or three years high school German.*

**341, 342 Survey of German Literature.** **Three sem hours each**  
The first semester will cover the period from Old High German to the Enlightenment. The second semester extends from the Classical Period to the present day. *Open to freshmen.* *Prereq: 222 Intermediate German or departmental approval.*

**343 German Composition.** **Three sem hours**  
Intended to provide a solid grounding in grammar and composition for the teaching of German. *Prereq: 234 Elementary German Conversation or departmental approval.*

**344 German Conversation.** **Two sem hours**  
For students who desire a practical knowledge of spoken language. Meets three times per week and student will spend three half-hour periods in laboratory. *Prereq: 234 Elementary German Conversation or departmental approval.*

**425 German Classicism.** **Three sem hours**  
 A study of the literature of the classical period with primary emphasis on Lessing, Goethe and Schiller.  
*Prereq: 341, 342 Survey of German Literature or departmental approval.*

**426 German Romanticism.** **Three sem hours**  
 Intensive study of outstanding authors closely associated with Romanticism, as well as those peripheral to it.  
*Prereq: 341, 342 Survey of German Literature or departmental approval.*

**427, 428 Modern German Authors.** **Three sem hours each**  
 A study of representative works from the various literary movements of the nineteenth and twentieth centuries.  
*Prereq: 341, 342 Survey of German Literature or departmental approval.*

**443 German Syntax and Advanced Composition.** **Two sem hours**  
 A senior level course in German vocabulary, structure and grammar. Half the course will be devoted to free composition and translation into German. The course may be repeated for supplementary credit since the material used will be changed frequently.  
*Prereq: 343 German Composition and 344 German Conversation or departmental approval.*

**444 Advanced German Conversation.** **Two sem hours**  
 The course will meet three times per week and the student is expected to spend one-half hour per lesson in the laboratory listening to recordings and making his own tapes. The course may be repeated for supplementary credit.  
*Prereq: 344 German Conversation and 343 German Composition or departmental approval.*

**451 Readings in German.** **One sem hour**

**452 Readings in German.** **Two sem hours**  
 Special projects in directed reading for majors and minors who have completed the available offerings in German, or who, because of most unusual circumstances, are granted departmental approval to substitute this for the regular courses.  
*Prereq: Permission of the department.*

**SPANISH**

**Major (30 semester hours)**

	<b>Semester Hours</b>
Required courses for a major in Spanish language and literature:	
343 Spanish Composition and 344 Spanish Conversation . . . . .	5
443 Advanced Spanish Composition and 444 Advanced Spanish Literature . . . . .	4
341, 342 Survey of Spanish Literature . . . . .	6
Literature courses numbered above 350 . . . . .	6
Electives in Spanish at any level . . . . .	9

Students majoring in Spanish will also take 411 Methods of Teaching Modern Language, if they are on the junior-senior high school curriculum.

The courses here meet the minimum requirements only. It is highly desirable that students specializing in Spanish

or planning to continue with graduate work carry their work beyond the minimum; many graduate schools require additional courses in literature.

**Minors (20 semester hours)**

	<b>Semester Hours</b>
I. Required courses for a minor in Spanish language and literature:	
343 Spanish Composition and 344 Spanish Conversation . . . . .	5
341, 342 Survey of Spanish Literature . . . . .	6
Electives in Spanish, any level . . . . .	9
II. Required courses for a minor in Spanish language:*	
343 Spanish Composition and 344 Spanish Conversation . . . . .	5
443 Advanced Spanish Composition and 444 Advanced Spanish Conversation . . . . .	4
Electives in Spanish, any level . . . . .	11
III. Required courses for a minor in Spanish literature:	
341, 342 Survey of Spanish Literature . . . . .	6
Electives in Spanish Literature numbered above 350 . . . . .	6
Electives in Spanish, any level . . . . .	8

**COURSES**

**121, 122 Beginning Spanish.** **Five sem hours each**  
 Specific emphasis on basic principles of grammar. Practice in elementary conversation, pronunciation, composition and reading. Students are to spend one half-hour per day in the laboratory as part of their preparation. Priority in registration will be given to freshmen and sophomores and to majors and minors in another foreign language.

**131, 132, 133 Beginning Spanish.** **Three sem hours each**  
 Specific emphasis on basic principles of grammar. Practice in elementary conversation, pronunciation, composition and reading. Students spend one half-hour per lesson in the laboratory as part of their preparation for class.

**134 Spanish for the Bilingual.** **Five sem hours**  
 A course in basic grammar and composition designed for students with an oral command of Spanish. The course will be conducted in Spanish and will prepare the student for entry into more advanced Spanish classes.  
*Prereq: Native command of oral Spanish and department approval.*

**221, 222 Intermediate Spanish.** **Three sem hours each**  
 For rapid reading of the language. Special emphasis on vocabulary building and on idiomatic construction. *Students who plan to continue in Spanish should take concurrently courses 233, 234 Elementary Spanish Conversation.*  
*Prereq: 122 or 133 Beginning Spanish, 134 Spanish for the Bilingual or three years of high school Spanish.*

**233, 234 Elementary Spanish Conversation.** **Three sem hours each**  
*Students who plan to continue in Spanish should take these courses concurrently with 221, 222 Intermediate*

\*Minors in Spanish on the elementary curriculum, see page 145.



*Spanish.* A review of Spanish grammar, simple composition, and extensive oral work. The course meets three times per week: one day will be devoted to grammar review, and two days to conversation. The student will spend two one-half hour periods per week in the laboratory.

*Prereq:* 122 or 133 *Beginning Spanish*, 134 *Spanish for the Bilingual* or three years of high school Spanish.

### 341, 342 Survey of Spanish Literature.

**Three sem hours each**

These courses deal with the development of the different literary movements in Spain and with the major writers of the country from the middle ages to the present. In Spanish. *Not open to freshmen.*

*Prereq:* 222 *Intermediate Spanish* or permission of the department.

### 343 Spanish Composition.

**Three sem hours**

A thorough review of grammatical principles to provide the student of Spanish with a solid foundation for teaching.

*Prereq:* 234 *Elementary Spanish Conversation* or permission of the department.

### 344 Spanish Conversation.

**Two sem hours**

Improved pronunciation, the acquisition of an active vocabulary for daily life and greater oral facility are the aims of this course. The course meets three times per week and students will spend three half-hour periods in the laboratory each week.

*Prereq:* 234 *Elementary Spanish Conversation* or permission of the department.

### 351, 352 Survey of Spanish-American Literature.

**Three sem hours each**

These courses deal with the major writers of Spanish-America. The first semester examines the literary works up to the period of independence from Spain. The second semester is devoted to the study and discussion of literature from the period after independence from Spain to the present. In Spanish.

*Prereq:* 222 *Intermediate Spanish* or permission of the department.

**443 Advanced Spanish Composition. Two sem hours**  
Designed to give the Spanish major advanced training in writing Spanish.

*Prereq:* 343 *Spanish Composition* and 344 *Spanish Conversation*, or permission of the department.

**444 Advanced Spanish Conversation. Two sem hours**

For Spanish majors. It may be repeated for supplementary credit since different material will be used annually. The course meets three times a week and the students will spend three half-hour periods in the laboratory each week.

*Prereq:* 343 *Spanish Composition* and 344 *Spanish Conversation*, or permission of the department.

**445 Spanish-American Novel. Three sem hours**

A study of the development of the Spanish-American Novel, covering one or more of the following areas: a) The Novel of the Land, b) The Romantic Novel, c) The Novel of the Mexican Revolution, d) The Gaucho Novel. This course may be repeated for credit if the material of the course is in another area.

*Prereq:* 341, 342 *Survey of Spanish Literature.*

**446 Spanish-American Theatre. Three sem hours**  
A study of the theatre in Spanish-America from its beginning to the present.

*Prereq:* 341, 342 *Survey of Spanish Literature*

**447 Modern Novel. Three sem hours**

The course will consist of a study of the development of the modern novel in Spain during the nineteenth and twentieth centuries. Representative novels will be read and discussed.

*Prereq:* 341, 342 *Survey of Spanish Literature* or permission of the department.

**448 Modern Drama. Three sem hours**

The development of modern Spanish drama and its various types will be studied. Plays to be read and discussed will be selected from the works of the principal dramatists of the nineteenth and twentieth centuries.

*Prereq:* 341, 342 *Survey of Spanish Literature* or permission of the department.

**449 Romanticism. Three sem hours**

A study of the major works of Hispanic Romanticism.

*Prereq:* 341, 342 *Survey of Spanish Literature.*

**451 Readings in Spanish. One sem hour**

**452 Readings in Spanish. Two sem hours**

Special projects in directed reading for majors or minors who have completed the available offerings in Spanish, or who, because of most unusual circumstances, are granted departmental approval to substitute this for the regular courses.

*Prereq:* Permission of the department.

**453 Drama of the Golden Age. Three sem hours**

The course will deal with the drama of the 16th and 17th centuries. Works of the major authors will be read and discussed.

*Prereq:* 341, 342 *Survey of Spanish Literature* or permission of the department.

**454 Modernism in Spanish America. Two sem hours**  
A survey of the literary movement known as "modernismo" in the literature of Spanish-America.

*Prereq:* 341, 342 *Survey of Spanish Literature.*

**455 The Generation of 1898. Two sem hours**

A study of the works of the main authors of the generation of 1898, from Unamuno to Ortega y Gasset.

*Prereq:* 341, 342 *Survey of Spanish Literature.*

**463 Don Quixote. Three sem hours**

The universal qualities of both the book and its author as well as their relation to Spanish life and literature of the period, are discussed.

*Prereq:* 341, 342 *Survey of Spanish Literature.*

**481 History of the Spanish Language. Two sem hours**

A survey of the development of the Spanish language from spoken Latin to our days, based on the reading and discussion of texts.

*Prereq:* 343 *Spanish Composition.*

## COURSES FOR LANGUAGE TEACHERS

**411 Methods of Teaching Modern Language.**

**Two sem ho**

The history, theory, and techniques of modern lang

teaching. *Not counted in Group I of the degree requirements, nor toward a major or minor in any modern language. Should be taken during the junior year.*

**412 Methods of Teaching Modern Languages in Elementary Grades. Two sem hours**

The technique and materials of teaching French, Spanish and German in the elementary grades. *Not counted in Group I of the degree requirements, nor toward a major in any modern language. Should be taken before practice teaching.*

## COURSES GIVEN IN ENGLISH

These courses count in Group I and satisfy requirements in that group. They are open to students from all departments and no knowledge of a foreign language is necessary.

**103 Introduction to Language. Two sem hours**

Intended for the student who has had no foreign language. It will acquaint him with the basic principles of linguistic structure as they apply to the Western European languages taught in the department. Credit will be granted in Group I.

**114 French Plays in English Translation. Three sem hours**

This course will cover the French theater from Corneille to modern times. It will include Moliere, Racine, Hugo, Musset, Dumas fils, Brieux, Curot, Rostand, Maeterlinck and various moderns.

**125 French Words in English. Two sem hours**

French words and phrases in use in modern English are studied for origin and meaning. Correct pronunciation is stressed so that the student may acquire an active as well as a passive use of the material. The course is *not* open to students of French.

**201 Mythology. Two sem hours**

The course is designed to acquaint the student with the

general field of classical mythology and the psychology underlying it. The poet's and artist's selection and use of the classic myths from early until modern times are studied and provide an interpretation of mythological allusions in literature.

**216 Don Quixote in English Translation. Two sem hours**

This course consists of a study of the most famous Spanish novel and of the background necessary for the understanding of the Age of Cervantes.

**218 Survey of Spanish-American Literature in English Translation. Three sem hours**

The purpose of this course is to give students who do not read Spanish some knowledge of the literature of Mexico and the Latin-American countries and, through literature, to induce a better understanding and appreciation of the culture and problems of that area. The course consists of a brief survey of the literature from the days of the Conquistadores to the present, with the major emphasis placed upon the gaucho literature of the nineteenth century and contemporary novels dealing with the Indians' problems.

**234 Etymology. Two sem hours**

Greek and Latin words and roots which are current in English forms are studied in order to enlarge the vocabulary and to produce a more discriminating use of words.

**271 Dante in English Translation. Two sem hours**

This course is designed for students without a knowledge of Italian and will consist of a study of the *Commedia Divina* and the *Vita Nuova*, in English translation, with background material on the Age of Dante.

**281 The Age of Goethe in English Translation. Three sem hours**

The course will consist of a study of the master-works of Goethe, in English translation, with a thorough examination of the background material and of the influence of Goethe.

## GEOGRAPHY AND GEOLOGY

Department Head: Ross N. Pearson

Professors: Paul O. Buckholts, George M. Howe, James R. McDonald, Lawrence L. Ogden, Daniel S. Turner

Associate Professors: Horace A. MacMahan, Jr., C.

Nicholas Raphael, Ranjit Tirtha

Assistant Professors: Allen Cichanski, Robert T. Ernst,

E. Lorene Hall, Eugene Jaworski, Elwood J.C. Kureth,

Robert B. Mancell, Marshall S. McLennan, Andrew

A. Nazzaro, Carl F. Ojala, Robert M. Ward

Instructor: Madolia E. Mills

### MAJORS AND MINORS

#### Geography Major (30 semester hours)

	Semester Hours
Required courses for a major in geography:	
108 Earth Science. . . . .	4
110 World Regions. . . . .	3
Two of the following techniques courses. . . . .	6
301 Introduction to Cartography	
303 Field Geography	
470 Quantitative Methods in Geography and Geology	
One of the following physical courses. . . . .	2 or 3
223 Weather and Climate	
226 Oceans	
325 Geomorphology	
327 Introduction to Soil Science	
Two of the following systematic courses. . . . .	6
235 Economic Geography	
332 Urban Geography	
360 Cultural Geography	
361 Population Geography	
431 Historical Geography of the U.S.	
432 Political Geography	
One of the following regional courses. . . . .	3
203 Geography of Asia	
205 Geography of Europe	
211 Geography of the U.S. and Canada	
321 Geography of Latin America	
322 Geography of Africa	
323 Geography of Australia and Pacific Islands	
324 Geography of South Asia	
359 Geography of the U.S.S.R.	
*Electives. . . . .	5 or 6

#### Geography Minor (20 semester hours)

	Semester Hours
Required courses for a minor in geography:	
108 Earth Science. . . . .	4
110 World Regions. . . . .	3
*Electives (only one regional course may be included) . . . . .	13

Students on the later elementary curriculum who elect a major or minor in geography should choose at least five semester hours from the following list: 203, 205, 211, 313, 321, 322.

See pages 144 and 145 for science group major and minor for elementary teachers.

*\*In consultation with departmental advisers, the student will select courses in the elective group compatible with his program objectives.*

See page 49 for interdepartmental programs in conservation and page 99 for general science.

#### Geology Major (30 semester hours)

	Semester Hours
Required courses for a major in geology:	
108 Earth Science. . . . .	4
228 Mineralogy. . . . .	3
230 Historical Geology. . . . .	3
326 Structural Geology. . . . .	3
329 Lithology. . . . .	3
330 Sedimentation and Stratigraphy. . . . .	3
Field Geology. . . . .	4-8
*Electives in geology-geography. . . . .	7-3

#### Geology Minor (20 semester hours)

	Semester Hours
Required courses for a minor in geology:	
108 Earth Science. . . . .	4
228 Mineralogy. . . . .	3
230 Historical Geology. . . . .	3
326 Structural Geology. . . . .	3
329 Lithology. . . . .	3
Electives as approved by the department. . . . .	5

#### Earth Science Major (30 semester hours)

	Semester Hours
Required courses for a major in earth science:	
108 Earth Science. . . . .	4
223 Weather and Climate. . . . .	3
226 The Oceans. . . . .	2
228 Mineralogy or	
229 Rocks of Michigan. . . . .	3-2
230 Historical Geology. . . . .	3
303 Astronomy. . . . .	3
331 Introduction to Paleontology or	
325 Geomorphology. . . . .	3
**Electives. . . . .	9-10

Earth science majors who are candidates for teacher certification will take, in addition, 347 Teaching Earth Science, three semester hours in Group IV.

### GRADUATE STUDY

The Geography and Geology Department offers graduate work leading to the master's degree in geography. For descriptions of graduate courses and programs in the Geography and Geology Department, please consult the Graduate Catalog.

## GEOGRAPHY AND GEOLOGY

### COURSES IN SCIENCE

*The following courses count in Group II.*

**102 Science for Elementary Teachers. Three sem hours**  
This course is designed for students who plan to teach in

*\*\*Students on the later elementary curriculum or secondary curriculum should choose at least nine semester hours from the following list: 114, 227, 228, 229, 325, 326, 327, 331, 370, 424, 462, 480; Biology 105, 224. Additional electives recommended for those planning graduate work in an earth science field should include: 301, 303, 304, Mathematics 107; Physics 221; Chemistry 119; Industrial Education 206.*

the elementary school. Lectures deal with basic earth science concepts and principles. The laboratory, which utilizes simple and inexpensive equipment, emphasizes the investigative or discovery approach.

**108 Earth Science.** **Four sem hours**  
The important aspects of the physical environment of man. The earth as a planet, landforms, weather and climate, water, soil, vegetation and mineral resources. A requirement for both the major and minor in geography and geology. Lecture: three hours per week. Laboratory: one hour period per week.

**114 Geography of National Parks.** **One sem hour**  
A critical evaluation of the location, conservation needs and natural features—surface, geological phenomena, water, vegetation, wild life—which led to the designation of certain areas as national parks and recreational areas.

**223 Weather and Climate.** **Three sem hours**  
Introduction to the properties and processes of the earth-atmosphere system that create weather and climate; deals summarily with observation, in depth with interpreting and understanding weather phenomena from commonplace to devastating; includes analytic description of climatic regions. Laboratory: two consecutive hours, one day a week; lecture: two hours per week.  
*Prereq: 108 Earth Science or one course in physics, chemistry or biology.*

**224 Principles of Conservation.** **Four sem hours**  
(See Biology, page 51)

**226 The Oceans.** **Two sem hours**  
A study of the oceans, including coasts, development of currents, current patterns, salinity, temperatures, tides, sediment deposition, submarine topography, the energy balance and research techniques. The economic potential of marine waters and the products of the sea in relation to man are stressed.  
*Prereq: 108 Earth Science.*

**227 Topographic Maps.** **Two sem hours**  
A study of typical areas from topographic and geologic maps and aerial photos to illustrate the physical forces at work in the United States.  
*Prereq: 108 Earth Science or a course in geology.*

**228 Mineralogy.** **Three sem hours**  
A study of the crystallography, crystal chemistry and identification of the most important rock forming and economic minerals of the crust of the earth.  
*Prereq: 131 General Chemistry I.*

**229 Rocks of Michigan.** **Two sem hours**  
The identification and classification of rocks with special emphasis on characteristics used in the field.  
*Prereq: 108 Earth Science or a course in geology.*

**330 Historical Geology.** **Three sem hours**  
The origin and development of the earth's features along with the development and succession of plant and animal groups culminating in the forms that now inhabit the earth.  
*Field trips and reports required.*  
*Prereq: 108 Earth Science or permission of the department.*

**331 Introduction to Cartography.** **Three sem hours**  
Laboratory course on the use of simple drafting instru-

ments and introduction to cartographic techniques. Earth dimensions, map scale, types of projections, symbolization, map compilation and cartographic techniques are treated in lecture. In lab, simple maps and cartograms are designed, drafted and inked.

*Prereq: 108 Earth Science or 110 World Regions or permission of the department.*

**302 Intermediate Cartography.** **Three sem hours**  
Intermediate Cartography 302 is a continuation of Introduction to Cartography 301. Cartography 302 emphasizes the student's production of thematic maps; the use of press-on materials, tapes and acetate overlays; scribing, computer mapping; certain types of reproduction techniques. One hour lecture, four hours laboratory per week.  
*Prereq: 301 Introduction to Cartography or permission of the department.*

**303 Field Geography.** **Two sem hours**  
Techniques in the observation of geographic features in the field. The construction of maps from field sketches and notes and the preparation of field reports. City, village, rural recreational areas are mapped. *Not open to students who hold credit in 403 Field and Project Geography.* Laboratory.  
*Prereq: 108 Earth Science or 110 World Regions or permission of the department.*

**311 Map Reading and Interpretation.** **Three sem hours**  
A non-technical introduction to maps and air photos as basic tools of geographic analysis. *Not open to majors or minors in geography.*

**325 Geomorphology.** **Three sem hours**  
A detailed study of surface features and the degradational, aggradational and structural processes by which they are formed. World wide examples are used extensively.  
*Prereq: 108 Earth Science and 230 Historical Geology or permission of the department.*

**326 Structural Geology.** **Three sem hours**  
Introduction to the terminology, relationship and deformation of rocks with examples from specific areas. Laboratory problems are directed toward understanding of geologic structures in three dimensions and their representation, interpretation, projection and illustration as applied to economic problems. Laboratory. *Field trips and reports required.*  
*Prereq: 108 Earth Science.*

**327 Introduction to Soil Science.** **Two sem hours**  
An introduction to soil science including the mineralogic, genitive, physical, chemical and biological properties of soils as related to earth science and the physical and economic environment of man. *Field trips and reports required.*  
*Prereq: 223 Weather or permission of the department.*

**329 Lithology.** **Three sem hours**  
The origin, occurrence, association, chemical relationships and distribution of igneous, sedimentary and metamorphic rocks; laboratory study of rocks. Two one hour lectures. One hour laboratory.  
*Prereq: 228 Mineralogy. Not open to students with credit in 229. Rocks of Michigan.*

**330 Sedimentation and Stratigraphy.** **Three sem hours**  
Study of the properties, description and classification of

sedimentary rocks; processes and environments of deposition of sediments; the relationships between deformation of the earth's crust and sedimentation; procedures in study and interpretation of sedimentary rocks. *Field trips and reports required.*

*Prereq: 108 Earth Science or equivalent; 228 Mineralogy.*

**331 Introduction to Paleontology. Three sem hours**

Origin and development of life on earth and the environments in which animal assemblages lived. Study of the principles involved in the interpretation of fossils. Systematic study of the features of the animal groups most important in the fossil record. *Field trips and reports required.*

*Prereq: 108 Earth Science or 230 Historical Geology or 105 Biological Science or permission of the department.*

**355 Geologic Field Methods. One sem hour**

Construction principles and use of conventional instruments in geologic surveying, note taking and preparation of illustrations and reports.

*Prereq: 108 Earth Science, 228 Mineralogy, 326 Structural Geology, 329 Lithology completed or currently enrolled, or permission of the department.*

**370 Glacial Geology. Three sem hours**

A study of the glacial geomorphology and stratigraphy of the Pleistocene drift with emphasis on the character of the drift sheets, their soils and lithology and the techniques of study as applied to the Wisconsin Stage in the state of Michigan. Comparisons are drawn with the movements and deposits of modern glaciers. Paleoclimatic cycles of Precambrian and Paleozoic glacial ages and theories of origin are stressed.

*Prereq: 108 Earth Science, 230 Historical Geology, 330 Sedimentation and Stratigraphy or permission of the department.*

**403 Field and Project Geography. Six sem hours**

Use of field instruments and methodologies in physical agricultural, urban and industrial geography. Five week post summer field camp off campus.

*Prereq: Junior standing or permission of the department.*

**424 Climatology. Two sem hours**

A study of the controls, characteristics and distribution of the elements of climate. Specific attention will be given to the study of the Koeppen classification and the use of Weather Bureau publications.

*Prereq: 223 Weather.*

**428 Optical Mineralogy. Four sem hours**

Study of the optical properties of crystalline matter. The petrographic microscope will be used in the identification of non-opaque and some opaque minerals, using crushed fragments and some thin-sections.

*Prereq: 228 Mineralogy and 224 Electricity and Light (Physics).*

**430 Petroleum Geology. Three sem hours**

A study of the origin, migration and accumulation of oil and natural gas. Exploration techniques in the use of structural geology, sedimentology and stratigraphy are stressed. The various drilling and coring methods, drilling equipment and the procedures of drilling are reviewed. *Field trips to active drilling and/or producing areas and reports are required.* Studies of specific oil and gas fields

will be assigned.

*Prereq: 230 Historical Geology, 326 Structural Geology, 329 Lithology, 330 Sedimentation and Stratigraphy or permission of the department.*

**439 Economic Geology. Three sem hours**

A study of the geochemical behavior of metallic elements; the origin, processes, controls and classification of ore deposits; and fossil fuels. The latter part of the course would deal with the occurrence and distribution of metallic, non-metallic, petroleum and fossil deposits.

*Prereq: 228 Mineralogy.*

**448 Ground Water. Three sem hours**

Ground water occurrence, distribution, relationships to surface water and precipitation; subsurface flow, especially as related to well water production; tests of aquifers; well drilling and installation; ground water exploration and recharge; legal problems. Lecture three hours per week. *Field trips and reports are required.*

*Prereq: 108 Earth Science, junior standing.*

**449 Mineral Deposits. Three sem hours**

A study of specific mineral occurrences, mines and mining districts. The world's principal deposits of metallic and non-metallic resources and their mining techniques are emphasized. This course is designed as an application of 439 Economic Geology. Lecture three hours per week.

*Prereq: 108 Earth Science, 329 Lithology, 439 Economic Geology.*

**462 Meteorology. Two sem hours**

Instruction in weather map and data analysis and in principles and procedures of forecasting; includes use of all types of weather information: surface, upper air, radar and weather satellite; compares methods and predictability for forecasts ranging from a few hours to months. Lecture: one hour per week. Laboratory: two consecutive hours, one day a week.

*Prereq: 223 Weather and Climate or equivalent.*

**466 Advanced Physical Geology. Three sem hours**

A course for the geology major or professionally oriented earth scientist or geographer. A detailed study of the classical articles on all aspects of physical geologic processes and products.

*Prereq: 108 Earth Science, 228 Mineralogy, 229 Rocks of Michigan or 329 Lithology, 230 Historical Geology, 330 Sedimentation and Stratigraphy.*

**470 Quantitative Methods in Geography and Geology. Two sem hours**

An introduction to the use of those quantitative methods that are particularly adaptable to geographic and geologic analysis and research.

*Prereq: Geography, geology or earth science major or permission of the department and junior standing.*

**475 Computer Mapping. Three sem hours**

Basic principles of graphic portrayal of geographical utilizing computer mapping programs. Laboratory centering on the SYMAP Program (Synagraphic Map System) which produces contour, conformant and pramal maps. Various other computer mapping programs are introduced. Emphasis on geographical applications. One hour lecture and four hours laboratory per week.

*Prereq: 301 Introduction to Cartography.*

**480 Special Problems in Earth Science. One sem hour**  
 An interdisciplinary treatment of the geographical, geological and biological sciences as they relate to techniques of observation and interpretation and to problem solutions in earth science and earth science teaching.  
*Prereq: Senior standing and one course in physics, chemistry and biology or permission of the department.*

## GEOGRAPHY COURSES IN SOCIAL SCIENCE

*The following courses count in Group III.*

**110 World Regions. Three sem hours**  
 An attempt to develop a tolerant understanding of peoples through an appreciation of the cultural and natural environments in which they live. Background information on selected world regions with emphasis on economic and social geography. The present occupations and activities of the population in each region. *A requirement for both the major and minor in geography.*

**203 Geography of Asia. Three sem hours**  
 A regional treatment. The natural setting, the distribution of the people, the important occupations and the problems of future development in each of several regions, excluding the U.S.S.R.  
*Prereq: 110 World Regions or 108 Earth Science.*

**205 Geography of Europe. Three sem hours**  
 A systematic treatment. The natural setting, cultural patterns, economic activities and developmental problems of the continent are discussed while selected significant regions are analyzed in detail.  
*Prereq: 110 World Regions or 108 Earth Science.*

**211 Geography of the United States and Canada. Three sem hours**  
 A regional treatment. The natural setting, the distribution of the people, the important occupations and the problems of future development in each of several regions.  
*Prereq: 110 World Regions or 108 Earth Science.*

**235 Economic Geography. Three sem hours**  
 A systematic treatment of agricultural, mineral and manufactured products throughout the world. The geographic factors in world trade and the problems involved in trade between nations.

**312 Geography of Canada. Two sem hours**  
 A detailed regional treatment. The natural setting, the distribution of the people, the important occupations and the problems of future development in each part of Canada.  
*Prereq: 110 World Regions or 108 Earth Science.*

**313 Geography of Michigan. Two sem hours**  
 A detailed regional treatment. The natural setting, the distribution of the people, the important occupations and the problems of future development in each part of the state.  
*Prereq: 110 World Regions or 108 Earth Science.*

**321 Geography of Latin America. Three sem hours**  
 A regional treatment. The natural setting, the distribution of the people, the important occupations and the problems of future development in each of several regions.  
*Prereq: 110 World Regions or 108 Earth Science.*

**322 Geography of Africa. Three sem hours**  
 A regional treatment. The natural setting, the distribution of the people, the important occupations and the problems of future development in each of several regions.  
*Prereq: 110 World Regions or 108 Earth Science.*

**323 Geography of Australia and Pacific Islands. Three sem hours**  
 A regional treatment. The natural setting, the distribution of the people, the important occupations and the problems of future development in each of several regions.  
*Prereq: 110 World Regions or 108 Earth Science.*

**324 Geography of South Asia. Three sem hours**  
 A detailed systematic and regional study of the geography of India, Pakistan, Ceylon and the Himalayan Kingdoms. Emphasis will be placed upon population problems in their cultural and natural environment.  
*Prereq: 203 Geography of Asia or permission of the department.*

**332 Urban Geography. Three sem hours**  
 A study of geographic principles related to the distribution, function, structure and regional setting of urban centers.  
*Prereq: 110 World Regions or 108 Earth Science.*

**333 Settlement Geography. Three sem hours**  
 Morphological, functional, cultural and ecological factors as they are manifested in human settlement patterns.  
*Prereq: 110 World Regions or 108 Earth Science.*

**359 Geography of the U.S.S.R. Three sem hours**  
 A comprehensive view of the physical and economic geography of the Soviet Union, including the natural setting, distribution of people, the important occupations and industrial and economic development.  
*Prereq: 110 World Regions or 108 Earth Science.*

**360 Cultural Geography. Three sem hours**  
 Man's development of a habitable world: a study of techniques, ideas and artifacts in man's use and transformation of the land.  
*Prereq: 108 Earth Science or 110 World Regions or permission of the department.*

**361 Population Geography. Three sem hours**  
 The geographic study of man's distribution over the earth emphasizing growth rates and densities as affected by cultural heritage, national policy and natural resources.  
*Prereq: 110 World Regions or permission of the department.*

**365 Nature and Origins of Urbanism. Three sem hours**  
 Regional examination of traditional, mercantile, colonial, primate and industrial cities as urban types; urbanism as an instrument of pioneering in the New World; Western man's view of the city through the ages.  
*Prereq: 110 World Regions or permission of the department.*

**423 Problems of Southeast Asia. Two sem hours**  
 A study of Southeast Asia as a geographic, economic and political unit. Emphasis will be on the political structures of Burma, Thailand, Laos, Cambodia, North and South Vietnam, Malaya, Indonesia and the Philippines.  
*Prereq: 110 World Regions or 108 Earth Science and 203 Geography of Asia.*



**425 Near East. Two sem hours**  
 The geography of Egypt, Saudi Arabia, Israel, Jordan, Lebanon, Syria, Turkey, Iraq, Iran and Afghanistan. The study of the natural and human elements; their influence on the conflict and prospects of the several nations.  
*Prereq: 110 World Regions or 108 Earth Science and 203 Geography of Asia.*

**431 Historical Geography of the United States. Three sem hours**  
 Geographical changes and developments in the United States from pre-historic times to 1900. Emphasis on the settlement and transformation of the land by Europeans and other significant changes in the geographic characteristics since the seventeenth century.  
*Prereq: 211 Geography of the United States and Canada or permission of the department.*

**432 Political Geography. Three sem hours**  
 A study of the theory and concepts of political geography, using contemporary examples. Size, location, resources, boundaries, population and level of technology are emphasized within and without the political framework.  
*Prereq: 110 World Regions or 107 Earth Science or permission of the department.*

**433 Case Studies in Political Geography. Three sem hours**  
 A regional study of the contemporary elements of political geography of selected states and nation states, emphasizing location, resources, population and level of technology.  
*Prereq: 110 World Regions or 108 Earth Science or permission of the department.*

**437 Development of Geographic Thought. Three sem hours**  
 A survey of the basic lines of geographic thought from classical antiquity to the present day. Special emphasis is placed on the European contributions of the 19th century and on the development of the intellectual base of modern American geography.

**438 Manufacturing Geography. Three sem hours**  
 An analysis of the spatial distribution of the world's manufacturing industries with emphasis on industrial and plant location techniques.  
*Prereq: 235 Economic Geography or permission of the department.*

**440 Agricultural Geography. Three sem hours**  
 Distribution and analysis of world agricultural patterns and prospects. Investigation into the effect of physical

environment, level of economic development, political decisions, etc., on agricultural development.  
*Prereq: 235 Economic Geography or permission of the department.*

**441 Transportation Geography. Three sem hours**  
 Geographic factors influencing transportation by land, water and air.  
*Prereq: 235 Economic Geography or permission of the department.*

**497 Individual Problems (Honors Course). One sem hour**  
 Advanced study on individual basis in areas in which the department does not offer a formal course. Normally such work is restricted to proficient students in the senior year under the general conditions prescribed for honors courses.  
*Prereq: Permission of the department.*

**498 Individual Problems (Honors Course). Two sem hours**  
 Advanced study on individual basis in which the department does not offer a formal course. Normally such work is restricted to proficient students in the senior year under the general conditions prescribed for honors courses.  
*Prereq: Permission of the department.*

**GEOGRAPHY COURSES  
 IN EDUCATION**

*The following courses count in Group IV.*

**347 Teaching Earth Science. Three sem hours**  
 The techniques of teaching laboratory-centered earth science courses, emphasizing inquiry teaching and questioning techniques. Practical experience is obtained by teaching actual earth science classes. *A requirement for teacher certification in earth science.*  
*Prereq: 108 Earth Science or equivalent, and junior standing or permission of the department.*

**348 Teaching Social Studies in Elementary Schools. Three sem hours**  
 An evaluation of methods commonly used in the teaching of social studies in the elementary grades with emphasis on planning units of work, use of visual aids and types of class activities most effective in the presentation of materials in this field.  
*Prereq: One course in geography.*

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# HISTORY AND PHILOSOPHY

**Department Head:** Ira M. Wheatley  
**Professors:** Frederick M. Anderson, Manuel Bilsky, Donald W. Disbrow, Donald F. Drummond, David M. Earl, Louis B. Gimelli, Richard D. Goff, J. Theodore Hefley, George S. May, R. Neil McLarty, Reinhard Wittke, P. Louis Zickgraf  
**Associate Professors:** Richard H. Abbott, George H. Cassar, Sidney Gendin, James E. Green, H. Roger King, Lester B. Scherer, Janice J. Terry, Jeanne C. Wacker, Dorsey E. Walker, James C. Waltz  
**Assistant Professors:** Lee R. Boyer, W. Donald Briggs, Samuel L. Bufford, David L. Creighton, Jeffrey A. Fadiman, Emanuel G. Fenz, Della M. Flusche, Thomas H. Franks, Daryl M. Hafter, Michael W. Homel, Howard F. Kamler, William A. Miller, Walter G. Moss, Lawrence H. Prud'homme, Margaret L. Rossiter, Judith F. Siegel, Jiu H. Upshur  
**Instructors:** Robert C. Fletcher, Stanley L. Harbison, Wayne H. MacVey, Paul L. Szonyi

224 American History, 1877 to Present. . . . .	3
333 Europe since 1919. . . . .	3
Restricted Electives (courses numbered 300 or above, including one course in United States history and one course in an area other than United States history). . . . .	6
Electives. . . . .	9

**Note:** 123 Evolution of American Democracy and 201 The Comparative Study of Religion may not be used for credit on the history major.

Students majoring in history on a secondary teacher's certificate program will take in addition 481 Teaching of Social Studies.

## Minor (20 semester hours)

Required courses:

	Semester Hours
101, 102 History of Civilization. . . . .	6
223 American History to 1877. . . . .	3
224 American History, 1877 to Present. . . . .	3
Restricted electives (courses numbered 300 or above). . . . .	5
Electives. . . . .	3

**Note:** 123 Evolution of American Democracy and 201 The Comparative Study of Religion may not be used for credit on the history minor.

Social science students interested in the core curriculum should elect the social science major and the history minor, and should take 313 Michigan History as an elective on the history minor.

**Note:** Students majoring or minoring in history are encouraged to take courses in the following cognate areas:

Humanities	Social Sciences
History of the Arts	Political Science
History of Literature	Economics
Foreign Language Literature	Sociology
Philosophy	Cultural Anthropology

## SOCIAL SCIENCE

**Major** (36 semester hours)

The social science major is intended primarily for students preparing to teach in junior high schools and should not be elected by persons on the degree only program. It should be accompanied by a minor in history, economics, geography, political science or sociology, or by one of the minors offered in the Department of English Language and Literature—preferably the minor in language and literature. For a student who chooses both the social science major and a history, economics, geography, political science or sociology minor, the minor field shall be excluded from the social science major, and the 6–12 semester hours thus released shall be distributed among the other four social science areas.

At least 36 semester hours, distributed as follows:

	Semester Hours
History. . . . .	12
101 History of Civilization. . . . .	3
102 History of Civilization. . . . .	3
223 American History to 1877. . . . .	3
224 American History 1877 to Present. . . . .	3
Economics. . . . .	6
200 The American Economy or	
201 Principles of Economics I. . . . .	3
Elective. . . . .	3
Geography. . . . .	6
110 World Regions. . . . .	3
Elective. . . . .	3
Political Science. . . . .	6
112 American Government or	
202 State and Local Government. . . . .	3
Elective. . . . .	3
Sociology. . . . .	6
105 Introductory Sociology. . . . .	3
Elective. . . . .	3

Students in the elementary, library science or special education curriculums should see page 146 for a social science group major or minor.

## HISTORY

**Major** (30 semester hours)

	Semester Hours
Required courses. . . . .	30
101, 102 History of Civilization. . . . .	6
223 American History to 1877. . . . .	3

## GRADUATE STUDY

The History and Philosophy Department offers graduate work leading to the master's degrees in history and social studies. For descriptions of graduate courses and programs in the History and Philosophy Department, please consult the Graduate Catalog.

## COURSES

### World History

**101 History of Civilization. Three sem hours**  
 The classical heritage and the civilization of the Middle Ages and the Renaissance in historical perspective. Cultural development and institutional growth are emphasized.

**102 History of Civilization. Three sem hours**  
 A continuation of 101 History of Civilization. The study of cultural developments and the growth of institutions in the 17th and 18th centuries; social and economic changes in modern times.

**103 History of Non-Western Civilization.****Three sem hours**

The civilizations of the Moslem world, Africa, India and East Asia in historical perspective. Philosophical outlook, cultural development and technological advances are emphasized, with attention also being given to social and economic changes in the period since 1500.

**201 The Comparative Study of Religion.****Three sem hours**

An introduction to the systematic study of religious experience and expression, organized around representative motif, phenomena and institutions and illustrated with relevant examples from the various historical religious traditions.

**301 The Religions of South and East Asia.****Three sem hours**

A survey of the religious traditions of India, Ceylon, Burma, Thailand, China, Tibet and Japan, showing the interaction of folk religion with the developing concepts and institutions of Hinduism, Buddhism, Confucianism, Taoism and Shinto.

*Prereq:* 201 *The Comparative Study of Religion* or 103 *History of Non-Western Civilization.*

**302 Near Eastern and Western Religions.****Three sem hours**

A survey of the historical evolution of the several religions originating in Western Asia, concentrating especially on the development and interaction of Judaism, Christianity and Islam.

*Prereq:* 201 *The Comparative Study of Religion* or 101 *History of Civilization.*

**Ancient and Medieval History****323 Greek History.****Three sem hours**

Ancient Greece from the Bronze Age to the Roman conquest.

**324 Roman History.****Three sem hours**

Ancient Rome from prehistoric background through the Age of Justinian.

**327 The Early Middle Ages.****Three sem hours**

The transition from classical to European civilization with special attention to Europe's relations with its neighbors.

**328 The High Middle Ages.****Three sem hours**

Development of distinctive European concepts, ideas, and institutions in the context of relations with non-European neighbors.

**403 History of the Ancient Near East. Three sem hours**

A survey of the civilization of the Fertile Crescent, Asia Minor and the Nile Valley from neolithic settlements down to classical times.

*Prereq:* 101 *History of Civilization.*

**European History****309 France to 1789.****Three sem hours**

A study of the main currents in early modern times with special emphasis on the impact of the Protestant Revolt and the Renaissance on French society, the rise of absolutism and the political and intellectual background of the French Revolution.

**310 France since 1789.****Three sem hours**

An examination of the major trends in French history

since the start of the Revolution. Cultural, social, economic and intellectual trends are stressed as well as political. The ways in which France has been a seedbed for new movements in Europe are particularly noted.

**311 England to 1689.****Three sem hours**

The general history of England to the Revolution of 1688, with emphasis on its cultural and constitutional contributions to the modern world.

**312 England 1689 to Present.****Three sem hours**

A continuation of 311 England to 1689. Deals with England in the period of imperial expansion, its industrial and social revolutions and its transition into a modern socially-minded nation.

**330 Europe in the Renaissance and Reformation.****Three sem hours**

A survey of the political, cultural, religious and economic history of Europe from the Italian Renaissance to the Peace of Westphalia.

**331 Europe from Absolutism to Revolution, 1648-1815.****Three sem hours**

A political, social and cultural study of Europe from the Peace of Westphalia through the Napoleonic Era. Emphasis will be placed upon the development of absolutism in France, constitutionalism in England, the Enlightenment and the French Revolution.

**332 Modern Europe 1815-1919.****Three sem hours**

A study of the development and conflicts of the national states of Europe from the Congress of Vienna to the Treaty of Versailles.

**333 Europe since 1919.****Three sem hours**

A history of Europe since Versailles with emphasis upon the Communist, Fascist and Nazi revolutions, their impact on the world; the origins and outbreak of the Second World War and the post 1945 era.

*Prereq:* Junior standing or permission of the department.

**337 German History to 1815.****Three sem hours**

German history from the early Teutonic tribes and Holy Roman Empire to the rise of Brandenburg-Prussia and the Germanic Confederation.

*Prereq:* Junior standing or permission of the department.

**338 German History since 1815.****Three sem hours**

Germany 1815 to the present. Topics considered are unification and Empire, World War I, the Weimar Republic, the rise of National Socialism, World War II and post-war Germany.

*Prereq:* Junior standing or permission of the department.

**343 History of Russia to 1855.****Three sem hours**

A survey of political, economic and cultural trends in the history of Russia from Riurik to the death of Tsar Nicholas I, with special emphasis on the growth of Tsarist absolutism.

*Prereq:* Junior standing or permission of the department.

**344 History of Russia since 1855.****Three sem hours**

A survey of the political, economic and diplomatic history of Imperial Russia and the Soviet Union from the great reforms of the 1860's to the death of Stalin. Special emphasis is on the Soviet period.

*Prereq:* Junior standing or permission of the department.

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**435 Italy since 1815. Three sem hours**  
The political, social and economic development of Italy from the Congress of Vienna to the present. Emphasis will be placed upon the unification movement, domestic and foreign problems of the late nineteenth and twentieth centuries. World War I and its effects. Mussolini and Fascism. World War II and the new liberal republic.  
*Prereq: Junior standing or permission of the department.*

**471 Social and Intellectual History of Nineteenth Century Europe. Three sem hours**  
A detailed study of the original concepts of Europe's nineteenth century intellectuals whose works were of major influence in the nineteenth and twentieth centuries.  
*Prereq: Junior standing or permission of the department.*

## American History

**123 Evolution of American Democracy. Three sem hours**  
A study of American democracy through the rise of our political institutions. The influence of the frontier, frontier individualism, sectionalism, the implication of disunion in the Civil War, the growth of industry, the labor movement, social reform programs and present world responsibility and leadership. *Not open to students who have taken either 223 or 224 American History.*

**223 American History to 1877. Three sem hours**  
A study of United States history from the period of exploration through the Reconstruction of the South following the Civil War. *Not open to students who have taken 123 Evolution of American Democracy.*

**224 American History, 1877 to the Present. Three sem hours**  
A study of United States history from the end of Reconstruction to the present. *Not open to students who have taken 123 Evolution of American Democracy.*

**303 History of American Religion. Three sem hours**  
A survey of religious institutions and ideas in relation to American culture from colonial times to the present.  
*Prereq: One course in American history.*

**313 Michigan History. Three sem hours**  
A survey of major economic, social and political developments in Michigan from prehistoric times to the present. Emphasis is placed on the period prior to the twentieth century.

**315 History of Black Americans. Three sem hours**  
A history of Americans of African ancestry from colonial times to the present. Special attention will be given to slavery, the post-Civil War South, northward migration and urban settlement and philosophies of racial progress.  
*Prereq: One course in American history.*

**355 Latin America: Colonial Period. Three sem hours**  
Latin American History: Colonial period surveys the history of Spanish America and Portuguese America from the conquest to the independence era. Attention is given to political, social and economic aspects.  
*Prereq: Junior standing or permission of the department.*

**356 Latin America: National Period. Three sem hours**  
Latin American History: National period surveys the history of Latin America from the independence era to the

present. Political, social, intellectual and economic topics are examined.

*Prereq: Junior standing or permission of the department.*

**357 History of Mexico. Three sem hours**  
An introduction to Mexican history from the Amerindian period through the recent past. Attention is given to political, social, economic and cultural developments in the area comprising the present day nation as well as those areas in North America once included in Mexico.  
*Prereq: Junior standing.*

**361 Foreign Relations of the United States. Three sem hours**  
A survey of the foreign relations of the United States with chief emphasis on the diplomacy of the period after the Civil War.

**362 American Urban History. Three sem hours**  
The development of urban institutions in the United States and the role of the city in the major events of American history.  
*Prereq: 224 American History, 1877 to the present.*

**365 The Old South. Three sem hours**  
The South from the colonial foundations to the formation of the Confederacy in 1861.  
*Prereq: 223 American History to 1877 and junior standing.*

**368 Social and Intellectual History of the United States to the Civil War. Three sem hours**  
Society, thought and culture in America during the seventeenth, eighteenth and early nineteenth centuries. Includes such subjects as Puritanism, the Enlightenment and Romanticism/Transcendentalism, together with their social and artistic implications. *Not open to freshmen or sophomores.*

**369 Social and Intellectual History of the United States since the Civil War. Three sem hours**  
Society, thought and culture in America during the late nineteenth and twentieth centuries. Includes such subjects as Pragmatism, Social Darwinism and Urbanization together with their social and artistic implications. *Not open to freshmen or sophomores.*

**380 The American Colonies to 1763. Three sem hours**  
A study of the European prelude to colonization; the founding of the colonies and their political, economic and social development; the deterioration of the relationship between Great Britain and the American colonies.  
*Prereq: 224 American History, 1877 to the Present, junior standing or permission of the department.*

**383 The Age of Jackson. Three sem hours**  
A history of the United States during the second quarter of the nineteenth century with major emphasis on economic, political and social controversies. The leadership roles of Jackson and Polk will be stressed.  
*Prereq: 224 American History, 1877 to the Present, junior standing or permission of the department.*

**385 Civil War and Reconstruction. Three sem hours**  
A study of the political, social, economic and military aspects of the American Civil War, followed by a consideration of the nation's struggle to solve the many problems

raised by the war. Emphasis will be given to those developments which have a continuing significance for American history.

*Prereq: 224 American History, 1877 to the Present, junior standing or permission of the department.*

**402 The American Revolution. Two sem hours**

A study of the background and character of the American Revolution. Emphasis is placed upon the varied interpretations of the Revolution and its contribution to the development of American principles.

**411 American Constitutional History to 1865. Three sem hours**

A history of the development of the American Constitution from English and American colonial origins to the end of the American Civil War.

*Prereq: 224 American History, 1877 to the Present and junior standing.*

**412 American Constitutional History 1865 to the Present. Three sem hours**

A history of the development of the American Constitution from 1865 to the present.

*Prereq: 224 American History, 1877 to the Present and junior standing.*

**414 Michigan in the Twentieth Century. Three sem hours**

The recent political, constitutional, economic, social, and educational developments in Michigan as a background for understanding present conditions and problems.

*Prereq: 224 American History, 1877 to the Present or 313 Michigan History and junior standing.*

**425 Twentieth Century America to 1945. Three sem hours**

A history of political, social, economic and cultural developments with special emphasis on the Progressive Era and the New Deal.

*Prereq: 224 American History, 1877 to the Present.*

**426 The United States since World War II. Three sem hours**

Important political developments since 1945.

*Prereq: 224 American History, 1877 to the Present.*

**480 Federalist-Jeffersonian America. Three sem hours**

The background of the creation of the Constitution, the Federalist administration, the Republican administration through the War of 1812, and post war elements of foreign policy. Research in primary sources will be stressed.

*Prereq: 223 American History to 1877 and junior standing.*

**493 History and Historians. One sem hour**

A study of the nature of history as reflected in the writings of eminent historians and authorities in the field of historiography. The course is limited to 15 superior students who intend to pursue graduate study in history.

*Prereq: Senior standing, 3.0 grade-point average and permission of the department. 494 Historical Research must be elected in the same semester.*

**494 Historical Research. Two sem hours**

An introduction to historical research. The course includes bibliographical techniques, critical analysis of sources and the application of these skills to a research project. The course is limited to 15 superior students who

intend to pursue graduate study in history.

*Prereq: Senior standing, 3.0 grade point average and permission of the department. 493 History and Historians must be elected in the same semester.*

**Non-Western History**

**371 History of the Far East to 1800. Three sem hours**

A study of the history of China, Korea and Japan from ancient times to the beginning of the nineteenth century. Special attention will be given to political, cultural and social developments. The dominant role of China during this period will be emphasized.

*Prereq: Junior standing or permission of the department.*

**373 History of Modern China. Three sem hours**

China from 1800 to the present: Traditional Confucianism, China in crisis, impact of the West, reform and revolution, Republican China, the Communist revolution, China since 1949.

*Prereq: Junior standing or permission of the department.*

**374 History of Modern Japan. Three sem hours**

Japan from 1800 to the present: collapse of the shogunate, 19th century reforms, rise of the empire to great power status, defeat in World War II, post war changes. Political, economic and cultural developments are considered.

*Prereq: Junior standing or permission of the department.*

**375 Modern India. Three sem hours**

The development and maturing of British rule in India against the background of Indian culture. The rise and development of Indian nationalism and the struggle for independence. Independence and the problems faced by India since 1947.

*Prereq: Junior standing or permission of the department.*

**377 History of Sub-Saharan Africa. Three sem hours**

The historical evolution of Africa's civilizations; origins, interrelations in ancient times, responses to Europe's colonization and current roles in the modern world.

*Prereq: Junior standing or permission of the department.*

**438 History of Islamic Lands to 1800. Three sem hours**

A survey of political, economic, religious and cultural developments in the Islamic lands from the time of Mohammed to 1800. Special attention is given to the role of Islam in Africa, to the cultural achievements of the Islamic peoples and to relations between Muslims and Christians.

*Prereq: Junior standing or permission of the department.*

**441 Middle Eastern History, 1798—Present. Three sem hours**

A survey of the political, economic and social history of the Middle East, including Turkey and Iran, with emphasis on the growth of independence movements in the area.

*Prereq: 101, 102 History of Civilization or 271 Introduction to World Politics.*

**442 North Africa, 1798 to Present. Three sem hours**

A survey of the political, economic and social history of North Africa, Egypt and the Sudan with emphasis on internal movements for independence from colonial powers.

*Prereq: 101 or 102 History of Civilization or 211 European Political Systems or 271 Introduction to World Politics.*

Teaching Methods: History and Social Studies

348 **Teaching Social Studies in Elementary Schools.** Three sem hours  
(See Geography and Geology Department)

481 **The Teaching of Social Studies.** Three sem hours  
Designed for teachers in junior and senior high schools. An understanding of the nature of the subjects included in social science in the public schools and a study of problems related to the teaching of history and other social studies.

Independent Study

497 **Independent Study in History.** One sem hour  
498 **Independent Study in History.** Two sem hours  
499 **Independent Study in History.** Three sem hours  
Advanced study on an individual basis in areas in which the department does not offer formal courses. These courses are restricted to highly proficient juniors and seniors who are majors in the social sciences.  
Prereq: Permission of the department.

PHILOSOPHY

The philosophy curriculum provides a basic knowledge of the field of philosophy. The general program supplements curricula in many other disciplines, such as teaching, the performing arts and the sciences, and a philosophy major prepares students for graduate work in philosophy, law, theology and other related liberal arts subjects. The programs for the major and minor, outlined below, are arranged to strike a balance between courses in each of the topical groups.

Major (30 semester hours) Non-Teaching

	Semester Hours
Required courses . . . . .	30
180 Introduction to Logic. . . . .	3
200 Types of Philosophy . . . . .	3
230 History of Philosophy: Ancient and Medieval . . . . .	3
231 History of Philosophy: Modern . . . . .	3
340 Contemporary Philosophy . . . . .	3
400, 401, 402, 403 Philosophy Seminar. . . . .	2
Electives (to be chosen from other philosophy courses). . . . .	13

Minor (20 semester hours) Teaching

	Semester Hours
Required courses . . . . .	20
180 Introduction to Logic. . . . .	3
200 Types of Philosophy . . . . .	3
230 History of Philosophy: Ancient and Medieval. . . . .	3
231 History of Philosophy: Modern. . . . .	3
Electives (to be chosen from other philosophy courses). . . . .	8

Basic Courses

30 **Introduction to Logic.** Three sem hours  
An introduction to the techniques of analyzing and clarifying arguments and of distinguishing good reasoning

from bad. The course includes a study of classical and modern deductive techniques, induction and common fallacies.

200 **Types of Philosophy.** Three sem hours  
The goal of this course is to introduce the student to philosophy by the study of such types of philosophy as rationalism, empiricism, idealism, materialism and pragmatism. The course uses as sources representative works from such authors as Plato, Lucretius, Descartes, Berkeley and William James.

II. Intermediate courses of general interest

212 **The Philosophical Bases of Contemporary Art.** Three sem hours  
This course helps the student understand contemporary art forms and the philosophical theories which underly them. By studying the arts themselves and the philosophies, the course tries to integrate the arts.  
Prereq: One course in philosophy or permission of the department.

220 **Ethics.** Three sem hours  
An introduction to the major problems of ethical theory through careful study of works selected from such writers as Aristotle, Kant, Mill and Nietzsche. The course examines such problems as the nature of value, the relationship between morality and happiness, the justification of ethical decisions, the idea of obligation and the application of ethical theory to specific ethical problems.  
Prereq: 180 Introduction to Logic or 200 Types of Philosophy.

260 **Existentialism.** Three sem hours  
An examination of contemporary existentialist thought about the nature of reality and human existence as reflected in the works of such men as Marcel, Heidegger, Sartre and Camus. The course also includes a study of the sources of existentialism as found in the works of Kierkegaard and Nietzsche.  
Prereq: 180 Introduction to Logic or 200 Types of Philosophy.

270 **Philosophical Issues in Literature.** Three sem hours  
An examination of questions concerning man's nature, the nature of the world he confronts and man's quest for self-identity as these issues are illustrated in selected works of literature.  
Prereq: 180 Introduction to Logic or 200 Types of Philosophy.

280 **Philosophical Foundations of Political Thought.** Three sem hours  
An examination of the philosophical bases of political ideology and theory. The course analyzes a variety of political theories, examining their component parts and discussing their basic assumptions. Examples are taken from the works of such writers as Plato, Aristotle, Hobbes, Locke, Rousseau, Mussolini, Marx and Thoreau.  
Prereq: 180 Introduction to Logic or 200 Types of Philosophy.

297 **Philosophy and Contemporary Issues.** Three sem hours  
A philosophical examination of some of the issues that are prominent in contemporary society. Several of the following topics will be studied: political obligation and



civil disobedience, pacifism, justification of revolution, social justice, community, alienation, the contemporary university.

*Prereq:* 180 *Introduction to Logic* or 200 *Types of Philosophy*.

### III. Studies in the History of Philosophy

#### 230 History of Philosophy: Ancient and Medieval.

**Three sem hours**

A study of important philosophical developments in Western thought from the pre-Socratics to the later Medieval philosophers. The course covers the pre-Socratics, Plato, Aristotle, the Stoics, St. Augustine, St. Thomas Aquinas, Occam and Duns Scotus.

*Prereq:* 180 *Introduction to Logic* or 200 *Types of Philosophy*.

#### 231 History of Philosophy: Modern. **Three sem hours**

A study of important philosophical developments in Europe from the Renaissance to the early nineteenth century. The course covers such figures as Descartes, Spinoza, Leibnitz, Hobbes, Locke, Berkeley, Hume and Kant. This course is a continuation of 230 History of Philosophy: Ancient and Medieval.

*Prereq:* 180 *Introduction to Logic* or 200 *Types of Philosophy*.

#### 335 American Philosophy. **Three sem hours**

An examination of the philosophical tradition in the United States through a study of such movements as idealism, transcendentalism, realism and pragmatism—from Jonathan Edwards to the present day.

*Prereq:* 231 *History of Philosophy: Modern* or permission of the department.

#### 340 Contemporary Philosophy. **Three sem hours**

An introduction to philosophical developments since approximately 1900. The course covers movements such as pragmatism, analytic philosophy and existentialism, as reflected in the works of men like James, Dewey, Russell, Ryle, Heidegger and Sartre.

*Prereq:* 231 *History of Philosophy: Modern* or permission of the department.

#### 410 Continental Rationalism. **Three sem hours**

An examination of the metaphysical views and theories of knowledge which emphasize the rational character of reality and the ability of man to acquire certain knowledge of reality through reasoning. The course deals with such major figures as Descartes, Spinoza, Leibnitz and Hegel.

*Prereq:* 231 *History of Philosophy: Modern* or permission of the department.

#### 431 British Empiricism. **Three sem hours**

An examination of philosophical theories based on the claim that all knowledge is ultimately derived from sense experience. The course deals with such topics as causality, personal identity and theory of meaning as considered by writers like Hobbes, Locke, Berkeley, Hume, Mill and Russell.

*Prereq:* 231 *History of Philosophy: Modern* or permission of the department.

### IV. Areas of Special Interest

#### 310 Aesthetics. **Three sem hours**

A study of philosophical issues relating to works of art and

other aesthetic objects. Possible topics include: the nature of aesthetic attitude, aesthetic evaluation, aesthetic meaning and aesthetic truth, expression in art, the nature of a work of art and basic value of art, the kinds of concepts used to talk about the arts.

*Prereq:* One course in philosophy.

#### 320 Contemporary Ethical Theory. **Three sem hours**

An examination of contemporary ethical discourse, analyses of ethical decision-making, and the distinction between normative ethics and meta-ethics.

*Prereq:* 220 *Ethics* or permission of the department.

#### 350 Philosophy of Religion. **Three sem hours**

A philosophical study of the nature, goals and proper function of religion. Some possible topics are: traditional arguments for the existence of God, grounds for disbelief in God, immortality, religious experience, the nature of religious language, the relation of science to religion, the role of faith and revelation, the connection between religion and ethics.

*Prereq:* 180 *Introduction to Logic* or 200 *Types of Philosophy*.

#### 355 Philosophy of Law. **Three sem hours**

An examination of the nature of law and the relationship between law and morality. Such theories as legal positivism, legal realism and natural law will be explored. Recommended for pre-law students.

*Prereq:* 180 *Introduction to Logic* or 200 *Types of Philosophy*.

#### 380 Philosophy of Science. **Three sem hours**

This course studies systematically the main philosophical problems raised by the results and methods of the physical and social sciences. Some of the topics covered are: the problem of meaning, measurement, the interpretation of probability statements, the justification of induction, the concept of cause, the laws of nature, description and explanation, determinism and indeterminism.

*Prereq:* Two courses in philosophy.

#### 381 Symbolic Logic. **Three sem hours**

An introduction to the notation and proof procedure of symbolic logic with emphasis upon the clarification and development of the notion of a formal language.

*Prereq:* Two courses in philosophy or permission of the department.

#### 400, 401, 402, 403 Philosophy Seminar. **Two sem hours**

An intensive study of selected topics in philosophy. The work consists of the analysis of philosophical texts, designed primarily for students majoring or minoring in philosophy. Since the subject matter changes, the course may be taken more than once for credit.

*Prereq:* Two courses in philosophy.

#### 425 Theory of Knowledge. **Three sem hours**

An investigation of the nature, scope and limits of knowledge. Some possible topics are: the connection between belief and knowledge, knowledge of other people's minds, the reliability of memory, the possibility of certain knowledge, theories of truth.

*Prereq:* Two courses in philosophy.

#### 442 Philosophy of Mind. **Three sem hours**

A philosophical study of the nature of mind. A study of logical relations among mental concepts such as consciousness, choice, intention, emotion, feeling, the u

conscious. The course also deals with human action and considers the possibility and meaning of an adequate explanation of psychological phenomena.  
*Prereq: Two courses in philosophy.*

**460 Philosophy of Language. Three sem hours**  
 An examination of the philosophically important aspects of language. Possible topics include: theories of meaning, analysis of referring and predication, the relation between language and reality, analysis of vagueness and metaphor, the role of language in philosophical method, the relation between language and necessary truth.  
*Prereq: Two courses in philosophy.*

**470 Phenomenology. Three sem hours**  
 An examination of the method and technique of phenomenological description of consciousness. Topics will be drawn from such areas of philosophy as ontology, theory of knowledge and philosophy of mind. Authors studied will include Brentano, Husserl, Heidegger, Merleau-

Ponty, Ricoeur and Sartre.  
*Prereq: Two courses in philosophy.*

**480 Metaphysics. Three sem hours**  
 A study of questions concerning the basic structure and ultimate nature of reality. Possible topics include: universals and particulars, space and time, determinism and freedom, the self, materialism, idealism, substance and process.  
*Prereq: Two courses in philosophy.*

**497 Independent Study in Philosophy. One sem hour**

**498 Independent Study in Philosophy. Two sem hours**

**499 Independent Study in Philosophy. Three sem hours**  
 Advanced study on an individual basis in areas in which the department does not offer a formal course. *The course is restricted to juniors and seniors who are majoring or minoring in philosophy.*  
*Prereq: Permission of the department.*



## MATHEMATICS

Department Head: Robert S. Pate

Professors: Madeline L. Early, John L. Ginther, James H. Northey

Associate Professors: Larry L. Badii, Donald A. Buckeye, Andrew C. Dempster, M. Margaret Gotts, Delia Koo, Kurt F. Lauckner, Nelly S. Ullman

Assistant Professors: David E. Cowles, Bob L. Goosey, Christopher E. Hee, Alan Heezen, Hartmut Hoft, Paul Howard, Alan L. MacDonald, Richard W. Marshall, Robert A. Mills, Mohammad Rafiq, Joanne S. Rankin, Toomas Rebane, John H. Remmers, Pedro P. Sanchez, Manda Suryanarayana, Enoch C. Tse, James R. Walter

Instructors: David L. Presser, Richard C. Vile, Michael Zeiger

The program in mathematics is designed to give majors certain basic courses, insure a broad background and yet allow enough electives for the student to adapt his program to one of the various phases of mathematics with which he may be concerned such as junior and senior high school teaching, statistics, engineering, the physical sciences or graduate work in pure or applied mathematics.

Students desiring a major in mathematics may choose from the following alternatives:

- (1) The major of 30 semester hours (see below).
- (2) The applied science curriculum (see page 36).

Students desiring a minor in mathematics may choose from the following alternatives:

- (1) The regular minor in mathematics (see below).
- (2) The special minor available to students on elementary teaching, library science and special education curriculums (see below).

The group major and group minor in general science also provide opportunities for incorporating mathematics into a regular program of study (see pages 144 and 145).

Students who desire acceleration or advanced standing in the mathematics sequence should consult the mathematics adviser, Bob L. Goosey.

### MAJOR AND MINORS

**Major** (30 semester hours)

	Semester Hours
Required Courses . . . . .	30
120, 121, 220, 122 Calculus with Analytic Geometry I, II, III and Elementary Linear Algebra . . . . .	13
Electives from 221 or blocks A, B, C, D. . . . .	11-13
Electives from 400 or blocks A, B, C, D. . . . .	3-2
Electives from 105, 118, 236 or 237 or blocks A, B, C, D. . . . .	3-2

*Majors preparing to teach high school and junior high school mathematics must take course 221 and courses from at least three of the four blocks A, B, C and D.*

Students majoring in business, the social sciences, biological science, or physical science and also majoring in mathematics should consult with a mathematics adviser concerning the most appropriate courses. Courses 221, 416, and 420 are suitable for any major and are highly recommended as preparation for graduate study. The following suggestions may serve as a general guide.

**Business 236, 320, 402, 418, 436, 470, 471**

**Economics 236, 320, 402, 418, 470**

**Biology 236, 418, 470, 471**

**Physics 237, 320, 418, 423, 425, 426, 436**

**Chemistry 237, 320, 418, 425**

**Psychology 236, 402, 418, 470, 471**

All mathematics majors other than teaching mathematics majors and the double majors indicated above, must take 221 Calculus with Analytic Geometry IV and courses from at least two of the four blocks A, B, C and D. It is expected that these students normally will exceed the thirty hour minimum requirement.

**Minor** (20 semester hours)

	Semester Hours
Required Courses . . . . .	20
120, 121, 220, 122 Calculus with Analytic Geometry I, II, III and Elementary Linear Algebra . . . . .	13
Electives from 221 and Math 314 and above	4-5
Electives in Mathematics. . . . .	3-2

**Note:**

It is recommended that students minoring in mathematics and preparing to teach mathematics complete electives from two of the blocks A, B, C, D.

The block courses referred to above are as follows:

**Block A**

- 314 Theory of Equations
- 411 Modern Algebra
- 414 Theory of Numbers
- 416 Elements of Matrices

**Block B**

- 441 College Geometry
- 445 Solid Analytic Geometry
- 446 Synthetic Projective Geometry

**Block C**

- 320 Differential Equations I
- 321 Differential Equations II
- 420 Advanced Calculus I
- 421 Advanced Calculus II
- 423 Functions of a Complex Variable
- 425 Mathematics for the Scientist I
- 426 Mathematics for the Scientist II

**Block D**

- 402 Finite Mathematical Structures
- 418 Applied Linear Algebra
- 436 Numerical Analysis I
- 437 Numerical Analysis II
- 470 Introduction to Mathematical Statistics I
- 471 Mathematical Statistics II

Adjustments will be made for transfers having credit in courses not listed in the blocks.

**Minor for the Elementary Teaching Certificate** (20 semester hours)

	Semester Hours
Required Courses . . . . .	12
101, 102, 140 and 301. . . . .	12
plus either (1) 106 and 120 or (2) 110 and electives approved by the Mathematics Department. . . . .	8

**Note:**

381 Teaching of Mathematics K-6 is required of elementary teachers with this minor. Students seeking further information about this minor should consult Donald A. Buckeye.

COURSES

General Requirements

1. No student outside the elementary teaching minor may receive credit in courses 101, 104, 105, 107, 118 or 119 after credit for 120 has been earned.
2. Students majoring in mathematics must complete at least five semester hours credit and minors must complete at least three semester hours credit in this department.
3. Majors preparing to teach mathematics in high school must complete a course in the teaching of mathematics in addition to the requirements for a major.

COMPUTER SCIENCE

This program will provide for continued growth and change in the field of computer science. It consists of a 31-hour major or a 20-hour minor. The major will provide for students interested primarily in information processing and the minor will accommodate those in physical sciences, social sciences, behavioral sciences and others concerned with information processing applications. Either major or minor can be used as a basis for graduate study in computer science. Further information about the program may be obtained from Robert A. Mills.

<b>Computer Science Major</b> (31 semester hours)	
	<b>Semester Hours</b>
Required Courses . . . . .	25
136, 237, 238, 239, 330, 334, 337, 338, 496	
Electives . . . . .	6
Any two from 430, 431, 432, 434, 436, 437, 438	
<b>Note:</b>	
236 may be substituted for 237. If so, then 436 and one other of the above electives must be taken.	
Additional Requirements . . . . .	22
120, 121, 122, 220, 221 . . . . .	16
Electives from 418, 425, 426, 470, 471 . . . . .	6

<b>Computer Science Minor</b> (20 semester hours)	
	<b>Semester Hours</b>
Required Courses . . . . .	14
136, 236 or 237, 238, 239, 330	
Electives . . . . .	6
Any two of the following with at least one 400-level course: 334, 337, 338, 432, 436, 437, 438.	

Any student interested in computer science applications business may substitute courses from the College of Business with the approval of the computer science advisor. However, no student may receive credit for both general Business 215 Computers in Business and Mathematics 236 Introduction to Computer Programming or Computer Programming and Numeric Methods.

GRADUATE STUDY

The Mathematics Department offers graduate work leading to the master's degree in mathematics. For descriptions of graduate courses and programs in the Mathematics Department, please consult the Graduate Catalog.

**101 Functional Mathematics I. Three sem hours**  
An introductory course to acquaint the student with the principal ideas of mathematics. Includes sets, logic, study of integers, rational and real numbers, number bases, exponents and logarithms and axiomatic geometry. Emphasis is placed on the concepts involved.

**102 Functional Mathematics II. Three sem hours**  
Review and extension of the real numbers to a study of the complex numbers, elementary number theory, logic and nature of proof, basic probability and statistics and informal geometry. (*Open only to prospective elementary teachers.*)  
*Prereq: 101 Functional Mathematics I.*

**104 Intermediate Algebra. Three sem hours**  
A review of elementary algebra and a continuation into the study of functions, graphs and quadratic equations.  
*Prereq: One year of high school algebra. Students who have completed more than one year of high school algebra should elect 105 College Algebra or 120 Calculus with Analytic Geometry I.*

**105 College Algebra. Three sem hours**  
Properties of the real numbers; equations and inequalities; functions; sequences; mathematical induction; polynomial, rational, exponential, and logarithmic functions; introduction to probability.  
*Prereq: One and one half to two years high school algebra or 104 Intermediate Algebra.*

**106 College Algebra and Trigonometry for Elementary Teachers. Four sem hours**  
Basic algebraic and trigonometric concepts. Real and complex number systems, solutions of equations and inequalities, graphs of functions, determinants, sequences and series, permutations, combinations and probability. (*Open only to prospective elementary teachers.*)  
*Prereq: One year high school algebra, plane geometry and 102 Functional Mathematics II or 110 Algebra for Elementary Teachers or 301 Advanced Topics in Elementary Mathematics.*

**107 Plane Trigonometry. Two sem hours**  
An elementary course in plane trigonometry. Students who have good records in high school courses including trigonometric identities, trigonometric equations and oblique triangles, should not take the course.  
*Prereq: One and one-half years of high school algebra or 104 Intermediate Algebra, and one year of plane geometry.*

**110 Algebra for Elementary Teachers. Three sem hours**  
Field properties, complex number, number sentences, introduction to coordinate geometry, nature of proof and concept of limit. (*Open only to prospective elementary teachers.*)  
*Prereq: 101 Functional Mathematics I.*

**118 Mathematical Analysis for Social Sciences I. Three sem hours**  
Solutions of linear equations, vectors and matrices, determinants, linear programming, exponential and logarithmic functions.  
*Prereq: Two years of high school algebra or 104 Interme-*

diate Algebra or equivalent. Students who feel weak in algebra are encouraged to elect 104 or 105 College Algebra first.

### 119 Mathematical Analysis for Social Sciences II.

**Three sem hours**

Differentiation of algebraic, exponential and logarithmic functions; applications of differentiation; an introduction to the definite integral; probability.

*Prereq: 118 Mathematical Analysis for Social Sciences I.*

### 120 Calculus with Analytic Geometry I.

**Four sem hours**

Differentiation of algebraic and trigonometric functions, applications, The Mean Value Theorem, definite and indefinite integrals, The Fundamental Theorem of Integral Calculus.

*Prereq: Students having a "B" average in high school and in high school mathematics through trigonometry may take this course in their first semester. Others should enroll in 105 College Algebra first (and in 107 Plane Trigonometry if not taken in high school).*

### 121 Calculus with Analytic Geometry II.

**Four sem hours**

Applications of integration; exponential, logarithmic and hyperbolic functions; methods of integration; plane analytic geometry.

*Prereq: 120 Calculus with Analytic Geometry I or equivalent.*

### 122 Elementary Linear Algebra.

**Two sem hours**

Vectors and matrices, operations on matrices, determinants, systems of linear equations, linear independence, linear transformations, eigenvalues.

*Prereq: 120 Calculus with Analytic Geometry I or equivalent.*

### 136 Introduction to Computer Science.

**Two sem hours**

This course is designed for any student who wishes to learn the capabilities and applications of digital computers. Some programming is included in the course but it is not a programming course. Non-computer science majors wishing to learn how to program a digital computer should elect 236 Introduction to Computer Programming or 237 Computer Programming and Numeric Methods.

### 140 Geometry for Elementary Teachers.

**Three sem hours**

Informal geometry of the plane and space, congruence and measurement, elementary theorems and proof and plane coordinate geometry. (Open only to prospective elementary teachers.)

*Prereq: 101 Functional Mathematics I.*

### 220 Calculus with Analytic Geometry III.

**Three sem hours**

Vectors and analytic geometry in space, differentiation of vector functions, partial differentiation, double integrals.

*Prereq: 121 Calculus with Analytic Geometry II and 122 Elementary Linear Algebra or equivalent. (122 may be taken concurrently.)*

### 221 Calculus with Analytic Geometry IV.

**Three sem hours**

Multiple integrals, vector analysis, infinite series, complex functions.

*Prereq: 220 Calculus with Analytic Geometry III or equivalent.*

### 230 Slide Rule.

**One sem**

The theory and practice of the slide rule. Each student must procure a log/log or vector slide rule.

*Prereq: 107 Plane Trigonometry or equivalent.*

### 231 Statics.

**Three sem**

The application of fundamental principles of mathematics to simple problems. Forces, components, vectors, moments, couples, friction and centroids.

*Prereq: 121 Calculus with Analytic Geometry II and Physics 223 Mechanics. Sound and Heat. (Both may be taken concurrently.)*

### 236 Introduction to Computer Programming.

**Three sem**

An introductory course using FORTRAN language for students wishing to learn the uses of a digital computer. Practice in developing algorithms, writing programs, obtaining solutions of mathematical and scientific problems.

*Prereq: One and one-half years high school algebra. (Credit will not be given for both 236 Introduction to Computer Programming and 237 Computer Programming and Numeric Methods. Science majors with adequate mathematics are advised to take 237.)*

### 237 Computer Programming and Numeric Methods.

**Three sem**

An introduction to computer programming using the FORTRAN language and applications to the numerical algorithms, fundamental to scientific computer. Discussion of error, polynomial interpolation, numerical integration, solution of systems of linear, non-linear and ordinary differential equations.

*Prereq: 121 Calculus with Analytic Geometry II. (May be taken concurrently.) (Credit will not be given for both 236 Introduction to Computer Programming and 237 Computer Programming and Numeric Methods.)*

### 238 Computer Programming Applications.

**Three sem**

This course presents the student with a variety of programming problems from mathematics, physics, chemistry, biology, economics, the social sciences, education, business, etc. It is intended to give extensive programming practice using several programming languages.

*Prereq: 136 Introduction to Computer Science or permission of the department, and 237 Computer Programming and Numeric Methods or 236 Introduction to Computer Programming.*

### 239 Assembly and Machine Language Programming.

**Three sem**

Computer structure, machine language, instruction execution and digital representation of data. Computer systems organization and programs. Symbolic code, assembly systems, macro definition and generation, program segmentation and linkage.

*Prereq: 136 Introduction to Computer Science, 237 Computer Programming and Numeric Methods, or 236 Introduction to Computer Programming; or 316 Programming of Business Information Systems.*



- 301 Advanced Topics in Elementary Mathematics.** **Three sem hours**  
Acquaints prospective elementary teachers with new topics in the elementary mathematics curriculum such as algebraic systems, conic sections, trigonometry, statistical procedures and topics in number theory.  
*Prereq: 102 Functional Mathematics II or 110 Algebra for Elementary Teachers or 140 Geometry for Elementary Teachers.*
- 306 Teaching of High School Mathematics.** **Three sem hours**  
Consideration of the mathematics program in the high school, its organization and content, methods of teaching and learning. This Group IV methods class does not count for the major or minor. *Not open to freshmen or sophomores or students on academic probation.*  
*Prereq: 120 Calculus with Analytic Geometry I.*
- 314 Theory of Equations.** **Two sem hours**  
Includes the theory of equations, determinants, and related topics, such as rings and fields.  
*Prereq: 121 Calculus with Analytic Geometry II.*
- 320 Differential Equations I.** **Three sem hours**  
The solutions of different types of ordinary differential equations and their applications. It is of particular value to students of the physical sciences and to those expecting to carry on graduate work in either mathematics or the physical sciences.  
*Prereq: 221 Calculus with Analytic Geometry IV.*
- 321 Differential Equations II.** **Three sem hours**  
Linear differential equations with variable coefficients, series solutions of second order linear differential equations, numerical methods, non-linear differential equations and Sturm-Liouville Theory will be discussed.  
*Prereq: 320 Differential Equations I.*
- 330 Discrete Mathematical Structures.** **Three sem hours**  
Set algebra and algebraic structures. Elements of the theory of directed and undirected graphs. Boolean algebra and propositional logic. Applications to various areas of computer science.  
*Prereq: 239 Assembly and Machine Language Programming.*
- 334 Data Structures.** **Three sem hours**  
Linear lists, strings, arrays and orthogonal lists. Representation of trees and graphs. Storage systems, structures, storage allocation and collection. Symbol tables, searching and sorting techniques. Formal specification of data structures and data management systems.  
*Prereq: 330 Discrete Mathematical Structures.*
- 337 Programming Languages.** **Three sem hours**  
Formal definition of programming languages. Structure of simple statements. Global properties of algorithmic languages. Structure of list processing, string manipulation, data description and simulation languages. Run-time representation of program and data structures.  
*Prereq: 330 Discrete Mathematical Structures.*
- Computer Organization.** **Three sem hours**  
Basic digital circuits, data representation and transfer, digital arithmetic. Digital storage and accessing, control actions, input-output facilities, systems organization, reliability, simulation techniques. Multiprogramming,

multiprocessing and real-time systems.  
*Prereq: 330 Discrete Mathematical Structures.*

- 381 The Teaching of Mathematics K-6.** **Three sem hours**  
Learning to teach children in the elementary grades (K-6) the understandings and processes of mathematics. Attention is focused on learning-teaching situations and effective use of learning aids. *Required of all students on early elementary and later elementary curriculums. Not open to students on academic probation.*  
*Prereq: 101 Functional Mathematics I and junior standing.*
- 400 History of Mathematics.** **Three sem hours**  
Designed to show the student how the subjects he is to teach have developed. Students have access to a large collection of books in the library.  
*Prereq: 220 Calculus with Analytic Geometry III.*
- 402 Finite Mathematical Structures.** **Three sem hours**  
Selected topics in mathematical logic, set theory operations on statements, sets and functions, elements of probability theory, linear algebra, convex sets, linear programming and theory of games.  
*Prereq: 121 Calculus with Analytic Geometry II.*
- 403 Current Research in Elementary School Mathematics.** **Three sem hours**  
A brief history of mathematics education, 1890 to present. Special emphasis on important research studies of this period. Consideration of various textbook series, use and evaluation of supplementary materials, the place value of teaching aids. Professional journals will be utilized throughout the course.  
*Prereq: 301 Advanced Topics in Elementary Math and 381 Teaching of Mathematics K-6.*
- 411 Modern Algebra.** **Three sem hours**  
Introduction to modern algebra, logic, set theory, groups, rings and fields.  
*Prereq: 220 Calculus with Analytic Geometry III.*
- 414 Theory of Numbers.** **Three sem hours**  
An introductory course dealing with the Euclidean algorithm and greatest common divisor, unique factorization theorem, linear Diophantine equations, congruences, theorems of Fermat, Euler and Wilson, quadratic residues, law of quadratic reciprocity and the Jacobi symbol.  
*Prereq: Junior or senior standing and/or permission of the department.*
- 416 Elements of Matrices.** **Three sem hours**  
A review of determinants, linear dependence and vectors, elementary properties of matrices, transformations, canonical forms and various applications.  
*Prereq: 220 Calculus with Analytic Geometry III.*
- 418 Applied Linear Algebra.** **Three sem hours**  
Applications of matrix algebra and determinants, linear dependence, linear programming, linear transformations in vector spaces. The emphasis will be more on applications rather than proof of the theorems.  
*Prereq: 121 Calculus with Analytic Geometry II or permission of the department.*
- 420 Advanced Calculus I.** **Three sem hours**  
Real numbers, elementary topology of real line, sequences, functions, limits, continuity, uniform continuity,



differentiation, integration, sequences and series of functions, uniform convergence.

*Prereq: 221 Calculus with Analytic Geometry IV.*

**421 Advanced Calculus II. Three sem hours**

Vectors, functions of several variables, limit and continuity, partial differentiation, Implicit Function Theorem, line and surface integral, Green's Theorem, the Divergence Theorem, Stokes's Theorem, multiple integrals, improper integrals.

*Prereq: 420 Advanced Calculus I.*

**423 Elements of Functions of a Complex Variable.**

**Three sem hours**

An introduction to the theory of functions: analytic functions, Cauchy-Riemann conditions, series expansion, Laurent series, poles and essential singularities, integration in a complex plane, Cauchy integral theorem, calculus of residues, conformal mapping.

*Prereq: 221 Calculus with Analytic Geometry IV or equivalent.*

**425 Mathematics for the Scientist I. Three sem hours**

The scientific applications of vector and tensor analysis, coordinate systems, matrices and determinants, infinite series, functions of a complex variable. Emphasis will be given to subjects of interest to the class.

*Prereq: 221 Calculus with Analytic Geometry IV.*

**426 Mathematics for the Scientist II. Three sem hours**

The scientific applications of ordinary and partial differential equations, special functions, integral transforms and subjects of interest to the class.

*Prereq: 425 Mathematics for the Scientist I.*

**430 Compiler Construction. Three sem hours**

Review of programming language structures, translation, loading, execution and storage allocation. Compilation of simple statements. Organization and over-all design of a compiler. Use of compiler writing languages.

*Prereq: 334 Data Structures and 337 Programming Languages.*

**431 Systems Programming. Three sem hours**

Batch-process systems programs, components and operating characteristics. Implementation techniques for parallel processing and interrupt handling. Overall structure of multiprogramming systems. Addressing techniques, file system design and management. Interprocess communication, design of system modules and interfaces.

*Prereq: 334 Data Structures, 337 Programming Languages and 338 Computer Organization.*

**432 Switching Theory. Three sem hours**

Switching algebra, gate network and sequential circuit analysis and synthesis. Boolean algebra, sequential circuit state and combinational circuit minimization, hazards and races, elementary number systems and codes.

*Prereq: 330 Discrete Mathematical Structures and 338 Computer Organization.*

**434 Sequential Machines. Three sem hours**

Finite state automata and sequential machines. Equivalence of states and machines, congruence, reduced machines, analysis and synthesis of machines. Decision problems of finite automata, partitions, semigroups and machines.

*Prereq: 432 Switching Theory.*

**436 Numerical Analysis I. Three sem hours**

Introduces the student to the numerical side of mathematical analysis using the digital computer as a tool. Included is a thorough treatment of solutions of equations, interpolation and approximation, numeric differentiation and integration.

*Prereq: 221 Calculus with Analytic Geometry IV and a computer programming course or permission of department.*

**437 Numerical Analysis II. Three sem hours**

Introduces the student to numerical methods for ordinary and partial differential equations. Experience in using the methods discussed is gained via problems whose solutions are computerized by the students.

*Prereq: 221 Calculus with Analytic Geometry IV and a computer programming course or permission of department.*

**438 Computer Graphics. Three sem hours**

Display memory, generation of points and vectors. Interactive graphics. Analog storage of images. Pattern recognition by features, syntax tables, random nets. Data structures and graphics software. Three-dimensional mathematics. Computer-aided design and instruction and animated movies.

*Prereq: 334 Data Structures. (338 Computer Organization and 431 Systems Programming recommended.)*

**441 College Geometry. Three sem hours**

The triangle, harmonic ranges and pencils, involution, poles and polars, orthogonal circles, the radical axis ratio and the principle of duality. Highly recommended to students who intend to teach.

*Prereq: 220 Calculus with Analytic Geometry III*

**445 Solid Analytic Geometry. Two sem hours**

An introductory course dealing with lines, planes, surfaces, general equations of the second degree, projective quadrics and the application of matrices.

*Prereq: 220 Calculus with Analytic Geometry III*

**446 Synthetic Projective Geometry. Two sem hours**

Elementary study of duality, harmonic sets, perspective projectivity, polarity and conics. Highly recommended to students who intend to teach.

*Prereq: 121 Calculus with Analytic Geometry I*

**470 Introduction to Mathematical Statistics I. Three sem hours**

A study of probability theory; statistical inference; empirical and theoretical frequency distributions of random variables, sampling theory, correlation and regression.

*Prereq: 220 Calculus with Analytic Geometry I*

**471 Mathematical Statistics II. Three sem hours**

A continuation of 470 Introduction to Mathematical Statistics, to include correlation and regression hypotheses, Chi square and other distribution tests.

*Prereq: 470 Introduction to Mathematical Statistics I*

**480 Honors Course in Mathematics. Two sem hours**

The content of this course varies with the individual student. It consists of advanced and/or an individual project of a difficult nature which will be done independently with periodic reports to the instructor.

*Prereq: Completion of the requirements for a 3.5 grade point average in mathematics.*

**491 Special Topics in Mathematics I. Two sem hours**  
 A senior level course in a specific area of mathematics. The area to be studied will be determined by the field of specialization of the staff member teaching the course and the interest of the students enrolled.

*Prereq: Undergraduate grade point average in mathematics 3.0 or above, and permission of the department.*

**492 Special Topics in Mathematics II. Two sem hours**  
 A second course of the type of 491.

*Prereq: 491 Special Topics in Mathematics I, undergraduate*

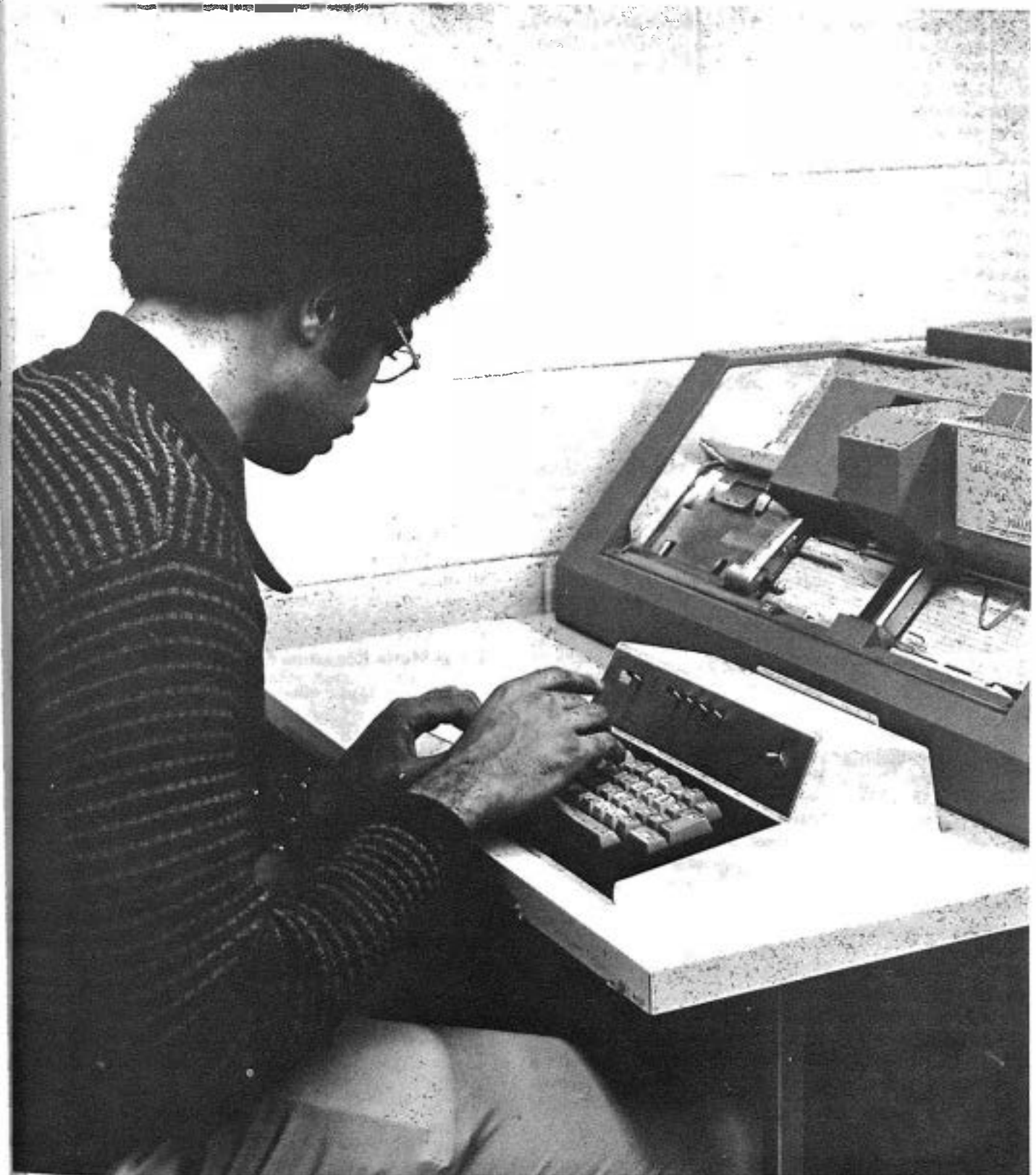
*grade point average in mathematics 3.0 or above, and permission of the department.*

**496 Special Topics in Computer Science.**

**Two sem hours**

This is a course for seniors in computer science. The topics covered will depend upon the interests of the student and the instructor guiding the work. The work will generally consist of a semester project and a final report.

*Prereq: Senior standing in computer science and permission of the department.*



**MUSIC**

**Department Head:** James B. Hause

**Professors:** Edith Borroff, William D. Fitch, Erich P. Goldschmidt, Oscar M. Henry, Maurice I. Laney, Arthur Parris, Maurice W. Riley, Thomas N. Tyra

**Associate Professors:** Armand R. Abramson, O. Blaine Ballard, Edgar E. Dittmore, Daniel R. Eller, John S. Elwell, Ruth G. Fenwick, Joseph Gurt, Marvin C. Howe, Alfio Pignotti, Hershale O. Pyle, Jean S. Sundquist, Edward J. Szabo, Mary Teal

**Assistant Professors:** Alejandra C. Atabug, Carter Eggers, Rachel Harley, Rodney L. Hill, Anthony J. Iannaccone, Elaine R. Jacobson, Sylvan Kalib, Emily B. Lowe, Dady Mehta, Mary E. Phipps, Max E. Plank, Robert Quayle, Charles R. Roe, Mary Ida Yost

**Instructors:** Valija Bumbulis, Frederic W. Moses, John R. Smith, David N. Stewart, Martin J. Zyskowski

The Department of Music offers curriculums leading to the Bachelor of Arts, Bachelor of Music Education, Bachelor of Science and Master of Arts degrees. The individual programs present music in the context of a broad liberal education, prepare vocal and instrumental teachers for elementary and secondary schools, provide individual and group study in all performance media, offer cultural enrichment to students in all departments and provide training necessary to qualify students for concentrated graduate studies and college teaching.

The Department of Music further offers basic training for musicians interested in professional careers as instrumentalists, singers and conductors, as composers and arrangers, music scholars and librarians, and, in collaboration with other departments, work in dance, radio, television and theatre.

The Department of Music is a full member of the National Association of Schools of Music.

Enrollment in any curriculum in music will be determined by the results of instrumental or vocal auditions and theory-placement examinations in musicianship. All new students should write the director of music auditions and scholarships well in advance of their intended registration date to arrange these auditions and examinations. Transfer students may at that time apply for advanced standing in music.

Auditions and examinations will be held during the 1973-1974 academic year on the following days:

<b>Fall Semester</b>	<b>Winter Semester</b>	<b>Summer</b>
November 13, 1973	February 7, 1974	June 12, 1974
	March 29, 1974	

**MUSIC FEE**

All students accepted for private music lessons will be assessed an applied music fee at the following rates:

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

**MAJORS AND MINORS**

**Arts Group Major** (36 semester hours)

See Curriculum, page 144, under College of Education

**Music Major** (Non-teaching: 49 semester hours)

The student will complete the requirements for the Bachelor of Arts degree curriculum, page 34, or the Bachelor of Science degree curriculum, page 34, by including the following 49 semester hour major and a different minor subject of 20 semester hours. In completing either of these curriculums, the student does not earn a teaching certificate.

	Semester Hours
Required courses for a major in music: . . . . .	
101, 102 Music Theory-Literature I, II. . . . .	8
*201, 212 Music Theory-Literature III, IV. . . . .	8
301, 302 History of Music. . . . .	6
401, 402 Music Theory-Literature V, VI. . . . .	4
1X1-1X6 Applied Music (Principal Instrument). . . . .	12
Electives (Department courses for which prerequisites are satisfied). . . . .	11

**Instrumental Music Education Major**

The instrumental music education curriculum leads to teacher certification and a Bachelor of Music Education degree.

Fine arts group requirements are summarized as follows:

	Semester Hours
Basic Music Studies. . . . .	33
Applied Music. . . . .	20
Conducting. . . . .	4
Ensembles. . . . .	8
Electives. . . . .	=

For details of the curriculum see page 153.

**Vocal Music Education Major**

The vocal music education curriculum leads to teacher certification and a Bachelor of Music Education degree.

Fine arts group requirements are summarized as follows:

	Semester Hours
Basic Music Studies. . . . .	26
Applied Music. . . . .	22
Conducting. . . . .	4
Ensembles. . . . .	8
Electives. . . . .	4

For details of the curriculum see page 154.

**Arts Groups Minor** (24 semester hours)

See Curriculum, page 144, under College of Education

**General Music Minor** (Non-teaching: 20 semester hours)

\*Completion of 252 Piano or equivalent is required

Students planning admission to a general music minor should complete the following:

1. An application at the Department of Music Office.
2. Placement tests in applied music and basic musicianship.
3. A course of study worked out with a designated music adviser.

#### **Music Education Minor (24 semester hours)**

Students planning admission to a music education minor should complete the following:

1. An application at the Department of Music Office.
2. Placement tests in applied music and basic musicianship.
3. With a designated music adviser, work out a curriculum to include the necessary courses from music theory, music literature, music education, applied music, conducting and piano.

### GRADUATE STUDY

The Music Department offers graduate work leading to the master's degree in music. For descriptions of graduate courses and programs in the Music Department, please consult the Graduate Catalog.

### COURSES

#### Theory-Literature and History

**1 Music Theory-Literature I. Four sem hours**  
Integrated theory-literature course dealing with perception, writing, analysis and performance of basic musical materials; stylistic comprehension of music of all periods; separate lab in ear training required. *For music majors and minors.*  
*Prereq: Permission of the department.*

**2 Music Theory-Literature II. Four sem hours**  
Continuation of Music Theory-Literature I above.  
*Prereq: 101 Music Theory-Literature I or examination for music majors and minors.*

#### Introduction to the Performing Arts.

**Three sem hours**

Arts of dance, theatre and music are studied both individually and collectively with the objective of determining their respective elements and of arriving at a better understanding and appreciation of the great works of art in the three fields. The place of these arts in our present day environment and their contribution to a richer life receive special emphasis. Attendance required at scheduled on-campus performances. (Music, Physical Education, Speech and Dramatic Arts Departments).  
*Prereq: Non-music majors only.*

#### Music Appreciation.

**Two sem hours**

The purpose of the course is to guide the student in listening to and understanding various types, forms and styles of instrumental and vocal music of the world. Representative works of all periods and cultures, including

contemporary developments, will be studied. Attendance at some concerts and recitals is required.

*Prereq: Non-music majors only.*

#### **201 Music Theory-Literature III. Four sem hours**

Continuation of Music Theory-Literature II with more emphasis on harmonic, melodic and compositional techniques of 19th and 20th centuries; creative writing, ear training, comprehensive analysis of music of all periods.

*Prereq: 102 Music Theory-Literature II and 252 Functional Piano or their equivalents.*

#### **202 Music Theory-Literature IV. Four sem hours**

Continuation of Music Theory-Literature III.

*Prereq: 201 Music Theory-Literature III.*

#### **237 Choral Literature for the School and Church.**

**Two sem hours**

A survey course on choral repertoire for the music educator. This course will embrace literature for junior-senior high school, church and community vocal groups. Selected materials for varied groupings will be examined and performed in class.

*Prereq: Permission of the department.*

#### **301 History of Music. Three sem hours**

A chronological study of Western music in its historical and cultural setting. Includes recognition of idioms, changing sounds, styles and forms of music in Medieval, Renaissance and Baroque periods, approximately through 1750. Each student surveys the history of his instrument.

*Prereq: 202 Music Theory-Literature IV.*

#### **302 History of Music. Three sem hours**

A continued chronological study of Western music in its historical and cultural setting, beginning about 1750. Emphasis similar to 301 History of Music but a strong concentration in contemporary music. Covers Classical, Romantic and present periods.

*Prereq: 301 History of Music.*

#### **317 Music Composition. Two sem hours**

Original writing and analysis of music, beginning with the smaller forms. May be repeated for credit.

*Prereq: 202 Music Theory-Literature IV or permission of the department.*

#### **341 Contrapuntal Techniques. Two sem hours**

Writing in polyphonic forms with concomitant analysis.

*Prereq: 202 Music Theory-Literature IV.*

#### **401 Music Theory-Literature V. Two sem hours**

Integration of previous studies in theory-literature and music history; continued study and analysis of music from all periods; original, creative composition with special emphasis on contemporary style; the study of orchestration with assignments in writing for instruments individually as well as in combination.

*Prereq: 302 History of Music.*

#### **402 Music Theory-Literature VI. Two sem hours**

Continuation of 401 Music Theory-Literature V.

*Prereq: 401 Music Theory-Literature V.*

#### **413 Orchestration. Two sem hours**

Practical work in setting compositions for full orchestra and various other instrumental ensembles.

*Prereq: 202 Music Theory-Literature IV.*

All courses in this minor must have been completed before student teaching in music as a minor field. The methods course must have been taken in the area of teaching desired.

**414 Band Arranging.** **Two sem hours**  
Arranging for band; transcription from other media; original composition; analysis of representative work.  
*Prereq: Senior standing and permission of the department.*

**436 Vocal Repertoire.** **Two sem hours**  
The study of solo song and its literature; emphasis on material relevant to various levels of vocal advancement. Repertoire includes French, German, Italian and English songs representing all musical periods.  
*Prereq: Permission of the department.*

**481 Studies in the Humanities.** **Four sem hours**  
An interdisciplinary approach to arts and ideas. Includes independent studies; flexible scheduling of lectures, discussions and presentations; field trips for direct experiences in the arts, culminating in presentations of individual and group studies to the class. *Does not apply to music major or minor.*  
*Prereq: Junior standing or above.*

### Music Education

**104 Elements of Music.** **Two sem hours**  
Designed to give the grade teacher singing, music reading and theory experience in the elements of music. It acquaints the student with concepts of rhythm and tonality with the aim of developing musical skills and understandings.  
Lecture: two hours per week.  
Laboratory: one hour period per week.

**207 Class Piano.** **Two sem hours**  
Group instruction for beginners in piano to provide the necessary skills for carrying on a music program in the classroom. *For students not specializing in music.*

**208 Class Piano.** **Two sem hours**  
Continuation of 207 Class Piano with emphasis on the functional aspects of piano playing and elementary piano literature. *For students not specializing in music.*  
*Prereq: 207 Class Piano or its equivalent.*

**211 Basic Brass Class.** **One sem hour**  
The teaching and playing of trumpet and trombone. *Majors and minors only.*

**212 Brass Class.** **One sem hour**  
The teaching and playing of French horn, euphonium and tuba. *Majors and minors only.*

**220 Functional Skills on Classroom Instruments.** **Two sem hours**  
Group instruction in developing functional skills on classroom instruments such as the recorder, guitar, ukulele, autoharp, Orff instruments, etc. A survey of instructional materials will be included.  
*Prereq: 104 Elements of Music or equivalent.*

**232 Voice Class.** **One sem hour**  
Special attention is given to improving the singing and speaking voice through the study of breath control, tone production and diction. Not open to students with voice as a principal instrument.  
*Prereq: The ability to read music in the clef appropriate to student's voice classification.*

**235 Diction in Singing.** **Two sem hours**  
The physiological descriptions and laboratory practice

of diction as used in singing.  
*Prereq: Permission of the department.*

**241 Basic Percussion Class.** **One sem hour**  
The teaching and playing of non-melodic percussion instruments. *Majors or minors only.*

**242 Percussion Class.** **One sem hour**  
The teaching and playing of tympani and mallet instruments. *Majors or minors only.*

**261 Basic String Class.** **One sem hour**  
The teaching and playing of violin. *Majors or minors only.*

**262 String Class.** **One sem hour**  
Continuation of 261 Basic String Class and teaching playing of viola.  
*Prereq: 261 Basic String Class.*

**263 String Class.** **One sem hour**  
The teaching and playing of cello and double bass. *Majors and minors only.*

**281 Basic Woodwind Class.** **One sem hour**  
The teaching and playing of clarinet. *Majors and minors only.*

**282 Woodwind Class.** **One sem hour**  
The teaching and playing of flute and saxophone. *Majors and minors only.*

**283 Woodwind Class.** **One sem hour**  
The teaching and playing of oboe and bassoon. *Majors and minors only.*

**320 Early Elementary Music Education.** **Three sem hours**  
A study of materials and teaching techniques in relation to the interests, characteristics and needs of children in the early elementary grades. *Non-majors only.*  
*Prereq: 104 Elements of Music and junior standing.*

**321 Later Elementary Music Education.** **Three sem hours**  
A study of music materials and teaching techniques in relation to the interests, characteristics and needs of children in the later elementary grades. *Non-majors only.*  
*Prereq: 104 Elements of Music and junior standing.*

**322 Music Literature for Children.** **Two sem hours**  
A study of those types, forms and styles of vocal and instrumental music of various periods that are especially appropriate for use with children, as well as effective materials and techniques for directing children's list.  
*Prereq: 104 Elements of Music or its equivalent.*

**330 Music Education in the Elementary School.** **Three sem hours**  
Includes the teaching techniques of care and development of the child voice, rote songs, rhythmic activities, training, listening lessons, creative music, song intonation and classroom instruments. Various music materials designed for grade schools and other materials are included.  
*Prereq: Junior standing. Open to music education and minors only. Completion of 254 Functional Piano or completion of 074 Voice/155 Piano; completion of 202 Music Theory-Literature IV; corequisite 331 Music Theory-Literature IV; satisfactory academic record; faculty approval.*



**331 Music Education in the Secondary School.**

**Three sem hours**

Includes the study of the following topics: care and treatment of adolescent voices; classification and training of voices, song interpretation; organization and administration of all types of choral ensembles; theory, history and literature of music classes; evaluation of numerous materials suitable for choral organizations and other classes in the secondary school; and psychology and philosophy of music education.

*Prereq: Satisfactory completion of 330 Music Education in the Elementary School and junior standing. Open to music education majors and minors only.*

**32 Instrumental Music in the Public Schools.**

**Four sem hours**

Designed to prepare students to teach instrumental music; covers organization of beginning classes, special problems of strings, selection of suitable materials, techniques of teaching, public relations and other areas of interest in the development of orchestras and bands. Special emphasis placed on music for grades four through nine.

*Prereq: Junior standing. Open only to instrumental music education majors.*

**333 Orchestral Methods.**

**Two sem hours**

Designed to assist students in their preparation as orchestra directors; covers special problems relevant to the string orchestra, string ensembles, and to the string curriculum in the secondary schools.

*Prereq: 332 Instrumental Music in the Public Schools and junior standing. Open only to instrumental music majors.*

**334 Band Methods.**

**Two sem hours**

Designed to assist students in their preparation as band directors in secondary schools; covers charting and drills for marching band; rehearsal procedures and selection of suitable materials for the concert band.

*Prereq: 332 Instrumental Music in the Public Schools and junior standing. Open only to instrumental music education majors.*

**492 Student Teaching.**

**Eight sem hours**

Admission to student teaching requires satisfactory completion of specified curriculums as well as faculty approval through a screening exam. Details are contained in "Statement of Policy Concerning Standards for Admission to Student Teaching in Music" available from the Music Adviser of Student Teaching.

**495 Student Teaching.**

**Four sem hours**

admission requirements under 492 Student Teaching.

**496 Student Teaching.**

**Four sem hours**

*req: 495 Student Teaching in music.*

**Music Honors**

**Honors Course in Music.**

**Two sem hours**

designed for superior students with the opportunity for an intensive program of independent study, original composition, performance or research.

*req: Senior standing, cumulative average of 3.5 in 3.2 in general studies. Regulations governing honors courses must be followed. (see page 19.)*

**Recitals**

Each semester in residence the student will be expected to participate in student recitals. These performances may take place in studio classes, informal departmental recitals, or, where the special qualifications are met, in public recitals.

A senior recital will be presented before a faculty committee. Ensemble music may be included on the programs. In such event the recitalist must have a principal solo role in the music performed. *Approval of senior programs for public performance will rest with the committee's recommendation.*

*All public recitals are subject to prior review and approval by a faculty committee.*

**Applied Music**

Students who do not qualify by audition for admission to a curriculum in music may, at the discretion of the department, be assigned preparatory work (Music IXO) until ready for university applied music study. It should be understood that delayed admission as a departmental major may extend the time normally required to satisfy graduation requirements.

Transfer students may be granted credit for applied music study accomplished at another institution or with a recognized private teacher. Eligibility for credit will be determined by audition. Prior study with a private teacher must be confirmed by a statement from that teacher to be presented at the audition. A course of study designed to satisfy Department of Music graduation requirements will be recommended at that time.

At the time of admission to a music curriculum, students with piano as a secondary instrument must demonstrate the required level of proficiency for graduation in their chosen curriculum, or elect piano every semester until the required proficiency is attained.

**Principal Instruments**

**1X0 series**—For the student who requires additional preparation in his principal instrument before entering regular freshman level work. Credit: one hour per semester, which cannot apply toward graduation requirements in either music major or music minor curriculums.

**1X1 series**—Lower level work. Credit: two hours per semester for music majors. May be repeated for credit.

**1X5 series**—Upper level work. Credit: two hours per semester for music majors. May be repeated for credit.

**110 Applied Music (Brass) One sem hour**

**111 Applied Music (Brass) Two sem hours**

**115 Applied Music (Brass) Two sem hours**

**120 Applied Music (Organ) One sem hour**

**121 Applied Music (Organ) Two sem hours**

**125 Applied Music (Organ) Two sem hours**

**140 Applied Music (Percussion) One sem hour**

**141 Applied Music (Percussion) Two sem hours**

**145 Applied Music (Percussion) Two sem hours**

**150 Applied Music (Piano) One sem hour**

**151 Applied Music (Piano) Two sem hours**

**155 Applied Music (Piano) Two sem hours**



- \*160 Applied Music (Guitar) One sem hour  
 \*161 Applied Music (Guitar) Two sem hours  
 \*165 Applied Music (Guitar) Two sem hours  
 160 Applied Music (Harp) One sem hour  
 161 Applied Music (Harp) Two sem hours  
 165 Applied Music (Harp) Two sem hours  
 160 Applied Music (Strings) One sem hour  
 161 Applied Music (Strings) Two sem hours  
 165 Applied Music (Strings) Two sem hours  
 170 Applied Music (Voice) One sem hour  
 171 Applied Music (Voice) Two sem hours  
 175 Applied Music (Voice) Two sem hours  
 180 Applied Music (Woodwinds) One sem hour  
 181 Applied Music (Woodwinds) Two sem hours  
 185 Applied Music (Woodwinds) Two sem hours

The Bachelor of Music Education degree requires 16 credit hours of work on the principal applied music instrument, to be earned through the 1X1 and 1X5 series. Four of the sixteen hours must be completed in upper level studies (1X5 series). Students are admitted to the 1X1 series level at different degrees of competency, therefore some students will require more time to achieve the proficiency needed for admission to the 1X5 series level. Students at 1X1 series level will be permitted to repeat the last semester of the 1X1 series for credit for a maximum of two semesters. Permission to move to 1X5 series level may be given by the faculty jury with the permission of the teacher. Instrumental music education majors enrolled in applied music will be formed into appropriate small ensembles at the discretion of the applied teacher. The total number of hours spent each week in lessons and small ensembles will be limited to the number of credit hours given.

### Secondary Instruments

0X1 series - For music minors. Credit: one hour per semester. May be repeated for credit.

- 011 Applied Music (Brass) One sem hour  
 021 Applied Music (Organ) One sem hour  
 041 Applied Music (Percussion) One sem hour  
 051 Applied Music (Piano) One sem hour  
 061 Applied Music (Guitar) One sem hour  
 061 Applied Music (Harp) One sem hour  
 061 Applied Music (Strings) One sem hour  
 071 Applied Music (Voice) One sem hour  
 081 Applied Music (Woodwinds) One sem hour

**\*\*251 Functional Piano. One sem hour**  
 A required course for all music majors and minors with no previous piano experience. Embraces a knowledge of keyboard skills necessary both for accompaniment of simple music and for developing musical understanding basic to all course work in music. *Majors or minors only.*

*\*Does not qualify as principal instrument in Bachelor of Music Education curriculums. Acceptable for Bachelor of Arts or Bachelor of Science degree with major in music.*

*\*\*Any break in the continuity of Functional Piano courses will require an audition before resumption of study.*

**\*\*252 Functional Piano. One sem hour**  
 Continuation of 251 Functional Piano.  
*Prereq: 251 Functional Piano or its equivalent.*

**\*\*253 Functional Piano. One sem hour**  
 Continuation of 252 Functional Piano. Stresses keyboard harmony, accompaniment; sight-reading, piano literature and technique.  
*Prereq: 252 Functional Piano or its equivalent.*

**\*\*254 Functional Piano. One sem hour**  
 Continuation of 253 Functional Piano. Additional accompaniment experience, keyboard harmony, improvisation, piano literature and techniques.  
*Prereq: 253 Functional Piano or its equivalent.*

**326 Conducting. Two sem hours**  
 Fundamentals of baton technique, score reading and interpretation of instrumental and vocal music.  
*Prereq: Junior standing, music major or minor.*

**327 Instrumental Conducting. Two sem hours**  
 A practical course in instrumental conducting; score preparation, baton technique, study of technical and musical problems in conducting traditional and contemporary works.  
*Prereq: 326 Conducting.*

**328 Choral Conducting. Two sem hours**  
 A practical course in choral conducting; baton technique, score analysis, study of technical and musical problems in conducting traditional and contemporary works.  
*Prereq: 326 Conducting.*

### Large Ensembles

**131 University Choir. One sem hour**  
 An ensemble of advanced singers. Open to all students in the University.  
*Prereq: Permission of the department.*

**134 University Women's Chorus. One sem hour**  
 Open to all women students.  
*Prereq: Permission of the department.*

**135 University Men's Chorus. One sem hour**  
 Open to all men students.  
*Prereq: Permission of the department.*

**136 Madrigal Ensemble. One sem hour**  
 Chamber music for mixed voices. Open to all students.  
*Prereq: Permission of the department.*

**248 Orchestra. One sem hour**  
 Open to all students in the University.  
*Prereq: Permission of the department.*

**249 Band. One sem hour**  
 Open to all students in the University. Enrollment Band requires attendance for the entire semester. Students electing 249 Band may also elect Physical Education 140 Marching Band for two hours activity.

**350 Contemporary Chamber Ensemble. One sem hour**  
 Various mixed ensembles of soloists. Devote performance of twentieth-century music, especially fifteen years. Compositions require performers instruments, solo voices, and, on occasion, electronic music.  
 Open to all qualified musicians.  
*Prereq: Permission of the department.*

**351 Collegium Musicum. One sem hour**  
 Various ensembles of soloists—instrumental, vocal and mixed. Opportunity to perform old and new music infrequently heard. Open to all qualified students.  
*Prereq: Permission of the department.*

**448 Opera Workshop. One sem hour**

**449 Opera Workshop. Two sem hours**

**450 Opera Workshop. Three sem hours**  
 A laboratory-performance course which will deal with performance of opera scenes and, when feasible, complete works. The musical, technical and dramatic aspects of production will be stressed.  
*Prereq: Permission of the department.*

**451 Vocal and Instrumental Accompanying. Two sem hours**

Provides pianists with experience in accompanying singers and instrumentalists through acquisition of basic skills and repertoire. Course may be repeated for credit.  
*Prereq: Audition.*

**150 Marching Band (150). Two sem hours**  
*(See Physical Education)*

**Small Ensembles**

Small ensemble experience for instrumentalists is provided in conjunction with applied music courses beginning September 1, 1971.

These courses are available to the non-major by permission of the department.

**245 Brass Ensemble. One sem hour**  
 Chamber music for brass. Open to all students.  
*Prereq: Permission of the department. Non-major only.*

**246 String Ensemble. One sem hour**  
 Chamber music for strings. Open to all students.  
*Prereq: Permission of the department. Non-major only.*

**247 Woodwind Ensemble. One sem hour**  
 Chamber music for woodwinds. Open to all students.  
*Prereq: Permission of the department. Non-major only.*



## PHYSICS AND ASTRONOMY

**Department Head:** James M. Barnes

**Professors:** Charles B. Breedlove, Walter L. Gessert, Fred T. Johnson, Adolph P. Loeber, Karl A. Parsons, Robert Silver

**Associate Professors:** James C. Porter, Clinton E. Thomas

**Assistant Professors:** Jean R. Moore, Richard F. Roth, Jon K. Wooley

**Instructor:** P. Daniel Trochet

### PHYSICS

#### Research "R" Major

The research major provides the necessary background for those planning to become professional physicists. The requirements listed below insure adequate depth and breadth of subject matter and experience in both theoretical and experimental physics and in mathematics. Students successfully completing this major are prepared to enter technical positions in government or industrial research or to undertake graduate study in physics. Further work on the graduate level is highly recommended for those capable of doing it.

Required courses for the "R" major in physics (36 semester hours):

	Semester Hours
223 Mechanics, Sound and Heat. . . . .	5
224 Electricity and Light. . . . .	5
430 Intermediate Mechanics I. . . . .	3
450 Electricity and Magnetism. . . . .	4
475 Intro to Quantum Mechanics. . . . .	3
Three of the following laboratory courses:	3-12
272 Modern Physics Laboratory. . . . .	1
432 Mechanics Laboratory. . . . .	1
442 Optics Laboratory. . . . .	1
452 Electrical Measurements. . . . .	4
456 Electronics for Scientists. . . . .	4
471 Nuclear Physics. . . . .	4
417 Undergraduate Research or	
490 Special Problems (Honors Course). . . . .	2
Electives in Physics. . . . .	11-2
<b>Total. . . . .</b>	<b>36</b>

#### Additional Requirements:

120 Calculus and Analytic Geometry I. . . . .	4
121 Calculus and Analytic Geometry II. . . . .	4
220 Calculus and Analytic Geometry III. . . . .	4
221 Calculus and Analytic Geometry IV. . . . .	4
Two of the following five courses:	
320 Differential Equations. . . . .	3
423 Elements of Functions of a Complex Variable. . . . .	3
*425 Mathematics for the Scientist I. . . . .	3
426 Mathematics for the Scientist II. . . . .	3
436 Numerical Analysis. . . . .	3

*See also Additional Physics Requirements below.*

#### Synthesis "S" Major

The synthesis major is provided for students who plan to teach physics in a secondary school, who desire a general cultural education with an emphasis on physics, who are preparing for work in another field such as pre-medicine or pre-law or who are interested in combining

physics with an allied field such as biology, chemistry, astronomy or geology or with the field of business. A maximum of six semester hours of designated astronomy courses may be included among the electives on this major.

Required courses for the "S" major in physics (30 semester hours):

223 Mechanics, Sound and Heat. . . . .	5
224 Electricity and Light. . . . .	5
270 Introduction to Modern Physics. . . . .	3
430 Intermediate Mechanics I. . . . .	3
Three of the following laboratory courses:	
272 Modern Physics Laboratory. . . . .	1
*320 Physics Laboratory Techniques. . . . .	2
432 Mechanics Laboratory. . . . .	1
442 Optics Laboratory. . . . .	1
452 Electrical Measurements. . . . .	4
456 Electronics for Scientists. . . . .	4
471 Nuclear Physics. . . . .	4
Electives in Physics and Astronomy. . . . .	11-2
<b>Total. . . . .</b>	<b>30</b>

#### Additional Requirements:

120 Calculus and Analytic Geometry I. . . . .	4
121 Calculus and Analytic Geometry II. . . . .	4
220 Calculus and Analytic Geometry III. . . . .	4

*See also Additional Physics Requirements below.*

#### Applied Science Major (see page 36)

#### Minor

	Semester Hours
Required courses for a minor in physics (20 semester hours):	
223 Mechanics, Sound and Heat. . . . .	5
224 Electricity and Light. . . . .	5
270 Introduction to Modern Physics. . . . .	3
One of the following laboratory courses:	1-4
272 Modern Physics Laboratory. . . . .	1
432 Mechanics Laboratory. . . . .	1
442 Optics Laboratory. . . . .	1
452 Electrical Measurements. . . . .	4
456 Electronics for Scientists. . . . .	4
471 Nuclear Physics. . . . .	4
Electives in Physics. . . . .	6-3
<b>Total. . . . .</b>	<b>20</b>

#### Additional Requirements:

120 Calculus and Analytic Geometry I. . . . .	4
121 Calculus and Analytic Geometry II. . . . .	4

*See also Additional Physics Requirements below.*

#### Additional Physics Requirements

All students who are completing a physics major (in physical science) are required to attend Physics Seminar for at least two semesters during their junior and senior years without credit. Physics Seminar meets eight times each semester.

Students who change their curriculum to a physics major or minor after completing 221 Mechanics, Sound

*\*Prospective teachers who are pursuing a junior-senior high school curriculum with a major in physics must complete 320 Physics Laboratory Techniques.*

Heat and 222 Electricity and Light may request the department to approve substitution of these courses for 223 Mechanics, Sound and Heat and 224 Electricity and Light. The total number of hours required for a major or minor is not reduced by this substitution. Transfer students who are majoring in physics or physical science must take a minimum of six semester hours in this department; those minorng must take a minimum of three semester hours.

Physics majors and physical science majors who are candidates for teachers' certificates will take 325 Methods of Science Teaching in addition to the requirements of the major.

**Physical Science Major**

**Combined group major in physical science (astronomy, chemistry, mathematics, physics) with required cognate minor in astronomy, chemistry or mathematics.**

This major-minor combination is provided to prepare students for teaching the physical sciences at the secondary level. Students will complete 56 hours in the four areas (60 hours if the minor is in astronomy) that are so distributed as to fulfill the minimum requirements for a 20-hour minor in chemistry or mathematics, or a 24-hour minor in astronomy. A 36-hour group major must be completed from the four areas, but no course may be counted in both major and minor areas.

The following courses must be included in the 56-60 hour program:

	Semester Hours
120 Calculus and Analytic Geometry I. . . . .	4
121 Calculus and Analytic Geometry II. . . . .	4
131 General Chemistry I. . . . .	4
132 General Chemistry II. . . . .	3
180 Chemical Laboratory and Techniques. . . . .	2
221 or 223 Mechanics, Sound and Heat. . . . .	4-5
222 or 224 Electricity and Light. . . . .	4-5
270 Introduction to Modern Physics. . . . .	3
304 Astronomy for Science Students. . . . .	4
320 Physics Laboratory Techniques for Teachers . . . . .	2
One of the following laboratory courses: . . . . .	1-4
272 Modern Physics Laboratory. . . . .	1
432 Mechanics Laboratory. . . . .	1
442 Optics Laboratory. . . . .	1
452 Electrical Measurements. . . . .	4
456 Electronics for Scientists. . . . .	4
471 Nuclear Physics. . . . .	4
Electives chosen from Physics 300 and above to complete 20 hours of Physics . . . . .	6-1

Required Cognate Minor  
Regular minor in chemistry, mathematics  
or astronomy. . . . . 20-24

All electives must be approved by the adviser.  
See also Additional Physics Requirements above.

**GENERAL SCIENCE**

**Combined group major in general science and required cognate minor in biology, chemistry, geography, mathematics or physics.**

The student will complete a minimum of 56 semester hours in the above five areas of science, so distributed to fulfill the minimum requirements for a 20-hour minor

in one of the five areas and a 36-hour group major composed of courses from the other four areas. If planning to teach, he will take in addition an appropriate methods course. The selection of all the courses to fulfill these requirements must be approved by the head of the department in which the student proposes to minor, and no course not so approved shall be counted toward meeting these requirements for graduation.

The following required courses must be included within the 56 semester hours of this program:

	Semester Hours
*107 Trigonometry. . . . .	2
*105 Higher Algebra . . . . .	3
**105 Biological Science. . . . .	4
108 Earth Science. . . . .	4
131 General Chemistry I. . . . .	4
180 Chemistry Laboratory Techniques. . . . .	2
221 Mechanics, Sound and Heat. . . . .	4
222 Electricity and Light. . . . .	4
223 Weather and Climate. . . . .	3
224 Conservation. . . . .	4
304 Introductory Astronomy for Science Students . . . . .	4

The student who completes this program will be well prepared to teach general science plus his minor, and can, by careful selection of electives on the group major, meet the North Central Association minimum requirements of ten semester hours in one or more additional sciences. After graduation and provisional certification, the required election of ten additional semester hours to qualify for the permanent certificate may be used to raise the subject area minor to a major, or to develop one or more additional subject areas into certifiable minors.

**Combined group minor in general science and major in biology, chemistry, geography, mathematics or physics.**

The student may instead qualify for a 30-hour major in one science and a group minor in the other four science areas. In such case he shall apply the basic course in the major field to count on the major, and the group minor shall consist of the remaining required courses from the above list. This program may require the completion of as many as 60 semester hours of science, or possibly more in case of a physics major not well prepared in mathematics.

Twenty-four hours must be completed to meet North Central Association requirements (24) for teaching this minor at the junior-senior high level. The methods may be included in this total.

**GRADUATE STUDY**

The Physics and Astronomy Department offers graduate work leading to the master's degrees in physics and general science. For descriptions of graduate courses and programs in the Physics and Astronomy Department, please consult the Graduate Catalog.

\*Students exempted from either mathematics course will elect instead an equivalent amount of more advanced mathematics.

\*\*Students exempted from 105 Biological Science will take instead either 221 General Botany or 222 General Zoology.

## COURSES

**100 Science for Elementary Teachers. Three sem hours**

This course is designed to stimulate interest in science by the use of simple and inexpensive equipment to demonstrate scientific principles. The course includes such topics as sound, light, heat, electricity and magnetism. *This course does not count towards a physics major or minor.*

*Prereq: Participation in the elementary teacher education project.*

**110 Physical Science I. Four sem hours**

This course is for those who are curious about the universe around them. Lectures and laboratory work show the value to the general student of the physical scientist's particular way of examining, describing and thinking about nature. No previous mathematics or science is required. The topics used to illustrate scientific thought and illuminate natural phenomena include: motion, mass and force, relativity, theory building, kinetic theory of heat, evidence for the existence of the atom, electromagnetic phenomena. Students in science, medicine or engineering, and those who have had high school physics, should take physics courses 221-222 or 223-224. *This course does not count toward a physics major or minor.* Four lectures and one laboratory period per week.

**112 Physical Science II. Four sem hours**

A continuation of 110 Physical Science. Continued exploration in lecture and laboratory of methods used by scientists in examining and describing physical phenomena, including: waves in various media, electrical forces and currents, the electromagnetic spectrum, the photon, the electron, the atom, the atomic nucleus. The laboratory will illustrate and exemplify the phenomena and encourage exploration by allowing students to follow a special interest as a project. Four lectures and one laboratory period per week.

*Prereq: 110 Physical Science. This course does not count toward a physics major or minor.*

**210 Musical Acoustics. Two sem hours**

For students with a major interest in music. The physical bases of sound production, transmission and reception will be outlined and demonstrated. Applications to topics such as intervals, temperament, acoustics of rooms and tone production in the various types of musical instruments will be considered. *This course does not count on a physics major or minor.*

**211 Elementary Physical Science. Three sem hours**

Designed particularly for teachers in both early and later elementary science. A study will be made, at an elementary level, of common machines, weather, matter, energy, heat, sound, light, magnetism and electricity. Individual student activity in the working out of simple experimental projects, followed by class discussions, will constitute a major part of the course. Most of the apparatus will be made from materials available in the home or at a variety store. *This course does not count on a physics major or minor.*

**221 Mechanics, Sound and Heat. Four sem hours**

A basic course in college physics intended for those liberal arts students who desire an introduction to physics and for

those pre-professional students who do not require a rigorous knowledge of problem solving. All students desiring physics as a major subject of study and all pre-engineers must elect 223 Mechanics, Sound and Heat. This course deals with the same laws of mechanics, sound and heat as are treated in Physics 223, but will place more emphasis on applications and somewhat less on problems. Laboratory: two consecutive hours, one day per week.

*Prereq: 107 Trigonometry and 105 Higher Algebra II, or a "B" average in high school mathematics through trigonometry.*

**222 Electricity and Light. Four sem hours**

A continuation of 221 Mechanics, Sound and Heat. A study is made of static and current electricity, of magnetism and of light. Laboratory: two consecutive hours one day per week.

*Prereq: 221 Mechanics, Sound and Heat.*

**223 Mechanics, Sound and Heat. Five sem hours**

A basic course in college physics intended for students majoring in physical science and those on a pre-engineering curriculum. Deals with laws of mechanics, sound and heat together with their application. Laboratory: two consecutive hours, one day per week.

*Prereq: 120 and 121 Calculus with Analytic Geometry I and II. (121 may be taken concurrently.)*

**224 Electricity and Light. Five sem hours**

A continuation of 223 Mechanics, Sound and Heat. A study is made of static and current electricity, of magnetism, and of light. Laboratory: two consecutive hours one day per week.

*Prereq: 223 Mechanics, Sound and Heat.*

**229 Strength and Elasticity of Materials. Four sem hours**

The fundamental principles of mechanics are applied to engineering problems involving stress and strain, including tension, torsion, shear, bending deflection of beams, theory of columns and strain energy.

*Prereq: 231 Statics, 223 Mechanics, Sound and Heat. This course does not count on a physics major or minor.*

**270 Introduction to Modern Physics. Three sem hours**

An introduction to modern physics and relativity using the qualitative interpretation, according to the modern quantum theory, of experimental results in atomic and nuclear physics.

*Prereq: 222 or 224 Electricity and Light.*

**272 Modern Physics Laboratory. One sem hour**

A laboratory course providing experimental studies in such areas as late classical, relativistic, quantum and clear physics. Three hours of laboratory per week.

*Prereq: 270 Introduction to Modern Physics, which may be taken concurrently.*

**320 Physics Laboratory Techniques. Two sem hours**

Easily available or inexpensive laboratory materials will be used to provide laboratory-centered instruction in physics for prospective teachers. Laboratory: six hours per week.

*Prereq: 221 Mechanics, Sound and Heat and 222 Electricity and Light, or equivalent. Open only to those pursuing teaching curriculums. Required of prospective teachers on the junior-senior high school curriculum who are physics or physical science majors.*



**325 Methods in Science Teaching.** **Two sem hours**  
Devoted to a study of classroom technique and methods of presentation of the subject matter of junior and senior high school science, including practice in the preparation and presentation of demonstrations illustrating scientific facts and principles. *Students majoring or minoring in any of the sciences are eligible for this course.*

**390, 391 Physics Project.** **Two sem hours**  
A suitable project in physics is to be done on an individual basis. Arrangements must be made with a physics staff member before the beginning of the semester.  
*Prereq: Permission of the department.*

**417 Undergraduate Research Laboratory.** **Two sem hours**  
Laboratory work of a research nature is done under the direction of a staff member working on a research problem. One problem will extend through the semester, with a comprehensive report required. Six hours are to be spent in the laboratory each week. Arrangements must be made with the department before the beginning of the semester. *Open to seniors nearing completion of a physics major.*  
*Prereq: Permission of the department.*

**430 Intermediate Mechanics I.** **Three sem hours**  
*This course is a replacement of 232 Dynamics.*  
The statics and dynamics of a particle, projectiles with air resistance, central forces, dynamics of a system of particles, vibrational motion and pendulums.  
*Prereq: 224 Electricity and Light, 121 Calculus with Analytic Geometry II.*

**431 Intermediate Mechanics II.** **Three sem hours**  
A continuation of 430 Intermediate Mechanics I. Mechanics of a rigid body, generalized coordinates, the Lagrangian and Hamiltonian functions, relative motion.  
*Prereq: 430 Intermediate Mechanics I, 220 Calculus with Analytic Geometry III.*

**432 Mechanics Laboratory.** **One sem hour**  
A laboratory course providing experimental studies in intermediate mechanics. Three hours of laboratory per week.  
*Prereq: 430 Intermediate Mechanics I.*

**436 Vibration and Sound.** **Three sem hours**  
Detailed studies of vibration and wave motion are made with specific emphasis on acoustic waves in air and other media. Other topics considered: reflection, refraction and interference of sound; vibrating strings and air columns; electro-acoustic transducers; architectural acoustics.  
*Prereq: 221 or 223 Mechanics, Sound and Heat, 222 or 224 Electricity and Light, 221 Calculus with Analytic Geometry IV.*

**440 Optics.** **Three sem hours**  
An intermediate course dealing with fundamentals of geometrical and physical optics. Some topics considered are: reflection, refraction, lenses and optical instruments, spectroscopes and spectra, interference, diffraction and polarization.  
*Prereq: 221 or 223 Mechanics, Sound and Heat, 222 or 224 Electricity and Light, 121 Calculus with Analytic Geometry II.*

**441 Modern Optics.** **Three sem hours**  
A course dealing with those aspects of physical and quantum optics which are essential for the quantitative descrip-

tion of modern optical technology such as lasers and holography. Emphasis is on physical optics. Topics covered include: application of Fourier Transform to diffraction, holography, Fresnel reflection coefficients, propagation of light in crystals, coherence and partial coherence and lasers.

*Prereq: 440 Optics, 221 Calculus with Analytic Geometry IV.*

**442 Optics Laboratory.** **One sem hour**  
A laboratory course providing experimental studies in geometrical, physical and quantum optics. Three hours of laboratory per week.  
*Prereq: 440 Optics, which may be taken concurrently.*

**450 Electricity and Magnetism.** **Four sem hours**  
An intermediate course in the classical theory of electricity and magnetism which develops the concept of electric and magnetic fields from the historical force laws of Coulomb and Ampere and which culminates with the formulation of Maxwell's Equations. Among the topics discussed are Gauss' Law, conductors, dielectrics, magnetic susceptibility, magnetic fields of currents, Faraday's Law of Induction and electromagnetic forces.  
*Prereq: 221 or 223 Mechanics, Sound and Heat; 222 or 224 Electricity and Light; 221 Calculus with Analytic Geometry IV.*

**452 Electrical Measurements.** **Four sem hours**  
An intermediate course in electricity. The classroom work covers the fundamental principles involved in measuring electric and magnetic quantities. In the laboratory the student acquires experience in the use of high grade electrical apparatus. The experiments include studies of galvanometers, Wheatstone bridges of various forms, potentiometers and standard cells, vacuum tubes, magnetic measurements and methods of measuring capacitance and inductance. Laboratory: four consecutive hours, one day per week.  
*Prereq: 221 or 223 Mechanics, Sound and Heat; 222 or 224 Electricity and Light.*

**456 Electronics for Scientists.** **Four sem hours**  
Treats non-communication theory and applications of vacuum tube and semi-conductor diodes and amplifying elements and related devices. In the laboratory, tube and transistor characteristics are studied together with circuits and instruments employing these elements. Laboratory: three consecutive hours, one day per week.  
*Prereq: 221 or 223 Mechanics, Sound and Heat; 222 or 224 Electricity and Light.*

**460 Heat and Thermodynamics.** **Three sem hours**  
An intermediate course in the fundamentals of heat and thermodynamics. Topics considered are: thermal expansion, specific heat, change of state, heat transfer, elementary kinetic theory, thermodynamic laws, entropy and other thermodynamic functions.  
*Prereq: 221 or 223 Mechanics, Sound and Heat; 222 or 224 Electricity and Light; 221 Calculus with Analytic Geometry IV.*

**462 Kinetic Theory and Statistical Mechanics.** **Three sem hours**  
An introduction to the kinetic theory of gases and statistical mechanics, rigorous enough to satisfy the needs of



students concentrating in physics and of those contemplating advanced study in related fields of science and engineering. The principal topics are the Maxwell-Boltzman distribution law, entropy and probability, transport phenomena, quantum statistics, Bose-Einstein and Fermi-Dirac statistics, the connection between statistical mechanics and thermodynamics, the equation of state, the elementary electron theory of metals and statistical methods in nuclear physics.

*Prereq: 224 Electricity and Light; 220 Calculus with Analytic Geometry III.*

**470 Atomic Physics. Three sem hours**

Electronic charge and mass, electron dynamics and relativity, quantum theory of radiation and specific heats, x-rays and crystal structure, atomic spectra and electron distribution, complex spectra, wave mechanics, solid state physics.

*Prereq: 221 or 223 Mechanics, Sound and Heat; 222 or 224 Electricity and Light; 121 Calculus with Analytic Geometry II.*

**471 Nuclear Physics. Four sem hours**

Radioactivity, scintillations, counters, cloud chambers, particle accelerators, transmutation of the elements, waves and particles, fission, fusion, stellar energies, nuclear reactors, cosmic rays, nuclear forces. Laboratory: two consecutive hours, one day per week.

*Prereq: 221 or 223 Mechanics, Sound and Heat; 222 or 224 Electricity and Light; 121 Calculus with Analytic Geometry II.*

**475 Introduction to Quantum Mechanics. Three sem hours**

This course will develop the fundamental ideas of the quantum theory; the dual nature of matter, wave equations and wave packets, observable and linear operators, the application of the Schroedinger and Heisenberg equations to elementary systems, Pauli's theory of electron spin.

*Prereq: 224 Electricity and Light; 220 Calculus with Analytic Geometry III.*

**476 Solid State Physics. Three sem hours**

An introduction to the principles and phenomena associated with the solid state: crystal structure, lattice waves, free electron model, band theory, properties of solids, imperfections.

*Prereq: 450 Electricity and Magnetism, 475 Introduction to Quantum Mechanics.*

**481 Mathematical Physics. Three sem hours**

Advanced mathematical topics selected for their importance for the physics student, with applications drawn from the field of physics. Vectors, matrices, tensors, partial differential equations, contour integration, calculus of variations, integral equations and transforms, eigenvalue functions, perturbation and group theory, special functions.

*Prereq: 221 Calculus with Analytic Geometry IV; 224 Electricity and Light.*

**490, 491 Special Problems (Honors Courses). Two sem hours**

An original experimental or theoretical problem in some area of physics is to be investigated on an individual basis. Arrangements must be made with a staff member

before the beginning of the semester.

*Prereq: 20 semester hours of physics, a "B" average in physics and permission of the department.*

**495 Readings in Physics (Honors Course). One sem hour**

Designed to give individual students a planned intensive reading program in some field of physics, the subject being chosen jointly by the student and the instructor. A part of this course will be the presentation of an hour-long talk in the chosen subject at an open meeting of the Physics Department staff and students.

*Prereq: 20 semester hours of physics and permission of the department.*

**ASTRONOMY**

**Astronomy Group Minor (24 semester hours)**

This minor is designed to give the interested student a basic knowledge of astronomy and related fields. It is recommended that students wishing to undertake graduate work in astronomy complete an "R" major in physics with a minor in either mathematics or astronomy. Electives used to fulfill the astronomy minor cannot be used to complete any other major or minor.

	Semester Hours
Required courses. . . . .	24
304 Introductory Astronomy for Science Students . . . . .	4
402 Advanced General Astronomy. . . . .	3
403 Practical Astronomy. . . . .	4
Electives approved by the Department of Physics and Astronomy in physics, astronomy, mathematics (above 200) or chemistry. . . . .	13

*Non-physics majors must include 223 Mechanics, Sound and Heat and 224 Electricity and Light among these electives.*

**Courses**

**303 Introduction to Astronomy. Three sem hours**

An astronomy course for students of any curriculum. The purpose of the course is to acquaint the student with the general field of astronomy. Topics discussed include the history of astronomy, the solar system, nebulae, stars and stellar systems. Evening observations with telescopes and a study of constellations are an integral part of this course. *This course does not count on a physics major or minor.*

**304 Introductory Astronomy for Science Students. Four sem hours**

The aim of this course is to acquaint the student with the science of astronomy. Special attention is given to techniques and related sciences used by astronomers. Evening laboratory sessions involving telescopic and naked-eye observations are an important part of this course. Not open to students with credit in 303 Introductory Astronomy. *This course may count on an "S" physics major.*

**401 Celestial Mechanics. Two sem hours**

A course designed for science and mathematics majors treating the kinematics and dynamics of bodies in geocentric, heliocentric and astrocentric orbit. Special attention is given to the two body problems and so consideration is given to the problem of perturbation.

may count on an "S" physics major.

*Prereq:* 304 *Introductory Astronomy for Science Students*. 223 *Mechanics. Sound and Heat.*

**402 Advanced General Astronomy. Three sem hours**  
A course for science and mathematics majors treating in a more rigorous fashion topics introduced in 304 Astronomy. Some topics considered are: the two body problem, binary stars, the determination of stellar distances, proper motions and masses, astronomical spectroscopy, solar physics. *This course may count on an "S" physics major.*

*Prereq:* 304 *Introductory Astronomy for Science Students*. 221 *Mechanics. Sound and Heat; plus 120 and 121 Calculus with Analytic Geometry I and II or 223 Mechanics. Sound and Heat.*

**403 Practical Astronomy. Four sem hours**  
A course for science and mathematics majors treating

such problems as: the analysis of observational data, determination of time and position on the earth. Astronomical observations with telescopes, sextants and the EMU meridian circle are an integral part of this course. *This course may count on an "S" major in physics.* Laboratory: three hours per week.

*Prereq:* 304 *Introductory Astronomy for Science Students*. 120 and 121 *Calculus with Analytic Geometry I and II.*

**408, 409 Astronomy Project. Two sem hours**  
A project in some area of astronomy is to be done on an individual basis. Arrangements must be made with an appropriate staff member before the beginning of the semester. Laboratory: six hours per week.

*Prereq:* 304 *Astronomy or permission of the department.*



## POLITICAL SCIENCE

Department Head: James S. Magee

Professors: Robert O. McWilliams, Samuel R. Solomon

Associate Professors: Benjamin T. Hourani, Marjorie J. Lansing, Barnabas A. Racz, Leonas Sabaliunas, Hisham M. Sabki

Assistant Professors: Thomas L. Brewer, Robert C. Grady, David W. Hortin, James D. Johnson, Karen E. Lindenberg, Charles M. Monsma, James W. Pfister

Instructor: Casimir A. Bobinski

### MAJOR AND MINOR

Major (30 semester hours)

	Semester Hours
Required courses: . . . . .	30
112 American Government. . . . .	3
202 State and Local Government. . . . .	3
210 Comparative Political Analysis or	
211 European Political Systems. . . . .	3
358 Political Parties and Pressure Groups or	
359 Public Opinion and Propaganda. . . . .	3
417 Political Theories. . . . .	3
Electives, including at least one	
additional course from each of the four	
fields listed below in the note. . . . .	15

Minor (20 semester hours)

	Semester Hours
Required Courses. . . . .	20
112 American Government. . . . .	3
202 State and Local Government. . . . .	3
Electives, including at least one additional	
course each from three of the four fields	
listed below in the note. . . . .	14

**Note:** Courses in political science are divided into four subject-matter fields as follows:

American National Government and Politics—112, 312, 313, 358, 359, 364.

American State and Local Government—202, 216, 270.

International Relations and Comparative Government—210, 211, 271, 341, 354, 361, 362, 367, 371, 372, 373, 374, 377, 441.

Political Theory and Methodology—310, 417, 418, 422.

### COURSES

**112 American Government.** Three sem hours  
A study of the forms and functions of American government on all levels: national, state and local. National government receives special emphasis, but comparisons between the levels of government are made throughout the course. *Satisfies the political science requirement of all curriculums.*

**202 State and Local Government.** Three sem hours  
A study of the forms and functions of state and local government with special emphasis on the government of Michigan. Especially valuable for teachers of social studies in senior and junior high schools. *Satisfies the political science requirement of all curriculums. Not open to freshmen.*

**210 Comparative Political Analysis.** Three sem hours  
An introduction to the basic concepts and analytical approaches utilized in the comparative study of politics and political systems.

*Prereq: 112 American Government.*

**211 European Political Systems.** Three sem hours  
A comparative survey of the political systems of Great Britain, France, Italy, Germany and the Soviet Union.

*Prereq: 112 American Government or 202 State and Local Government.*

**216 Municipal Government.** Three sem hours  
A study of the forms and functions of municipal government.

*Prereq: 112 American Government or 202 State and Local Government.*

**270 Introduction to Public Administration.** Three sem hours  
The nature of public administration; problems connected therewith—direction and organization; recruitment, training and promotion of personnel; maintenance of loyalty and efficiency.

*Prereq: 112 American Government or 202 State and Local Government.*

**271 Introduction to World Politics.** Three sem hours  
The fundamentals of great power politics together with the impact of efforts at international organization.

*Prereq: 112 American Government or 202 State and Local Government.*

**310 Scope and Methods of Political Science.** Three sem hours  
The course is designed to acquaint the student with philosophical and methodological problems and analytic techniques in the study of politics. Each student is expected to gain competence in formulating and executing research projects.

*Prereq: 112 American Government or 202 State and Local Government.*

**312 American Constitutional Law I.** Three sem hours

**313 American Constitutional Law II.** Three sem hours  
Although these courses are designed to provide a two-semester study of the judicial process and judicial opinions, each course may be elected independently. The environment of judicial decision-making will be ascertained through an investigation of the politics, procedures and personalities of the Supreme Court. The impact of the court upon the development and operation of the American system of government will be assessed through an examination of leading court decisions.

*Prereq: 112 American Government or 202 State and Local Government.*

**312 American Constitutional Law I.** Three sem hours

**313 American Constitutional Law II.** Three sem hours

**341 International Law.** Three sem hours  
An introduction to the principles and practices of Public International Law. The origin and development, the nature and sources of International Law. Special emphasis will be placed upon the legal problems of peace and the future perspectives of International Law in the relations of nations.

*Prereq: 112 American Government or 202 State and Local Government.*

**341 International Law.** Three sem hours

*Prereq: 112 American Government or 202 State and Local Government.*

**354 Government and Politics of Canada.**

**Three sem hours**  
 Analysis of the Canadian political system in terms of historical background, political environment, constitutional structure, legislative, executive and judicial processes, political parties and pressure groups, public opinion and voting behavior, political problems and trends.  
*Prereq: 112 American Government.*

**358 Political Parties and Pressure Groups.**

**Three sem hours**  
 The formal and informal organization, operation and function of American political parties, minor parties, political leadership. The structure techniques and role of pressure groups in American society.  
*Prereq: 112 American Government.*

**359 Public Opinion and Propaganda. Three sem hours**

The nature, formation, measurement and role of public opinion; the structure of control and the performance of the mass media; the nature of techniques, strategies and effects of propaganda.  
*Prereq: 112 American Government.*

**361 Government and Politics of the U.S.S.R.**

**Three sem hours**  
 A study of Soviet political institutions including constitutional developments, structure and operation of the government. Emphasis will be placed on the role of the Communist Party.  
*Prereq: 112 American Government or 202 State and Local Government.*

**362 Foreign Relations of the Soviet Union.**

**Three sem hours**  
 A study of Soviet foreign policy, methods and some related problems from 1917 to the present. Particular emphasis will be given to the Sino-Soviet rift and its implications.  
*Prereq: 112 American Government or 202 State and Local Government.*

**364 The Legislative Process. Three sem hours**

A study of the agencies, procedures and influences in the formation of public policy by Congress, state legislatures and administrative agencies.  
*Prereq: 112 American Government.*

**367 Contemporary Political Systems of Latin America.**

**Three sem hours**  
 A study of the governmental structure and the nature of political activity in selected Latin American nations, with an emphasis on issues such as urbanization, military influence, students and labor in politics and the development of political parties.  
*Prereq: 210 Comparative Political Analysis or permission of the department.*

**371 Government and Politics of the Middle East.**

**Three sem hours**  
 The Middle East as a case study in the field of comparative politics, European colonial policies, nationalist movements and politics of independent states.  
*Prereq: 211 European Political Systems or permission of the department.*

**372 Government and Politics of Sub-Sahara Africa.**

**Three sem hours**  
 Africa as a case study in the field of comparative politics,

tribal political systems, European colonial policies, nationalist movements, multi-racial conflict and politics of independent states in Sub-Sahara Africa.

*Prereq: 211 European Political Systems or permission of the department.*

**373 Governments and Politics of South and Southeast Asia. Three sem hours**

An introduction to the political systems of India, Pakistan, Burma, Thailand, Vietnam, Indonesia and the Philippines. Emphasis will be given to the connection between society and politics and to national and regional development.  
*Prereq: 112 American Government.*

**374 Political Systems of the Far East. Three sem hours**

A study of the political systems of selected Far Eastern states, including Japan, China and Korea.  
*Prereq: 210 Comparative Political Analysis or permission of the department.*

**377 American Foreign Policy Process.**

**Three sem hours**  
 An introduction to the formulation and execution of American foreign policy, including consideration of the role of public opinion, the press, interest groups, Congress, the President, deterrence theory and decision-making in crisis situations.  
*Prereq: 112 American Government.*

**417 Political Theories. Three sem hours**

A study of political philosophy from ancient times to the middle of the nineteenth century. *Open to juniors and seniors only.*  
*Prereq: 112 American Government or 202 State and Local Government.*

**418 Recent Political Theory. Three sem hours**

A comparative study of the so-called "isms"—capitalism, socialism, communism and fascism. Their political aspects and their impact upon democracy will receive special emphasis. *Open to juniors and seniors only.*  
*Prereq: 112 American Government or 202 State and Local Government.*

**422 American Political Theory. Three sem hours**

A concise survey of American political thought. The origins, growth and present state of American political ideologies will be examined.  
*Prereq: 112 American Government or 202 State and Local Government.*

**432 Public Bureaucracy in Democratic Society.**

**Three sem hours**  
 A study of the role of bureaucracy in democratic society with emphasis on both democratic and administrative values.  
*Prereq: 210 Comparative Political Analysis and 270 Introduction to Public Administration or permission of the department.*

**441 International Organization. Three sem hours**

The structure and functions of international organizations. Collective security, disarmament and the pacific settlement of disputes will be examined. The League of Nations and the United Nations will be emphasized.  
*Prereq: 112 American Government or 202 State and Local*







## PSYCHOLOGY

Department Head: Samuel Karson

Professors: Robert L. Anderson, Francis M. Canter, Monroe P. Friedman, Donald E. Jackson

Associate Professors: Judith E. Gallatin, Peter A. Holmes, Stuart A. Karabenick, Murray Meisels, Jerry W. O'Dell, Kenneth B. Pool, Ferdinand Stern, Zakhour I. Youssef

Assistant Professors: James Battle, Gary L. Davis, Dennis J. Delprato, Barry A. Fish, John R. Knapp, Richard M. Lerner, Joan M. Marshall, Henry Orloff

Adjunct Professor: Peter T. Hountras

### MAJOR AND MINOR

Major (30 semester hours)

	Semester Hours
Required courses:	
101 or 102 General Psychology. . . . .	3-4
205 Quantitative Methods in Psychology. . . . .	3
301 Experimental Psychology. . . . .	4
453 History and Systems of Psychology. . . . .	3
Restricted electives of one each from the following groups: . . . . . 12	
Group A—Adjustment and Personality	
207 Psychology of Adjustment. . . . .	3
360 Abnormal Psychology. . . . .	3
451 Dynamics of Personality. . . . .	3
Group B—Biological	
357 Sensation and Perception. . . . .	3
457 Physiological Psychology. . . . .	3
458 Comparative Psychology. . . . .	3
Group C—Modification of Behavior	
304 Learning. . . . .	3
356 Motivation. . . . .	3
Group D—Developmental	
321 Child Psychology. . . . .	3
322 Psychology of Adolescence. . . . .	3
Electives by advisement. . . . .	5-4

Minor (20 semester hours)

	Semester Hours
101 or 102 General Psychology. . . . .	3-4
Electives in psychology. . . . .	17-16
(as approved by psychology adviser)	

### GRADUATE STUDY

The Psychology Department offers graduate work leading to the master's degree in psychology and the specialist's degree in school psychology. For descriptions of graduate courses and programs in the Psychology Department, please consult the Graduate Catalog.

### COURSES

**101 General Psychology. Three sem hours**  
Introduction to methods, principles and theories evolving from the scientific analysis of behavior. *Not open to students who have credit in 102 General Psychology.*

**102 General Psychology. Four sem hours**  
Introduction to methods, principles and theories evolving from the scientific analysis of behavior. Laboratory demonstrations and experiments illustrating selected concepts.

*Not open to students who have credit in 101 General Psychology.* Lecture: three hours per week. Laboratory: two hours per week.

### 205 Quantitative Methods in Psychology.

**Three sem hours**

An introduction to the basic concepts and methods used in the analysis of psychological data. Methods of describing groups of data and of determining individuals' positions in groups will be studied, as will means of determining relationships and differences between groups. *Prereq: 101 or 102 General Psychology; and 104 Higher Algebra I, or equivalent.*

### 207 Psychology of Adjustment.

**Three sem hours**

Systematic presentation of issues, concepts, principles and theories in the study of human adjustment. *Prereq: 101 or 102 General Psychology.*

### 240 Psychology of Sex.

**Three sem hours**

An introduction to the psychological basis of human sexual behavior. Survey of the literature concerned with human sexuality from a psychological point of view with an emphasis on research findings. *Prereq: 101 or 102 General Psychology.*

### 301 Introductory Experimental Psychology.

**Four sem hours**

Design, control and measurement techniques employed in the scientific investigation of behavior: *e.g.* motivation, emotion, perception and learning. Lecture and laboratory. *Prereq: 205 Quantitative Methods in Psychology.*

### 304 Learning.

**Three sem hours**

An examination of research and theories of learning as developed by Thorndike, Guthrie, Tolman, Hull, Skinner, Mowrer and others, plus selected contemporary topics. *Prereq: 301 Introductory Experimental Psychology.*

### 308 Social Psychology.

**Three 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 are discussed. The effect of group membership upon individual behavior is stressed. *Prereq: 105 Introductory Sociology, and 101 or 102 General Psychology.*

### 321 Child Psychology.

**Three sem hours**

The development of human behavior from conception to adolescence. Analysis of developmental processes involved in cognition, socialization, emotion and personality, relying on research and theory. Emphasis is on developmental trends. *Not open to students on early elementary curriculum.* *Prereq: 101 or 102 General Psychology.*

### 322 Psychology of Adolescence.

**Three sem hours**

Provides the student an opportunity to formulate, examine and understand a comprehensive, balanced picture of the physical, mental, emotional, social and ideological developments and adjustments during adolescence. *Prereq: 101 or 102 General Psychology.*

### 330 The Psychology of Contemporary Issues.

**Three sem hours**

The application of psychological principles and methodology to selected contemporary world problems such as

arms control, disarmament and cybernation.

*Prereq: 101 or 102 General Psychology.*

**340 Psychological Perspectives on Prejudice and Discrimination. Three sem hours**

The study of the psychological processes underlying the phenomena of prejudice and discrimination. Primary attention will be given to a review of materials on personality and development as this is relevant to the practice of discrimination and to the experience of prejudice on the part of both minority and majority group individuals.

*Prereq: 101 or 102 General Psychology and sophomore standing.*

**351 Industrial Psychology. Three sem hours**

Applications of psychological methods and principles to industrial problems.

*Prereq: 101 or 102 General Psychology and junior or senior standing.*

**352 Psychology Testing and Evaluation. Three sem hours**

Principles and theory of psychological testing. Introduction to evaluation, administration and interpretation of group and individual tests used in diagnosis and prognosis.

*Prereq: 101 or 102 General Psychology and junior or senior standing.*

**356 Motivation. Three sem hours**

Review and analysis of research and theory on the determinants of the direction, persistence and vigor of behavior.

*Prereq: 301 Introductory Experimental Psychology.*

**357 Sensation and Perception. Three sem hours**

Analysis of the dimensions of sensory experience and their integration into percepts, including an examination of theories of perception.

*Prereq: 301 Introductory Experimental Psychology.*

**360 Abnormal Psychology. Three sem hours**

Modern theories of the origin of mental disorders and personality disturbances, nature and mechanism of the various forms of abnormal behavior, prevention and treatment, social significance of aberrations.

*Prereq: 101 or 102 General Psychology and junior or senior standing.*

**370 Psychology In The Field Setting. Two sem hours**

Supervised work in field settings which provide opportunities for experiences relevant to the field of psychology, with focus on the integration of psychological materials and methods with supervised work experiences. One hour lecture and four hours field work per week.

*Prereq: 101 General Psychology, sophomore standing, concurrent enrollment in any clinical, developmental, personality or social course in the department, and permission of the department.*

**381 Individual Reading in Psychology. One sem hour**

Supervised reading of psychological literature.

*Prereq: 101 or 102 General Psychology and prior departmental approval of a planned reading program.*

**382 Individual Reading in Psychology. Two sem hours**

Supervised reading on psychological problems.

*Prereq: 101 or 102 General Psychology and prior departmental approval of a planned reading program.*

**383 Individual Reading in Psychology. Three sem hours**

Supervised reading on psychological problems.

*Prereq: 101 or 102 General Psychology and prior departmental approval of a planned reading program.*

**391 Individual Research in Psychology. One sem hour**

Supervised investigation of psychological problems.

*Prereq: 205 Quantitative Methods in Psychology and permission of the department.*

**392 Individual Research in Psychology. Two sem hours**

Supervised investigation of psychological problems.

*Prereq: 205 Quantitative Methods in Psychology and permission of the department.*

**393 Individual Research in Psychology. Three sem hours**

Supervised investigation of psychological problems.

*Prereq: 205 Quantitative Methods in Psychology and permission of the department.*

**448 Seminar in Psychology. Two sem hours**

Provides an opportunity to synthesize various approaches to the study of psychology. Opportunities are afforded for development, presentation and critical appraisal of individual projects designed by the students. *Open to students in their senior year majoring or minoring in psychology.*

**450 Psychology of Individual Differences. Two sem hours**

Analysis of research on variability between individuals and groups as per intelligence, aptitudes, achievement, motivation, perception and attitudes.

*Prereq: 101 or 102 General Psychology.*

**451 Dynamics of Personality. Three sem hours**

Integration of the physiological, psychological and cultural determinants of human personality and analysis of selected theories of human personality.

*Prereq: Six hours in psychology and junior or senior standing.*

**453 History and Systems of Psychology. Three sem hours**

Historical development of modern psychological theories with emphasis on contemporary systems, including functionalism, behaviorism, phenomenology, psychoanalysis and dynamic psychologies.

*Prereq: Twelve hours of psychology and senior standing.*

**457 Physiological Psychology. Three sem hours**

Analysis of the relationships between physiological processes and behavior. *Open to junior and senior science majors with permission of the department.*

*Prereq: 301 Introductory Experimental Psychology, and 105 Biological Science or 222 General Zoology.*

**458 Comparative Psychology. Three sem hours**

An exploration of modern solutions to the innate versus learned behavior controversy and an examination of species differences with respect to behavior and behavioral capacities.

*Prereq: 301 Introductory Experimental Psychology.*

# SOCIOLOGY

Department Head: Edward Green  
 Professor: S. Joseph Fauman  
 Associate Professors: Werner J. Einstadter, Lawrence K. Kersten, Leroy W. Watts  
 Assistant Professors: Patrick C. Easto, Allen S. Ehrlich, Patricia R. Ferman, Kaja Finkler, Fred T. Gibilisco, Gordon E. Moss, Mady W. Segal, Marguerite D. Smith, David W. Stupple, Nancy N. Thalhofer, Patricia K. Townsend, Bruce L. Warren, Ira M. Wasserman, Ronald M. Westrum

The program in sociology advances the goals of liberal education and provides majors with a foundation for graduate study, professional education in social work or teaching sociology in secondary school. The social welfare curriculum outlined on page 42 offers pre-professional education in social work and preparation for careers in fields of social service.

## MAJORS AND MINORS

### Major in Sociology (30 semester hours)

	Semester Hours
Required Courses. . . . .	30
105 Introductory Sociology. . . . .	3
135 Cultural Anthropology. . . . .	3
250 Elementary Social Statistics. . . . .	3
308 Social Psychology. . . . .	3
403 Modern Sociological Theory. . . . .	3
404 Methods in Social Research. . . . .	3
405 Social Theory and Social Structure. . . . .	3
One of the following. . . . .	3
306 Urban Community	
307 Industrial Sociology	
310 Social Stratification	
362 Social Organization	
Electives. . . . .	6

May be taken in sociology, anthropology or social work. Any courses in social work or anthropology to be counted toward elective credit for the sociology major must be at the 300 level or above.)

### Minor in Sociology (20-21 semester hours)

	Semester Hours
Required Courses. . . . .	20-21
105 Introductory Sociology. . . . .	3
Sociology courses at 300 level or above . . . . .	8-9
Electives. . . . .	9

Any course in anthropology to be counted toward elective credit for the sociology minor must be at the 300 level or above. Social work courses may not be counted toward the sociology minor.

### Major in Anthropology (30 semester hours)

	Semester Hours
135 Cultural Anthropology. . . . .	3
At least one course at the 200 level (Areal Etnography). . . . .	3
At least one course at the 300 level (Topical). . . . .	3

At least one course at the 400 level (Advanced) 3  
 Electives\* . . . . . 18

\*The remaining courses to complete the total of 30 semester hours are to be chosen from anthropology courses and a maximum of three of the following cognate courses in other disciplines:

- Art 222 African and Afro-American Art
  - Art 420 History of Primitive Art
  - Biology 306 Physical Anthropology
  - Economics 412 Economics of Underdeveloped Countries
  - English 320 Introduction to Linguistic Science
  - Geography 331 Introduction to Paleontology
  - Geography 360 Cultural Geography
  - History 103 History of Non-Western Civilization
  - History 301 The Religions of South and East Asia
  - Philosophy 380 The Philosophy of Science
  - Political Science 367, 371, 372, 373 or 374 (Government and Politics of Various Regions)
  - Psychology 458 Comparative Psychology
  - Sociology 219, 250, 310, 320, 334, 403
  - Speech 300 Phonetics
- Other areal courses may be used with permission of anthropology adviser

### Minor in Anthropology (20 semester hours)

	Semester Hours
135 Cultural Anthropology. . . . .	3
One 200 level anthropology course. . . . .	3
Electives* . . . . .	14

\*In addition to courses in cultural anthropology, a student may choose the following as part of his electives:

- One sociology course at the 200 level or above
- Biology 306 or 511 Physical Anthropology
- English 320 Introduction of Linguistic Science

Criminal Justice and Criminology Curriculum (see p. 38)  
 Social Welfare Curriculum (see p. 42)

## GRADUATE STUDY

The Sociology Department offers graduate work leading to the master's degree in sociology. For descriptions of graduate courses and programs in the Sociology Department, please consult the Graduate Catalog.

## SOCIOLOGY COURSES

**105 Introductory Sociology. Three sem hours**  
 A number of basic sociological concepts are used to analyze selected aspects of American society in intergroup relations, rural and urban communities, social classes and in family, educational, religious, governmental and economic institutions.

**202 Social Problems. Three sem hours**  
 A sociological analysis of problems arising in contemporary American society in connection with the organization of social behavior in selected areas of social life, such as child rearing, relations between the sexes, crime and delinquency, relations between racial and cultural subgroups and personality disorders.  
*Prereq: 105 Introductory Sociology.*

- 204 Marriage and Family.** **Three sem hours**  
Provides information pertinent to the position and significance of the family in our changing society. Information drawn from sociology, social psychology and psychology is applied to courtship and mate selection, as well as to problems of marital adjustment.  
*Prereq: 105 Introductory Sociology.*
- 214 Racial and Cultural Minorities.** **Three sem hours**  
Racial and cultural minorities in the modern world with particular references to the Negro and to European and Oriental immigrants in the United States; racial myths, doctrines and movements; conflict and accommodation of majority and minority peoples; proposed solutions of ethnic problems.  
*Prereq: 105 Introductory Sociology.*
- 240 Concepts of Sociology.** **Three sem hours**  
A scientific analysis of human behavior in the following areas: distribution and change of population, cross-cultural study of societies and communities, measurement of class behavior, social basis of personality, theory of deviant behavior, communication in small groups, mass communication and public opinion and social change.  
*Prereq: 105 Introductory Sociology.*
- 250 Elementary Social Statistics.** **Three sem hours**  
In this course the student will be trained to analyze social data. He will be introduced to the nature of empirical data, the organization of univariate data, measures of central tendency, measures of dispersion, the nature of correlation, regression in the two variable case, tests of significance and the general character of statistical inference.  
*Prereq: 105 Introductory Sociology, high school algebra or equivalent.*
- 303 Sociology of Childhood and Youth.** **Three sem hours**  
Childhood and youth as elements of social organization. The relationship between social structure and the emergent personality of the individual; normality and deviance as social processes.  
*Prereq: 105 Introductory Sociology.*
- 306 The Urban Community.** **Three sem hours**  
Ecological and social organization of urban life. Special emphasis upon the metropolitan trend in the United States and the social problems created by it.  
*Prereq: 105 Introductory Sociology.*
- 307 Industrial Sociology.** **Three sem hours**  
The social structure of the workplace, the work experience of the participants and the relation of both to the community and to society. Particular attention is given to the formal structure of large-scale organizations and the operation of small groups within them.  
*Prereq: 105 Introductory Sociology.*
- 308 Social Psychology.** **Three 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 are discussed. The effect of group membership upon individual behavior is stressed.  
*Prereq: 105 Introductory Sociology and 101 General Psychology.*
- 309 Culture and Personality.** **Three sem hours**  
An analysis of the manner in which group and cultural factors influence the growth and change of personality. Some attention is given to the impact of personality types on group life.  
*Prereq: 105 Introductory Sociology or 135 Cultural Anthropology and 101 General Psychology.*
- 310 Social Stratification.** **Three sem hours**  
Analysis of the forms and conditions of social inequality. Consideration of the classical and modern theories of class structure and dynamics and their relevance to existing structure and function of groups in a society is studied.  
*Prereq: Two courses in sociology.*
- 311 Social Gerontology.** **Three sem hours**  
Analysis of the demographic and socio-cultural factors in aging, the aging individual as a person, older people as groups and aggregates within the culture and structure of a changing society, the manner in which society attempts to meet the needs of aging people and the aged.  
*Prereq: 105 Introductory Sociology.*
- 312 Medical Sociology.** **Three sem hours**  
The examination of social behavior and social organization as factors in disease distribution. The sociological analysis of medical care, organization and practitioners.  
*Prereq: 105 Introductory Sociology and sophomore standing.*
- 320 Sociology of Religion.** **Three sem hours**  
A sociological analysis of religious organizations and the institution of religion. Emphasis is upon the interaction between religious organizations and other institutions and associations. The role of religion in social movements and social change is stressed.  
*Prereq: 105 Introductory Sociology or 135 Cultural Anthropology.*
- 334 Population.** **Three sem hours**  
Population size and composition and their dynamics in basic social science data. Vital phenomena and migration. The relationship between human numbers and resources and its politico-economic implications. Population theories and policies of population control.  
*Prereq: 105 Introductory Sociology or permission of department.*
- 362 Social Organization.** **Three sem hours**  
The study of selected areas of social organization, including social classes, bureaucracy, the professions and social movements. Theories and empirical studies of stratification, power and decision-making will be considered.  
*Prereq: 105 Introductory Sociology.*
- 402 Group Dynamics.** **Three sem hours**  
A study of the structure and interaction processes of small groups. Cohesiveness, group standards, conformity and deviance, leadership, group emotion, communication, group roles and sociometrics are discussed. Particular emphasis is given to classroom application.  
*Prereq: 105 Introductory Sociology or 101 General Psychology.*
- 403 Modern Sociological Theory.** **Three sem hours**  
The rise and development of sociological thought from Comte to the present. The works of various European

American schools are analyzed and critically appraised in terms of their value in empirical research.

*Prereq: Three courses in sociology and junior standing.*

#### 404 Methods in Sociological Research.

**Three sem hours**

An examination of the methods currently employed in sociological research as well as a review of the many types of application now being made. Laboratory work includes participation in the conduct of a survey.

*Prereq: Three courses in sociology and junior standing.*

#### 405 Social Theory and Social Structure.

**Three sem hours**

A seminar in which selected monographic materials on modern societies and societies in process of modernization will serve as a medium for a synthesis of the field of sociology.

*Prereq: Three courses in sociology at the 300 level or above and senior standing.*

#### 406 Criminology.

**Three sem hours**

The nature and incidence of crime, the characteristics of criminals and theories of criminal behavior.

*Prereq: 105 Introductory Sociology.*

#### 407 Criminal Justice in Contemporary Society.

**Three sem hours**

The police and courts in social institutions; the process of corrections; strategies for the prevention and control of crime.

*Prereq: 406 Criminology.*

#### 448 Collective Dynamics.

**Three sem hours**

A study of spontaneous, transitory and volatile collective behavior, as contrasted with the relatively stable, institutionalized patterns of interaction. Includes analysis of rumor transmission, crowd behavior, mass behavior and the emergence of organized social movements.

*Prereq: Twelve hours of sociology.*

#### 450 The Family.

**Three sem hours**

Study of the family as a basic social institution. Examination of various types of family systems throughout the world with special emphasis on the American family.

*Prereq: Junior standing and either 105 Introductory Sociology or 135 Cultural Anthropology.*

#### 451 The Sociology of Occupations and Professions.

**Three sem hours**

Social significance of work. Stressing the process of professionalization, career selection and colleague and client relationships. Social organization of occupational groups.

*Prereq: Twelve hours in sociology.*

#### 497, 498, 499 Independent Study.

**One, two and three sem hours each**

Independent study, under the supervision of a department member, in areas for which the department does not offer a course. Normally such work is restricted to advanced proficient students.

*Prereq: Permission of the department.*

### ANTHROPOLOGY COURSES

#### 135 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.

#### 150 Introduction to Prehistoric Archeology.

**Three sem hours**

A general survey of the field of archeology focusing upon the methodologies and analyses employed in the study of prehistoric cultures.

*Prereq: 135 Cultural Anthropology.*

#### 234 Peoples and Cultures of Latin America.

**Three sem hours**

A regional, historical and topical survey of Latin American cultures.

*Prereq: 135 Cultural Anthropology.*

#### 236 Peoples of Africa.

**Three sem hours**

A study of the social and cultural legacy of pre-colonial Black Africa and its transformation and diffusion in the modern world. Includes a survey of major ethnic groupings, social institutions—the family economy, religion, education and political structures, the impact of Islam and the West; emergent nationalism, current problems in African politics and social life, the dialogue between Black America and Black Africa.

*Prereq: 135 Cultural Anthropology.*

#### 237 Indians of North America.

**Three sem hours**

A regional, historical and topical survey of Aboriginal North American cultures.

*Prereq: 135 Cultural Anthropology or permission of the department.*

#### 238, 239, 241 Ethnographic Survey.

**Three sem hours each time**

An ethnographic survey of major culture areas of the world—e.g. the Pacific, Latin America, etc. Each semester it is taught one cultural area will be covered. Students may elect the course several times as long as different cultural areas are studied.

*Prereq: 135 Cultural Anthropology.*

#### 248 Peoples and Cultures of the Pacific.

**Three sem hours**

A regional, historical and topical survey of aboriginal Pacific cultures.

*Prereq: 135 Cultural Anthropology.*

#### 249 Peoples and Cultures of the Caribbean.

**Three sem hours**

A regional, historical and topical survey of Caribbean cultures.

*Prereq: 135 Cultural Anthropology.*

#### 309 Culture and Personality.

**Three sem hours**

An analysis of the manner in which group and cultural factors influence the growth and change of personality. Some attention is given to the impact of personality types on group life.

*Prereq: 105 Introductory Sociology or 135 Cultural Anthropology and 101 General Psychology.*

#### 330 Political Anthropology.

**Three sem hours**

The comparative study of political systems in primitive and peasant societies, local-level politics, government and law will be examined from an anthropological perspective.

*Prereq: 135 Cultural Anthropology and sophomore standing.*



**335 Anthropology and Non-Primitive Societies.****Three sem hours**

An analysis of the studies and problems which anthropology has investigated in non-primitive societies. Topics to be covered will include problems of analysis in complex societies, national character, folk-urban continuum, peasants and colonialism.

*Prereq: 135 Cultural Anthropology or equivalent and sophomore standing.*

**336 Social and Cultural Change. Three sem hours**

A survey of the theories and problems of change in primitive and advanced societies.

*Prereq: 135 Cultural Anthropology or equivalent and sophomore standing.*

**337 Social Anthropology. Three sem hours**

Comparative analysis of the structure and function of primitive societies with an emphasis upon systems of kinship.

*Prereq: Three courses in anthropology and junior standing.*

**338 Anthropology of Religion. Three sem hours**

The anthropological study of religious belief and ritual in primitive and peasant societies.

*Prereq: 135 Cultural Anthropology and sophomore standing.*

**339 Economic Anthropology. Three sem hours**

The comparative study of social mechanisms by which primitive societies are organized to provision themselves at various levels of socio-political organizations.

*Prereq: 135 Cultural Anthropology and sophomore standing.*

**340 Language and Culture. Three sem hours**

A study of the relation of language to social behavior and modes of thought in unilingual and multilingual speech communities.

*Prereq: 135 Cultural Anthropology and sophomore standing. English 320 Introduction to Linguistic Science suggested.*

**435 Cultural Ecology. Three sem hours**

A comparative study of the patterns and processes of adaptation in primitive societies at various levels of socio-political organization.

*Prereq: Three courses in anthropology and junior standing.*

**439 Anthropological Theory. Three sem hours**

The study of various theoretical approaches within the field of cultural anthropology. The theoretical perspectives of a number of European and American schools will be discussed from analytical and historical view-points.

*Prereq: Three courses in anthropology and junior standing.*

**440 Individual Reading and Research in Anthropology.****Two sem hours**

Directed reading and research on problems within the field of anthropology.

*Prereq: 135 Cultural Anthropology and permission of the department.*

**441 Seminar in Anthropology. Three sem hours**

An intensive study of a problem of current research

interest in anthropology. The topic will vary from semester to semester.

*Prereq: Four courses in anthropology and permission of the department.*

## SOCIAL WORK COURSES

(The requirements for the social welfare curriculum are given on page 42.)

**212 Social Welfare. Three sem hours**

The historical and analytical study of American welfare services as related to the economic, political and social cultural conditions and prevailing ideologies in significant periods of their development.

*Prereq: Sophomore standing.*

**213 Field Observation. Two sem hours**

An introduction to the various settings in which social welfare is practiced, the programs of social agencies and social welfare services. The student is familiarized with the social agencies and their operation through observational experiences and a weekly two hour seminar.

*Prereq: Sophomore standing. Must be taken concurrently with 212 Social Welfare.*

**314 Social Work I. Three sem hours**

A study of the professional criteria of social work, the role, significance and place of the social work profession in modern society and an analysis of the culture of social work in terms of its ideologies, social values, norms, occupational roles and symbols with relationship to other helping professions.

*Prereq: 212 Social Welfare, 213 Field Observation and junior standing.*

**315 Social Work II. Three sem hours**

A continuation of 314. This course is designed to incorporate the student's previous knowledge of social welfare, the humanities and social sciences in understanding the need for social work services, the function and components of social work, its methods and the settings within which it is practiced.

*Prereq: 314 Social Work I and junior standing. Must be taken concurrently with 317 Community Service Experience.*

**317 Community Service Experience. Two sem hours**

Students are assigned to community organizations approved by the instructor for a period of eight hours per week. This will give the students an awareness and an appreciation of human need. It will introduce them to the various kinds of community social service programs and give them first hand exposure to the organizational structure. They will be a part of in the advanced 410-411 Field Experience placements. A two-hour weekly seminar is part of this course. *To be taken concurrently with 315.*

**408 Social Work III. Three sem hours**

This course is designed to give the student an introduction to the social work techniques of interpersonal intervention—case work, group work, community organization and aspects of social treatment.

*Prereq: 212 Social Welfare, 213 Field Observation, 314 Social Work I, 315 Social Work II, 317 Community Service Experience. Must be taken concurrently with 411 Field Experience.*

**409 Social Work IV.**

A continuation of 408 Social Work III.

*Prereq: 408 Social Work III. Must be taken concurrently with 411 Field Experience.*

**Three sem hours**

**410 Field Experience I.**

The students are assigned to a specific agency for the semester for a period of four to eight hours weekly. The agency, in agreement with the school, provides learning experiences and supervision that are appropriate to the objectives of the under-graduate program and to the level

**Four sem hours**

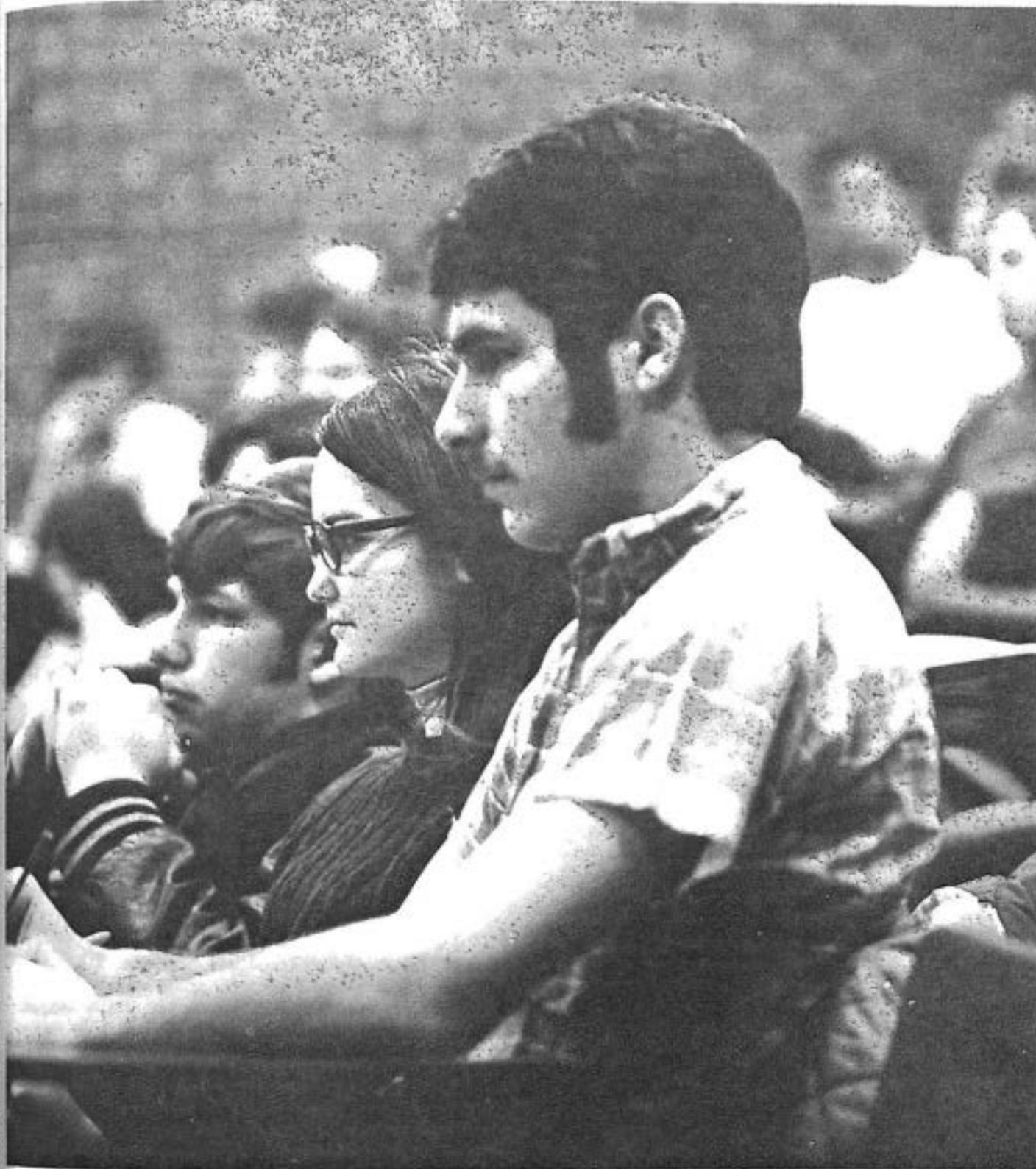
of the student's knowledge and capacity. A weekly two hour seminar relating field learning to classroom content is an integral part of this course.

*Prereq: 212 Social Welfare, 213 Field Observation, 314 Social Work I, 315 Social Work II, 317 Community Service Experience. Senior: 408 Social Work III must be taken concurrently.*

**411 Field Experience II.**

A continuation of 410 Field Experience. *Must be taken concurrently with 409 Social Work IV.*

**Four sem hours**



## SPEECH AND DRAMATIC ARTS

**Department Head:** Thomas J. Murray  
**Professors:** George P. Bird, James W. Gousseff, Virginia T. Koste, John W. Sattler, Parker R. Zellers  
**Associate Professors:** Harry W. Bowen, Gail W. Comp-ton, Mitchel R. McElya, William V. Swisher  
**Assistant Professors:** Henry B. Aldridge, Gary L. Evans, Annette Martin, Sally R. McCracken, Thelma L. McDaniel, Willie B. Morgan, Dennis A. Parker, Arthur J. Yahrmatter  
**Instructors:** Dennis M. Beagen, George E. McCloud, Joseph P. Misiewicz, Kenneth Paulin, Elma L. Schmidt, Kenneth W. Stevens

### MAJORS AND MINORS

(For those on either the teaching or nonteaching curriculum)

#### I. Summary of Credit Requirements for Major and Minor

	MAJOR	MINOR
A. Total Credit Requirements	30 hours	20 hours
B. Distribution of Credit Requirements		
1. Foundation Courses	5-6 hours	5-6 hours
2. Application Courses	9 hours	6 hours
3. Theory Courses	9 hours	3 hours
4. Electives	5-6 hours	5-6 hours

#### Semester Hours

#### II. Program Study

- A. Foundation Courses
1. 121 Fundamentals of Speech. . . . . 2
  2. 124 Fundamentals of Speech. . . . . 3
  3. 224 Advanced Public Speaking. . . . . 3
  4. 227 Introduction to Speech Theory. . . . . 3
- B. Application Courses
1. 166-466 Forensics. . . . . 1
  2. 321 Parliamentary Procedure. . . . . 2
  3. 350 Persuasive Speaking. . . . . 3
  4. 356 Argumentation and Debate. . . . . 3
  5. 359 Discussion and Conference. . . . . 3
- C. Theory and Research Courses
1. 440 Survey of Public Address. . . . . 3
  2. 460 Theory of Speech Criticism. . . . . 3
  3. 475 Practicum in Speech Communication Behavior. . . . . 3
  4. 485 Theories of Speech Communication. . . . . 3
- D. Elective Courses

Electives may be chosen from courses in the Department of Speech and Dramatic Arts

#### III. Optional Concentration in Broadcasting or Interpretative Reading

With department permission, ten (10) hours of course work in broadcasting or interpretative reading may be substituted to fulfill the credit requirement for the major or minor in speech.

- A. Interpretation Concentration  
 132; One of the following: 203, 310, 314;

- 324 and either 411 or 414 and one activity hour in interpretative reading  
 B. Broadcasting Concentration  
 140; Two of the following: 240, 331, 332, 344; and either 431 or 432 or 446

#### Dramatic Arts Major (30 semester hours)

	Semester Hours
Required Courses. . . . .	30
100 Introduction to Theatre. . . . .	3
135 Play Production. . . . .	3
234 Stagecraft. . . . .	3
One of the following: . . . . .	3
242 Fundamentals of Acting	
370 Scene Design	
335 Play Direction. . . . .	3
406 History of the Theatre. . . . .	3
499 Seminar in Theatre. . . . .	2
167, 267 Theatre Practice. . . . .	2
Electives. . . . .	8

Electives may be chosen from courses in dramatic arts (excepting 100, 133, 501, 502 and 503) and the following: ENGLISH 210 Shakespeare, 240 Great Drama, Shakespearean Comedy, 340 English Drama 1558-1642, 341 English Drama 1660-1779, 403 Modern Drama, SPEECH 314 Interpretation of Drama.

#### Dramatic Arts Minor (20 semester hours)

	Semester Hours
Required Courses. . . . .	20
100 Introduction to Theatre. . . . .	3
135 Play Production. . . . .	3
234 Stagecraft. . . . .	3
335 Play Direction. . . . .	3
406 History of the Theatre. . . . .	3
167 Theatre Practice. . . . .	1
Electives. . . . .	4

#### Dramatic Arts for Children Minor (20 semester hours)

	Semester Hours
121 Fundamentals of Speech or	
124 Fundamentals of Speech . . . . .	3
207 Introduction to Children's Literature or	
240 Great Dramas . . . . .	3
222 The Child and Drama. . . . .	1
323 Improvisation. . . . .	1
Electives from the following: . . . . .	16
100 Introduction to Theatre or	
106 Introduction to Performing Arts. . . . .	3
133 Theatre Crafts. . . . .	2
167 Theatre Practice. . . . .	1
267 Theatre Practice. . . . .	1
242 Fundamentals of Acting. . . . .	3
322 Theatre for Children. . . . .	3
324 Interpretation of Children's Literature. . . . .	3
385 Dramatic Composition or	
386 Dramatic Writing . . . . .	3-2
422 Independent Study in Dramatic Arts for Children . . . . .	1
423 Independent Study in Dramatic Arts for Children . . . . .	2
424 Independent Study in Dramatic Arts for Children . . . . .	3

**Speech and Dramatic Arts Major (30 semester hours)**

	Semester Hours
*121 Fundamentals of Speech or 124 Fundamentals of Speech . . . . .	2-3
140 Introduction to Broadcasting and Film or 446 Broadcasting in Society . . . . .	3
*132 Interpretative Reading. . . . .	3
*100 Introduction to Theatre. . . . .	3
224 Advanced Public Speaking or 350 Persuasive Speaking . . . . .	3
*135 Play Production. . . . .	3
205 Voice and Articulation. . . . .	3
*356 Argumentation and Debate or *359 Discussion and Conference . . . . .	3
Electives in dramatic arts. . . . .	3
Electives in speech or dramatic arts. . . . .	3-4

**Speech and Dramatic Arts Minor (20 semester hours)**

Courses starred above, including both 359 Discussion and Conference and 356 Argumentation and Debate.

**Speech Minor (For those on elementary, library science and special education curriculums only)—(20 semester hours)**

	Semester Hours
One of the following: . . . . .	2-3
121 Fundamentals of Speech or 124 Fundamentals of Speech	
One of the following: . . . . .	3
132 Interpretative Reading 301 Speech Science	
205 Voice and Articulation 300 Phonetics	
One of the following: . . . . .	3
234 Stagecraft 222 The Child and Drama 135 Play Production 323 Improvisation	
One of the following: . . . . .	3
224 Advanced Public Speaking 359 Discussion and Conference 350 Persuasive Speaking 356 Argumentation and Debate	
Electives from the above courses or the following: . . . . .	9-8
166 Forensics 167 Theatre Practice 168 Interpretation 169 Broadcasting 140 Introduction to Broadcasting and Film 322 Theatre for Children 422 Independent Study in Dramatic Arts for Children 446 Broadcasting in Society	

**Literature, Language, Speech and Dramatic Arts Group Major (36 Semester hours)**  
See page 145.

**GRADUATE STUDY**

The Speech and Dramatic Arts Department offers graduate work leading to the master's degree. For descriptions of graduate courses and programs, in the Speech and Dramatic Arts Department, please consult the Graduate Catalog.

**SPEECH COURSES**

**Fundamentals of Speech**

**121 Fundamentals of Speech. Two sem hours**  
Designed to provide the student with both theory and practice in the principles of effective speech composition and presentation. *Not open to students with credit in 124 Fundamentals of Speech.*

**124 Fundamentals of Speech. Three sem hours**  
This course may be substituted for 121 Fundamentals of Speech. It provides more intensive theory and practice in the principles of effective speech composition and presentation. It is taught in part through the medium of closed-circuit TV. *Not open to students with credit in 121 Fundamentals of Speech.*

**Communication and Public Address**

**224 Advanced Public Speaking. Three sem hours**  
A course designed to give the student understanding of the characteristics of various types of speeches and speech situations and practice in the preparation and delivery of speeches for various occasions.  
*Prereq: 121 Fundamentals of Speech or 124 Fundamentals of Speech.*

**227 Introduction to Speech Theory. Three sem hours**  
A study of basic oral communication theory, including consideration of evidence, communication models, interpersonal communication, and theory building.

**321 Parliamentary Procedure. Two sem hours**  
A study of the basic principles of parliamentary procedure, with special reference to the generally recognized rules governing the conduct of business in group meetings. Practice in chairing meetings, participating and in serving as parliamentarian.

**350 Persuasive Speaking. Three sem hours**  
The study of the basic elements inherent in persuasion; the analysis of representative persuasive speeches; practice in securing the acceptance of ideas through psychological appeals as well as logical reasoning.  
*Prereq: 121 Fundamentals of Speech or 124 Fundamentals of Speech.*

**356 Argumentation and Debate. Three sem hours**  
Emphasizes the principles of logical reasoning and oral presentation of reasoned discourse in group situations. Exercise in debate and in general argumentative speaking are included.  
*Prereq: 121 Fundamentals of Speech or 124 Fundamentals of Speech.*

**359 Discussion and Conference. Three sem hours**  
Emphasizes the principles and practice of discussion as employed in committees, panels, symposia and forums. Students will plan and participate in discussions of contemporary problems.  
*Prereq: 121 Fundamentals of Speech or 124 Fundamentals of Speech.*

**440 Survey of Public Address. Three sem hours**  
An historical and critical study of some of the more important speakers and their speeches from classical Greek and Roman times to the present with reference to social and political movements in the world's history.  
*Prereq: Junior standing plus 10 hours of speech credit.*

**460 Theory of Speech Criticism.** Three sem hours  
A study of the theoretical and critical works of ancient, renaissance and modern rhetoricians.  
*Prereq: Junior standing plus 10 hours of speech credit.*

**475 Practicum in Speech Communication Behavior.** Three sem hours  
An examination of methods currently employed in speech communication, as well as a review of the many types of application now being made. Course includes analysis of speech communication behavior.  
*Prereq: Three courses in speech, junior standing or permission of the department.*

**485 Theories of Speech Communication Behavior.** Three sem hours  
Study of the theories which have made significant contributions to the understanding of speech communication behavior.  
*Prereq: Nine hours in the field of speech and dramatic arts or permission of the department.*

**497 Independent Study.** One sem hour

**498 Independent Study.** Two sem hours

**499 Independent Study.** Three sem hours  
Advanced study on individual basis in areas in which the department does not offer a formal course. Normally such work is restricted to proficient students in the senior year under the general conditions prescribed for honors courses.  
*Prereq: Permission of the department.*

**166, 266, 366, 466 Forensics.** One sem hour each  
Students who participate in extracurricular activities may, with the approval of the professor in charge of the activity and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities, and the credits may be earned in one activity or in several activities. Admission to the activity does not insure credit.  
*Prereq: Permission of the department.*

## Broadcasting

**140 Introduction to Broadcasting and Film.** Three sem hours  
A basic orientation to radio, television and film studios and equipment. Emphasis is placed on a study of the nature of broadcasting and development of effective microphone and camera technique.  
*Prereq: 121 Fundamentals of Speech or 124 Fundamentals of Speech.*

**240 Broadcasting and Film Performance Techniques I.** Two sem hours  
A study of the various types of radio, television and film non-dramatic speaking such as news, sports, commercials, continuity, narration, talks, interviews and discussions. Practice and evaluation of announcing types and styles.  
*Prereq: 140 Introduction to Broadcasting and Film or permission of the department.*

**245 Introduction to Film.** Three sem hours  
An introduction to the historical development of film as an art form, with attention to cinematography, editing, scenarios, lighting and acting and directing styles.  
*Prereq: 101 and 102 Reading of Literature and 121 or 124 Fundamentals of Speech.*

**331 Fundamentals of Radio Production and Direction.** Two sem hours  
The basic fundamentals of preparation, production, direction and evaluation of both dramatic and non-dramatic radio programs.

*Prereq: 240 Broadcasting and Film Performance Techniques I, or 340 Broadcasting and Film Performance Techniques II or permission of the department.*

**332 Fundamentals of Television Production and Direction.** Two sem hours  
The basic fundamentals of preparation, production, direction and evaluation of both dramatic and non-dramatic television programs.

*Prereq: 240 Broadcasting and Film Performance Techniques I, or 340 Broadcasting and Film Performance Techniques II or permission of the department.*

**340 Broadcasting and Film Performance Techniques II.** Two sem hours  
A study of types and styles of dramatic speaking for radio, television and film. Practice in the basic techniques of acting for the three media.

*Prereq: 140 Introduction to Broadcasting and Film or permission of the department.*

**344 Broadcast Continuity Writing.** Two sem hours  
A study of the forms of non-dramatic writing for radio and television including news, commercials, public service announcements, music continuity, feature stories, narrations, talks and short documentaries. Special attention is given to the writing of radio and television scripts.  
*Prereq: 140 Introduction to Broadcasting and Film or permission of the department.*

**431 Advanced Radio Production and Direction.** Three sem hours  
A continuation of 331 Fundamentals of Radio Production and Direction. Advanced theory and practical experience in production of longer, more complex dramatic material for radio.  
*Prereq: 331 Fundamentals of Radio Production and Direction or permission of the department.*

**432 Advanced Television Production and Direction.** Three sem hours  
A continuation of 332 Fundamentals of Television Production and Direction. Principles, practices and techniques of directing and producing dramatic material for television. Major television formats will be discussed and analyzed. Practical experience in depth will be provided for each student.  
*Prereq: 332 Fundamentals of Television Production and Direction or permission of the department.*

**446 Broadcasting in Society.** Three sem hours  
A study of the developmental growth of radio and television broadcasting, their role in society, governmental influences, programming at station and network level and research in broadcasting.  
*Prereq: 121 Fundamentals of Speech or permission of the department.*

**165, 265, 365, 465 Broadcasting-TV.** One sem hour each  
Students who participate in extracurricular activities with approval of the professor in charge of the activity and the department head, receive one hour of credit in a single



activity during one semester. Students may earn up to four hours credit in such activities, and the credits may be earned in one activity or in several activities. Admission to the activity does not insure credit.  
*Prereq: 140 Introduction to Broadcasting and permission of the department.*

#### 169, 269, 369, 469 **Broadcasting-Radio.**

**One sem hour each**

Students who participate in extracurricular activities may, with approval of the professor in charge of the activity and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities, and the credits may be earned in one activity or in several activities. Admission to the activity does not insure credit.

*Prereq: 140 Introduction to Broadcasting and Film and permission of the department.*

### Interpretation

#### 132 **Interpretative Reading.** **Three sem hours**

Deals with the fundamentals of oral interpretation: developing poise and ease before an audience, a clear forceful and flexible voice and discrimination in interpreting thought to others. Selections will be prepared and presented before the class.

*Prereq: 121 or 124 Fundamentals of Speech.*

#### 203 **Interpretation of Prose.** **Three sem hours**

Deals with the application of the fundamentals of oral interpretation to the reading of prose with emphasis on the short story and excerpts from longer works of fiction. Special attention will be given to problems involved in the interpretation of prose.

*Prereq: 132 Interpretative Reading.*

#### 310 **Oral Interpretation of Poetry.** **Three sem hours**

Deals with the application of the principles of oral interpretation to the reading of poetry, with emphasis on modern and contemporary poetry.

*Prereq: 132 Interpretative Reading.*

#### 314 **Interpretation of Drama.** **Three sem hours**

Deals with specific problems involved in interpreting dramatic literature. Emphasis will be placed on selection of materials, cutting and arrangement of materials, dialogue, characterization and character placement. Students will work individually and collectively in interpreting scenes in plays.

*Prereq: 132 Interpretative Reading or permission of the department.*

#### 4 **Oral Interpretation of Children's Literature.**

**Three sem hours**

Study of the selection, understanding and oral interpretation of literature for children. Experience in reading to children of various ages is provided.

*Prereq: 207 Literature for Elementary Grades or departmental major or minor.*

#### 1 **Advanced Problems in Interpretation.**

**Three sem hours**

Deals with the presentation of programs of some length difficult in prose, poetry and drama. Emphasis will be placed on programming, styles of interpretation, choral singing, and experimental work. A public program will be presented by the class.

*Prereq: Six hours of oral interpretation or permission of*

*the department.*

#### 414 **Development and Theory of Oral Interpretation.**

**Three sem hours**

Deals with the development of oral interpretation from ancient Greece to the present, including the study of modern theories in oral interpretation.

*Prereq: Nine hours of oral interpretation or permission of the department.*

#### 168, 268, 368, 468 **Interpretation.** **One sem hour each**

Students who participate in extracurricular activities may, with the approval of the professor in charge of the activity and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities and the credits may be earned in one activity or in several activities. Admission to the activity does not insure credit.

*Prereq: 132 Interpretative Reading or permission of the department.*

## SPEECH SCIENCE AND EDUCATION

#### 102, 202, 302, 402 **Voice Development.**

**One sem hour each**

A laboratory for developing strength and control of the human speaking voice through a regular program of physical and tonal exercises, recordings, readings and choral speaking. Students will attend two regularly scheduled hours each week and additional sessions as arranged.

#### 205 **Voice and Articulation.** **Three sem hours**

A study of the physical production of speech and the characteristics of American speech sounds and intonation. Emphasis is placed on oral practice to improve individual voice and articulation skills for delivery and performance in the various areas of speech and dramatic arts. Recording and listening laboratory hours arranged.

*Prereq: 121 Fundamentals of Speech or 124 Fundamentals of Speech, or permission of the department.*

#### 300 **Phonetics.** **Three sem hours**

A summary survey of the physiology and physics of speech sounds. Intensive study of the use of the International Phonetic Alphabet in dialectology and speech improvement. Comparative study of phonemic systems and the Initial Teaching Alphabet.

*Prereq: 301 Speech Science, 205 Voice and Articulation or permission of the department.*

#### 301 **Speech Science.** **Three sem hours**

A survey of the physiological and psychological bases of speech and hearing. Emphasis is placed on understanding the physical characteristics of speech sounds and the human voice, as they are used in effective oral communication.

*Prereq: One of the following: 205 Voice and Articulation, or 132 Interpretative Reading, or 240 Broadcasting and Film Performance Techniques I, or 242 Fundamentals of Acting, or permission of the department.*

#### 307 **The Teaching of Speech.** **Three sem hours**

Emphasizes the analysis and construction of courses of study, evaluation of textbooks and teaching materials, methods of directing extra-curricular speech activities and demonstrations of teaching methods. *Required of students majoring in speech in the junior or senior high*

school curriculum, but does not carry credit in any other curriculum.

*Prereq: Four courses in speech.*

## DRAMATIC ARTS COURSES

### Theatre

#### 100 Introduction to Theatre. **Three sem hours**

An introduction to the arts and crafts of the theatre including the legitimate stage, television and motion picture drama. The purpose of the course is to foster appreciation of theatre through an understanding of its historical development, its forms and styles and its production techniques. Attendance required at selected EMU Theatre productions. *Required of dramatic arts majors and minors.*

#### 106 Introduction to Performing Arts. **Three sem hours**

The arts of dance, theatre and music are studied both individually and collectively with the objective of determining their respective elements and of arriving at a better understanding and appreciation of the great works of art in the three fields. The place of these arts in our present day environment and their contribution to a richer life receive special emphasis. Attendance required at special field on-campus performances. (Music, Physical Education, Speech and Dramatic Arts Departments.)

#### 133 Introduction to the Theatre Crafts.

**Two sem hours**

The principles and practical techniques of planning, constructing and coordinating the behind-the-scenes elements of play production (set pieces, lighting, costuming, make-up, sound, properties). Emphasis is on simple materials and techniques usable by students and children in school and recreational situations. This course is designed for non-dramatic arts majors.

#### 135 Play Production. **Three sem hours**

An introduction to the process of analyzing, directing and staging plays; demonstration and practice. Laboratory hours by arrangement.

*Prereq: 100 Introduction to Theatre or permission of the department.*

#### 234 Stagecraft. **Three sem hours**

A study and application of the technical elements of play production with emphasis on stage mechanics, construction and scene painting. Laboratory hours will be arranged in order to insure adequate practical experience in the scenic arts and crafts.

*Prereq: 135 Play Production or permission of the department.*

#### 242 Fundamentals of Acting. **Three sem hours**

A study of the fundamental theories and techniques of acting. Major emphasis will be placed on theatre acting, but consideration will also be given to radio and television acting. Laboratory hours by arrangement.

*Prereq: Sophomore standing.*

#### 322 Theatre for Children. **Three sem hours**

A study of the development, philosophy and techniques of theatre for children with emphasis on dramatic literature for children and its staging.

*Prereq: One course in drama.*

#### 323 Improvisation. **Three sem hours**

Explorations of spontaneous dramatic playing through intensive exercises and drama games meant to generate greater individual freedom and self-discipline, as well as to expand resources and techniques for teaching and directing. Opportunities to lead experimental small-group sessions are available.

*Prereq: 222 The Child and Drama or departmental major or minor.*

#### 335 Play Direction. **Three sem hours**

An intensive study of the process of directing plays. Whenever possible, students in the course will direct a one-act play for public presentation. Laboratory hours by arrangement.

*Prereq: 135 Play Production or permission of the department.*

#### 370 Scene Design. **Three sem hours**

Includes the history of design in terms of stage scenery; an investigation of current trends, techniques and media of scene design and the practical execution of models and sketches by the student.

*Prereq: 234 Stagecraft, 135 Play Production or permission of the department.*

#### 375 Stage Makeup. **One sem hour**

The theory and techniques of theatrical makeup. Laboratory hours to be arranged.

#### 376 Stage Lighting. **Two sem hours**

Stage lighting: historical development, basic electrical theory, switchboards and lighting instruments, color theory, principles and practices in stage lighting. Laboratory hours to be arranged.

*Prereq: 234 Stagecraft, 135 Play Production or permission of the department.*

#### 377 Stage Costume: History and Theory. **Three sem hours**

A survey of the principles and practices of stage costume design from antiquity to the present.

*Prereq: 135 Play Production or permission of the department.*

#### 378 Stage Costume: Design and Construction. **Three sem hours**

The fundamentals of designing theatrical costumes; a study of specific construction problems found in making of period costumes.

*Prereq: 377 Stage Costume: History and Theory or permission of the department.*

#### 385 Dramatic Composition. **Three sem hours**

An examination of the elements of dramatic structure through the analysis and composition of works of various scope. (Emphasis on adult plays for the stage with special problems of drama for children and for the va broadcast media also considered.)

*Prereq: 135 Play Production or permission of the department.*

#### 386 Dramatic Writing. **Two sem hours**

Intensive concentration on the writing of a significant example of adult or children's drama for the stage or broadcast media.

*Prereq: 385 Dramatic Composition or permission of the department.*

**406 History of the Theatre.** **Three sem hours**  
A history of the physical theatre and the written drama from antiquity to the present. Emphasis on theatre architecture and stagecraft, including scenery, costumes and lighting.  
*Prereq: Junior standing or permission of the department.*

**425, 426, 427, 428 Honors Course in Theatre.** **One or two sem hours**  
Individual study and/or research in specialized areas of theatre. Open only to dramatic arts majors. *Regulations governing honors courses must be followed (see page 19).*

**499 Seminar in Theatre.** **Two sem hours**  
This course is designed to provide the student with opportunities to explore areas in theatre not covered in the regular course offerings.  
*Prereq: Open only to departmental seniors or by permission of the department.*

**167, 267, 367, 467 Theatre Practice.** **One sem hour each**  
Students who participate in extracurricular activities may, by special permission of the department, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities and the credits may be earned in one activity or in several activities. Admission to the activity does not insure credit.  
*Prereq: Permission of the department.*

### Drama for the Child and Adolescent

**133 Introduction to Theatre Crafts.** **Two sem hours**  
The principles and practical techniques of planning, constructing and coordinating the behind-the-scenes elements of play production (set pieces, lighting, costuming, make-up, sound, properties). Emphasis is on simple materials and techniques useable by students and children in school and recreational situations. This course is designed for non-dramatic arts majors.

**2 The Child and Drama.** **Three sem hours**  
A study of drama experience as intrinsic in human development. An introduction to spontaneous drama games exercises as a way of sharpening imagination, deepening interpersonal relations, and strengthening individual identity. Interpretation of such experience in learning and growth is emphasized.  
*Prereq: Sophomore standing.*

**2 Theatre for Children.** **Three sem hours**  
A study of the development, philosophy and techniques

of theatre for children, with emphasis on the relevant dramatic literature and its staging.  
*Prereq: One course in drama.*

**323 Improvisation.** **Three sem hours**  
Explorations of spontaneous dramatic playing through intensive exercises and dramatic games meant to generate greater individual freedom and self-discipline, as well as to expand resources and techniques for teaching and directing. Opportunities to lead experimental small group sessions are available.  
*Prereq: 222 The Child and Drama or departmental major or minor.*

**324 Oral Interpretation of Children's Literature.** **Three sem hours**  
A study of the selection, understanding and oral interpretation of literature for children. Experience in reading to children of various ages is provided.  
*Prereq: 207 Literature for Elementary Grades or departmental major or minor.*

**422 Independent Study in Dramatic Arts for Children.** **One sem hour**  
Individual projects, research or advanced reading programs in dramatic arts for children. Designed for students prepared to go beyond available course work. *By permission of the department.*

**423 Independent Study in Dramatic Arts for Children.** **Two sem hours**  
Individual projects, research or advanced reading programs in dramatic arts for children. Designed for students prepared to go beyond available course work. *By permission of the department.*

**424 Independent Study in Dramatic Arts for Children.** **Three sem hours**  
Individual projects, research or advanced reading programs in dramatic arts for children. Designed for students prepared to go beyond available course work. *By permission of the department.*

**168, 268, 368, 468 Interpretation.** **One sem hour**  
*(A available with a focus on oral interpretation of literature for the child and adolescent.)* Students who participate in extra-curricular activities may, with the approval of the professor in charge of the activity and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities and the credits may be earned in one activity or in several activities. Admission to the activity does not insure credit.  
*Prereq: 132 Interpretative Reading or permission of the department.*

# **COLLEGE OF BUSINESS**

Dean: Earl A. Roth

## **DEPARTMENTS**

**Accounting and Finance**

**Business Education**

**General Business**

**Management**

**Marketing**

**Bureau of Business Services  
and Research**

## BUSINESS CURRICULUMS

The College of Business provides professional curriculums for students contemplating administrative careers in business, government agencies and public administration, or as business teachers in educational systems. Related public service and research activities are conducted.

Educational programs leading to both the bachelor's and master's degrees give special emphasis to the behavioral and quantitative sciences approach in the development of analytical skills and problem solving techniques which can be applied to management problems. In addition to acquiring academic specialization in business administration, those persons who wish to be teachers of business subjects must complete a prescribed sequence of professional courses in the field of education.

Instructional emphasis is given to mathematical model building, systems analysis, computer application, decision-making simulation and research methodology. A minimum of sixty semester hours must be completed in economics, psychology, sociology, mathematics and other related liberal arts areas.

Educational programs are accredited by the North Central Association of Colleges and Universities and the American Association of Collegiate Schools of Business. The college is a member of the National Business Education Association.

A pre-professional business program is available for students planning to enter employment after two years of academic study. Enrollees receive a Certificate of Achievement upon the satisfactory completion of a program of study restricted to professional business courses. Students enrolled in this program may transfer to the four-year bachelor's degree program at any time during the first two years, or upon completion of 60 semester hours of academic study.

Information relative to graduate programs leading to master's degrees is presented in the graduate catalogue.

### Transfer Credit from Community and Junior Colleges

Community and junior college students who plan to study at Eastern Michigan University are urged to enroll in courses equivalent to 100-200 level courses offered in this College of Business. Community and junior college students should not enroll in 300 and 400 University level courses since transfer credit in such courses cannot be assured.

### Business Administration Curriculum

#### Bachelor of Business Administration Degree

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

#### Semester Hours

Group I Drama, Language, Literature and Speech. . . . .	5-8
121 or 124 Fundamentals of Speech. . . . .	2-3

Either of the following (see page 68) . . . . .	3-5
121 English Composition or a foreign language course (121 through 222)	
Group II Science. . . . .	17-18
One laboratory course from the biology, chemistry, geography or physics departments. . . . .	4-5
101 General Psychology. . . . .	3
Mathematics (Select one of the following options). . . . .	6-7
*Option I:	
118 Mathematical Analysis for Social Sciences I . . . . .	3
119 Mathematical Analysis for Social Sciences II. . . . .	3
**Option II:	
120 Calculus with Analytic Geometry I . . . . .	4
122 Elementary Linear Algebra. . . . .	2
***365 Business Statistics I. . . . .	3
Group III Social Science. . . . .	12
101 or 102 History of Civilization. . . . .	3
Either of the following: . . . . .	3
112 American Government or 202 State and Local Government 201, 202 Principles of Economics. . . . .	6
Humanities Area Requirements. . . . .	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A fine arts course in art, music or dramatic arts. . . . .	2-3
Either of the following: . . . . .	6
101, 102 Reading of Literature or 221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Any one of the following: . . . . .	3
180 Introduction to Logic 200 Types of Philosophy 201 The Comparative Study of Religion	
Group VI Practical Arts. . . . .	
Business Administration Core (Must be com- pleted by all majors by end of junior year) . . .	
215 Computers in Business. . . . .	3
240 Principles of Accounting. . . . .	3
241 Principles of Accounting. . . . .	3
302 Business Communication. . . . .	3
303 Legal Environment of Business. . . . .	3
353 Principles of Finance. . . . .	3
360 Principles of Marketing. . . . .	3
382 Introduction to Management. . . . .	3

*\*Students having a "B" average in high school mathematics courses through trigonometry may not Option I.*

*\*\*Students planning to pursue graduate study in business administration are encouraged to select Option II alternative advanced mathematics sequence may be required for students who have completed three or more years of high school mathematics with high achievement.*

*\*\*\*This course must be completed by the end of the year.*



490 Business Policy. . . . .	3
Academic Major (select one). . . . .	23-24
Accounting. . . . . (see page 125)	
General Business. . . . . (see page 131)	
Management. . . . . (see page 134)	
Marketing. . . . . (see page 136)	
Group VII physical Education and Health. . . . .	4
Physical education activity courses (8 act. hrs.)	
Note: Two semester hours of military science may apply toward this requirement.	
Electives. . . . .	25-19
Total. . . . .	124

*Students completing the above curriculum have met the major and minor requirements for graduation. No outside minor is needed.*

Students planning to continue study in some graduate school of business are urged to complete the following courses as electives:

- ECO 430 Aggregate Economics Analysis
- ECO 431 Intermediate Economic Analysis
- GBS 465 Business Statistics II

### Secretarial Administration Curriculum

#### Bachelor of Business Administration Degree

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities— is required of all students.

#### Semester Hours

Group I Drama, Language, Literature and Speech. . . . .	5-8
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68). . . . .	3-5
121 English Composition or a foreign language course (121 through 222)	
Group II Science. . . . .	17-18
One laboratory science course from the biology, chemistry, geography or physics departments. . . . .	4-5
101 General Psychology. . . . .	3
118 Mathematical Analysis for Social Sciences I . . . . .	3
119 Mathematical Analysis for Social Sciences II . . . . .	3
365 Business Statistics I. . . . .	3
Group III Social Science. . . . .	12
101 or 102 History of Civilization. . . . .	3
Either of the following. . . . .	3
112 American Government or 202 State and Local Government	
201, 202 Principles of Economics. . . . .	6
Humanities Area Requirements. . . . .	11-12
In addition to the courses above, the select-courses below from Groups I, III and IV must be taken to complete the Basic Studies.	
A fine arts course in art, music or dramatic arts. . . . .	2-3

Either of the following. . . . .	6
101, 102 Reading of Literature or 221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Any one of the following. . . . .	3
180 Introduction to Logic	
200 Types of Philosophy	
201 The Comparative Study of Religion	
Group VI Practical Arts. . . . .	50
Business Administration Core. . . . .	27
215 Computers in Business. . . . .	3
240 Principles of Accounting. . . . .	3
241 Principles of Accounting. . . . .	3
353 Principles of Finance. . . . .	3
360 Principles of Marketing. . . . .	3
382 Introduction to Management. . . . .	3
302 Business Communication. . . . .	3
303 Legal Environment of Business. . . . .	3
490 Business Policy. . . . .	3
Major Concentration. . . . .	23
Required. . . . .	19
222 Office Services. . . . .	4
326 Secretarial Procedures. . . . .	3
395 Office Management. . . . .	3
Secretarial Option . . . . .	nine hours
226 Shorthand Dictation. . . . .	3
227 Shorthand Speedbuilding. . . . .	3
325 Shorthand Transcription. . . . .	3
Management Option . . . . .	nine hours
384 Personnel Administration. . . . .	3
386 Organization Theory and Development (and one of the following)	
390 Management Systems. . . . .	3
482 Wage-Salary Administration. . . . .	3
487 Problems in Personnel Administration. . . . .	3
Electives. . . . .	4
224 Office Machines. . . . .	3
415 Records Administration. . . . .	2
401 Business Internship. . . . .	1
Group VII Physical Education and Health. . . . .	4
Physical education activity courses (8 act. hrs.). . . . .	4
Two semester hours of military science may apply on this requirement.	
Women: Must include 101	
Electives. . . . .	25-20
Total. . . . .	124

*Students completing the above curriculum have met the major and minor requirements for graduation. No outside minor is needed.*

### PRE-PROFESSIONAL BUSINESS PROGRAM (Two-Year)

The pre-professional business program has been specifically designed as a course of studies for those students who must limit their initial higher education experience to two years. Sixty-two semester hours are required for the completion of this program. A minimum of thirty-seven hours in business subjects provides effective training for early employment in business and industry. Students interested in the two-year pre-professional business program of study are encouraged to discuss it with the adviser chairman before enrollment.

Concentrated study is possible in one of the optional areas listed below. Students who successfully complete the program with an academic point average of 2.00 ("C") receive a Certificate of Achievement.

**Semester Hours**

Group I Drama, Language, Literature and Speech.....	5
121 English Composition.....	3
121 Fundamentals of Speech.....	2
Group III Social Science.....	3
201 Principles of Economics.....	3
Group VI Practical Arts.....	37-40
Business Technology Core.....	6
215 Computers in Business.....	3
240 Principles of Accounting.....	3
Major Concentration Areas (select one).....	31-34

**Secretarial**

Required.....	24
*121 Typewriting Applications.....	2
222 Office Services.....	4
*226 Shorthand Dictation.....	3
302 Business Communication.....	3
227 Shorthand Speedbuilding.....	3
325 Shorthand Transcription.....	3
326 Secretarial Procedures.....	3
401 Business Internship.....	1
415 Records Administration.....	2
Electives in Business.....	7-10

**Accounting**

Required.....	24
*121 Typewriting Applications.....	2
224 Office Machines.....	3
241 Principles of Accounting.....	3
302 Business Communication.....	3
303 Legal Environment of Business.....	3
340 Intermediate Accounting.....	3

342 Managerial Cost Accounting.....	3
395 Office Management.....	3
417 Business Internship.....	3
Electives in Business.....	

**Retailing**

Required.....	
121 Typewriting Applications.....	2
224 Office Machines.....	3
241 Principles of Accounting.....	3
360 Principles of Marketing.....	3
363 Retailing.....	3
365 Buyer Behavior.....	3
369 Advertising.....	3
382 Principles of Management.....	3
401 Business Internship.....	1
Electives in Business.....	7

**Group VII Physical Education and Health**

\*\*Non-veteran men: physical education activity courses (four actual hours)..... 7  
 Women: physical education activity courses (four actual hours)..... 2

Electives..... 18  
 Total..... 18

\*Students having deficiencies in elementary typewriting and/or beginning shorthand may register for 120 Typewriting Techniques and 225 Shorthand Theory in partial fulfillment of general elective requirements. When students possess proficiency equivalent to course requirements in 121 Typewriting Applications and/or Shorthand Dictation, these courses will be waived and substitute courses will be included in the curriculum.

**GRADUATE STUDY**

The College of Business offers graduate work leading to the master's degrees in business administration and business education. For descriptions of graduate courses and programs in the College of Business, please consult the Graduate Catalog.

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## ACCOUNTING AND FINANCE

Department Head: William L. Kimball

Associate Professors: William C. Bryan, Charles A. Carroll, John W. Keros, Allen I. Schwadron, Maurice E. Stark, John D. Stoffels

Assistant Professors: Gordon L. Chapman, Fred T. Gilson, Herbert M. Kennedy, Geraldine M. Kruse, John F. Lafferty, Albert E. Rizkalla

Instructor: Dale A. Davis

### ACCOUNTING

Accounting majors are prepared for professional careers in public accounting, industrial accounting and institutional accounting. The work of an accountant includes financial statement preparation, business budgeting, taxation advice and auditing of financial records. Because of the increasing emphasis on communication in business, students majoring in accounting are encouraged to elect courses in English and speech beyond the core requirements.

Accounting and finance majors who wish to become certified public accountants (public accounting) or certified financial managers (industrial or governmental accounting) may, upon graduation, sit for the uniform national examinations leading to entrance into these professional societies.

#### Major in Accounting

(To be completed in conjunction with the Bachelor of Business Administration degree).

	Semester Hours
Total specialized hours required.....	24
Required.....	15
340 Intermediate Accounting.....	3
341 Intermediate Accounting.....	3
342 Managerial Cost Accounting.....	3
344 Tax Accounting.....	3
445 Auditing.....	3
Elective Courses.....	9
304 Law of Business Enterprises.....	3
343 Advanced Cost Accounting.....	3
346 Governmental Accounting.....	3
348 Practicum in Accounting.....	3
440 Advanced Accounting.....	3
441 Internship in Public Accounting.....	1
444 Advanced Tax Accounting.....	3
446 Financial Information Systems.....	3
447 Contemporary C.P.A. Problems.....	3
452 Analysis of Financial Statements.....	3
497, 8, 9 Directed Studies.....	1, 2, 3

#### Minor in Accounting (a non-teaching minor for non-business majors)

Students who are non-business majors may elect to minor in accounting. These students must complete the following program:

Total specialized hours required.....	21
Required.....	15
240 Principles of Accounting.....	3
241 Principles of Accounting.....	3
343 Legal Environment of Business.....	3
340 Intermediate Accounting.....	3
344 Tax Accounting.....	3
Elective Courses.....	6
15 Computers in Business.....	3

341 Intermediate Accounting.....	3
342 Managerial Cost Accounting.....	3
343 Advanced Cost Accounting.....	3
346 Governmental Accounting.....	3
444 Advanced Tax Accounting.....	3
446 Financial Information Systems.....	3

### FINANCE

The finance program is designed to prepare candidates for careers in banks and other financial institutions, corporation finance and the security markets. Finance majors interested in sitting for the Chartered Financial Analyst examinations should elect 452 Analysis of Financial Statements.

Students in finance are encouraged to elect additional hours of study in accounting, economics and mathematics.

#### Major in Finance

(To be completed in conjunction with the Bachelor of Business Administration degree).

Total specialized hours required.....	24
Required courses.....	12
354 Investments.....	3
355 Intermediate Finance Theory.....	3
450 Problems in Finance Management.....	3
452 Analysis of Financial Statements.....	3
Elective Courses.....	12
120 Calculus with Analytic Geometry I.....	4
306 Insurance.....	3
342 Managerial Cost Accounting.....	3
344 Tax Accounting.....	3
430 Aggregate Economic Analysis.....	3
431 Intermediate Economics Analysis.....	3
451 Portfolio Management.....	3
453 Commercial Banking.....	3
465 Business Statistics II.....	3

#### Minor in Finance (A non-teaching minor for nonbusiness majors)

Non-business majors may elect to minor in finance. Students must complete 21 semester hours of credit per the following program:

	Semester Hours
Finance minor.....	21
Required.....	12
240 Principles of Accounting.....	3
241 Principles of Accounting.....	3
353 Principles of Finance.....	3
355 Intermediate Financial Theory.....	3
Elective Courses.....	9
354 Investments.....	3
450 Problems in Financial Management.....	3
451 Portfolio Management.....	3
452 Analysis of Financial Statements.....	3
453 Commercial Banking.....	3

### COURSES

#### Accounting

**240 Principles of Accounting. Three sem hours**  
Thorough study of the accounting cycle. The course centers on the way accounting serves to develop useful information about economic organizations. Problems of valuation and statement presentation of selected assets

and liabilities are considered. Problems of accounting for ownership equity.

**241 Principles of Accounting.** **Three sem hours**  
Expense analysis and cost accounting; use of accounting data to achieve managerial goals; influence of taxes on business decisions is introduced. Special attention is given to the problems that arise in interpreting accounting data.  
*Prereq: 240 Principles of Accounting.*

**244 Personal Tax Accounting.** **Two sem hours**  
Introduction to federal and state income and social security tax problems of individuals. Practice on preparation of individual tax returns. (Credit toward a degree will not be permitted for both Accounting 244 and Accounting 344.) (Business Education majors may substitute this course for 344 Tax Accounting with permission of their department head.)  
*Prereq: 240 Principles of Accounting or junior standing.*

**340 Intermediate Accounting.** **Three sem hours**  
Review of recording and reporting procedures; accounting concepts and theories guiding the valuation and classification of current assets, plant assets, intangible assets and current liabilities.  
*Prereq: 241 Principles of Accounting.*

**341 Intermediate Accounting.** **Three sem hours**  
Covers capital stock, rights, options and retained earnings; long term liabilities; income tax allocation; long term investments; prior period adjustments; funds flow; price level accounting; consignments; installment sales.  
*Prereq: 340 Intermediate Accounting.*

**342 Managerial Cost Accounting.** **Three sem hours**  
Accounting information for use in planning objectives and in controlling operations. A framework for measuring managerial performance is developed through an analytic treatment of cost behavior under dynamic conditions by employing such devices as cost-volume-profit relationships, flexible budgeting and standards (variances).  
*Prereq: 241 Principles of Accounting.*

**343 Advanced Cost Accounting.** **Three sem hours**  
Covers some cost concepts on an advanced level such as standard costs and variance analysis; responsibility accounting, direct costing, overhead allocation, break-even; product pricing through return on investment methods; divisional income measurement; forecasting with statistical models; capital budgeting; and applications of mathematics to cost accounting problems.  
*Prereq: 342 Managerial Cost Accounting and 365 Business Statistics I.*

**344 Tax Accounting.** **Three sem hours**  
Covers history of the income tax; the tax legislative process; tax research; income and loss realization and recognition; capital gains and losses; exclusions; deductions; losses; exemptions; rates, personal tax returns.  
*Prereq: 340 Intermediate Accounting or 452 Analysis of Financial Statements.*

**346 Governmental Accounting.** **Three sem hours**  
Covers accounting philosophy for nonprofit organizations; principles of fund accounting; the budget process including program budgeting; institutional (college, hospitals, welfare agency) accounting; internal control; and data processing.  
*Prereq: 241 Principles of Accounting.*

**348 Practicum in Accounting.** **Three sem hours**  
Specialized accounting topics are studied in relation to changes in the practice of accounting and its regulation by government agencies. New teaching methods encouraged.  
*Prereq: 341 Intermediate Accounting.*

**440 Advanced Accounting.** **Three sem hours**  
Covers partnership organization, change, and liquidation; consolidation accounting; fiduciary accounting; introduction to governmental accounting.  
*Prereq: 341 Intermediate Accounting.*

**441 Internship in Public Accounting.** **One sem hour**  
Carefully supervised employment in public accounting to better understand the accounting principles and procedures which are taught in the classroom. Pass grade.  
*Prereq: Permission of the department.*

**444 Advanced Tax Accounting.** **Three sem hours**  
Covers tax law applicable to partnerships and corporations reorganization, operation, distributions, reorganization and liquidation.  
*Prereq: 344 Tax Accounting.*

**445 Auditing.** **Three sem hours**  
Covers audit standards, professional responsibility, internal control evaluation, statistical sampling and use of EDP systems.  
*Prereq: 18 semester hours of accounting and junior standing.*

**446 Financial Information Systems.** **Three sem hours**  
Concepts of a responsive information system, including principles of design, profitability and responsibility accounting and control. Description of typical accounting systems and procedures within the business enterprise. Application of data processing in the accounting system.  
*Prereq: 215 Computers in Business and 342 Managerial Cost Accounting or permission of the department.*

**447 Contemporary C.P.A. Problems.** **Three sem hours**  
Analysis of current accounting problems faced by the C.P.A. profession. Covers audit, legal liability, ethics, theory and practice.  
*Prereq: 440 Advanced Accounting.*

**497, 498, 499 Directed Studies.**  
**One, two and three sem hours**  
Directed study of a problem or group of problems in accounting and finance not otherwise treated in departmental courses.  
*Prereq: Permission of the department.*

## Finance

**353 Principles of Finance.** **Three sem hours**  
Financing and organizing business enterprise; interpreting financial statements, sources and uses of funds; financing and sale of securities, income disbursements and dividend policies.  
*Prereq: 241 Principles of Accounting and 105 Calculus A or 118 Mathematical Analysis of Services I.*

**354 Investments.** **Three sem hours**  
Development and placement of investments in

and their relationship to economic, legal and social institutions. Topics include bonds, stocks, security markets, security market operation, new security issues, investment policies, U.S. Government, state and municipal obligations.

*Prereq: 119 Mathematical Analysis for Social Services II and 353 Principles of Finance.*

**355 Intermediate Financial Theory. Three sem hours**  
The course of study focuses on the theory of financial management, internal financial management and control institutional relationships.

*Prereq: 119 Mathematical Analysis for Social Services II and 353 Principles of Finance.*

**350 Problems in Financial Management. Three sem hours**  
Study and discussion through the case method of contemporary developments in financial theory and practical applications. Students engage in research in the area of their choice.

*Prereq: 355 Intermediate Financial Theory.*

**451 Portfolio Management. Three sem hours**

An advanced course for professional investment managers covering economic policy and forecasting, security valuation, technical analysis, portfolio methods and procedures.

*Prereq: 354 Investments or equivalent.*

**452 Analysis of Financial Statements. Three sem hours**

Analysis and interpretation of the financial statements and reports of various types of businesses and industries. Effect of price-level changes is emphasized.

*Prereq: 341 Intermediate Accounting or 355 Intermediate Financial Theory.*

**453 Commercial Banking. Three sem hours**

Practices, policies and problems of commercial bank management and operation. capital adequacy, loan and investment policy, liquidity and profit maximization.

*Prereq: 353 Principles of Finance.*





## BUSINESS EDUCATION

Department Head: Robert A. Ristau

Professors: Rosemary L. DeLoach, Charles H. Duncan,  
Russell L. Ogden, Mary F. Robek

Associate Professors: Normajean I. Anderson, Rosetta  
F. Wingo

Assistant Professors: Albert W. Belskus, Louis R.  
Graziano, William C. Joy

The Business Education Department offers three categories of course offerings:

- (1) The business teacher education program, a four-year course of specialized study leading to the Bachelor of Business Education degree.
- (2) The secretarial administration program, a four-year course of study leading to the Bachelor of Business Administration degree.
- (3) The business technology program, a two-year course of study leading to a certificate of graduation.

The various requirements for successfully completing these programs are given in the information that follows.

## BUSINESS TEACHER EDUCATION

### Major in Business Teacher Education

The business teacher education program prepares a student to teach business subjects in junior and senior high schools. Upon completion of the program, the student is granted his degree and a Michigan Secondary School Provisional Teacher's Certificate. In addition, a Provisional Vocational Certificate may be earned if work-experience requirements in the State Plan have been met. The study program in business teacher education consists of a broad background in business with specialization in two or more areas in which the student plans to teach: accounting, distributive education, general business, office administration and data processing and shorthand.

All majors in business teacher education must complete the general requirements for the Bachelor of Business Education degree as described on page 150 in addition to certain required courses and electives from major areas of concentration, as listed below.

	Semester Hours
Areas of Concentration	
(Select two areas, or select one area plus one subject minor of 20 semester hours. ....	9-18
<b>Accounting</b>	
340 Intermediate Accounting. ....	3
341 Intermediate Accounting. ....	3
344 Tax Accounting. ....	3
<b>Distributive Education</b>	
363 Retailing. ....	3
368 Marketing Strategy. ....	3
461 Sales Management. ....	3
<b>General Business</b>	
304 Law of Business Enterprises. ....	3
306 General Insurance. ....	3
308 Personal Finance. ....	3
<b>Office Administration and Data Processing</b>	
316 Programming of Business Information Systems. ....	3
395 Office Management. ....	3
415 Records Administration. ....	2

### Shorthand

*226 Shorthand Dictation. ....	3
227 Shorthand Speedbuilding. ....	3
325 Shorthand Transcription. ....	3

### Minor in Business Teacher Education

(20 semester hours)

The business teacher education minor is designated for non-business students who have elected to major in some other area of education. Such students should select 364, 365 or 466 to their education course requirements.

Students majoring in business administration departments who wish to earn a teaching certificate must complete two of the minor area groups shown below in addition to the Group IV education courses required for business education majors.

Education students who choose to minor in business teacher education must specialize in one of the following groups:

### Accounting

	Semester Hours
240 Principles of Accounting. ....	3
241 Principles of Accounting. ....	3
303 Legal Environment of Business. ....	3
340 Intermediate Accounting. ....	3
341 Intermediate Accounting. ....	3
344 Tax Accounting. ....	3
Electives in Accounting. ....	2

### Distributive Education

360 Principles of Marketing. ....	3
363 Retailing. ....	3
368 Marketing Strategy. ....	3
369 Advertising. ....	3
401 Business Internship. ....	1
461 Sales Management. ....	3
Electives in Business. ....	4

### General Business

240 Principles of Accounting. ....	3
303 Legal Environment of Business. ....	3
304 Law of Business Enterprises. ....	3
306 General Insurance. ....	3
308 Personal Finance. ....	3
382 Introduction to Management. ....	3
Electives in Business. ....	2

### Office Administration

215 Computers in Business. ....	3
222 Office Services. ....	3
240 Principles of Accounting. ....	3
316 Programming of Business Information Systems. ....	3
395 Office Management. ....	3

*\*Students having deficiencies in elementary typewriting and/or beginning shorthand may register for 120 Typewriting Techniques and/or 225 Shorthand Theory for partial fulfillment of general elective requirements. Students possess proficiency equivalent to course numbers in 121 Typewriting Applications and/or 225 Shorthand Dictation these courses will be waived and substitute courses will be included in the curriculum.*

415 Records Administration. . . . .	2
Electives in Business. . . . .	2
	20
<b>Secretarial</b>	
*222 Office Services. . . . .	4
224 Office Machines. . . . .	3
240 Principles of Accounting. . . . .	3
227 Shorthand Speedbuilding. . . . .	3
325 Shorthand Transcription. . . . .	3
326 Secretarial Procedures. . . . .	3
Electives in Business. . . . .	1
	20

**SECRETARIAL ADMINISTRATION**

**Major in Secretarial Administration**

Majors in secretarial administration are required to complete the basic core in business administration outlined on page 123 and, in addition, complete the area of concentration as given below.

	<b>Semester Hours</b>
Major Concentration. . . . .	23
Required. . . . .	19
*222 Office Services. . . . .	4
326 Secretarial Procedures. . . . .	3
395 Office Management. . . . .	3
Secretarial Option	9
*226 Shorthand Dictation. . . . .	3
227 Shorthand Speedbuilding. . . . .	3
325 Shorthand Transcription. . . . .	3
Management Option	9
Selected from:	
384 Personnel Administration. . . . .	3
386 Organization Theory and Development . . . . .	3
And one of the following:	
390 Management Systems. . . . .	3
482 Wage-Salary Administration. . . . .	3
487 Problems in Personnel Administration . . . . .	3
Electives. . . . .	4
224 Office Machines. . . . .	3
345 Unit Record Equipment. . . . .	2
401 Business Internship. . . . .	1

**Minor in Secretarial Administration (A non-teaching minor)**

Non-business majors may fulfill the requirements for a minor in secretarial administration by completing the following courses:

	<b>Semester Hours</b>
Secretarial Administration Minor (non-business majors). . . . .	21
*222 Office Services. . . . .	4
*226 Shorthand Dictation. . . . .	3

\*Students having deficiencies in elementary typewriting and/or beginning shorthand may register for 120 Typewriting Techniques and 225 Shorthand Theory in partial fulfillment of general elective requirements. When students possess proficiency equivalent to course requirements in 121 Typewriting Applications and/or 226 Shorthand, these courses will be waived and substitute courses will be included in the curriculum.

227 Shorthand Speedbuilding. . . . .	3
240 Principles of Accounting. . . . .	3
325 Shorthand Transcription. . . . .	3
326 Secretarial Procedures. . . . .	3
415 Records Administration. . . . .	2

**COURSES**

**Business Education**

- 120 Typewriting Techniques. Two sem hours**  
 Development of basic techniques and manipulative skill for efficient machine operation. Speed and control emphasized. Introduction to applications through centering, tabulating and structuring typewritten material for various purposes. *No credit is given to students who have received credit for one year of high school typewriting.* Lab fee required.
- 121 Typewriting Applications. Two sem hours**  
 Continued emphasis on skill development. Application of skill to typing special communication forms, letters, manuscripts and tabulated reports. Attention is given to improving form and punctuation. Lab fee required.  
*Prereq: 120 Typewriting Techniques or one year of high school typewriting.*
- 222 Office Services. Four sem hours**  
 Using the typewriter as a technical tool in the preparation of governmental, legal, medical and financial reports and stressing the use of such auxiliary equipment as ink, spirit and offset duplicators, voice transcribers and mimeoscopes. Lab fee required.  
*Prereq: 121 Typewriting Applications or equivalent.*
- 224 Office Machines. Three sem hours**  
 Application of office machines to the solution of mathematical problems encountered in business. Operational skill developed on rotary, printing and electronic calculators. Lab fee required.
- 225 Shorthand Theory. Three sem hours**  
 An introduction to the alphabet, brief forms and theory through the reading and writing of Gregg shorthand. *No credit is given to students who have received credit for shorthand in high school.*
- 226 Shorthand Dictation. Three sem hours**  
 Emphasis on the development of speed in taking dictation and the typewriting of transcripts. Thorough review of brief forms and theory principles.  
*Prereq: 225 Shorthand Theory or one year of high school shorthand.*
- 227 Shorthand Speedbuilding. Three sem hours**  
 Extended speed dictation including specialized business and professional vocabularies. Emphasis on a correct transcript including punctuation and spelling.  
*Prereq: 226 Shorthand Dictation or one and one-half years of high school shorthand and a typewriting speed of 50 net words per minute.*
- 325 Shorthand Transcription. Three sem hours**  
 Further development of transcription skills. Application of shorthand, typewriting and English skills to produce business communications neatly and accurately at an acceptable rate.  
*Prereq: 222 Office Services and 227 Shorthand Speedbuilding.*

**326 Secretarial Procedures.** **Three sem hours**  
Theory of secretarial procedures. Emphasis on office efficiency, human relations, executive thinking and secretarial ethics.

*Prereq: 222 Office Services.*

**364 Methods of Teaching General Business Subjects.**

**Two sem hours**

Methods in teaching bookkeeping, general business and business law with application to classroom situations. Emphasis on objectives, lesson planning, techniques of teaching and sources of materials.

*Prereq: 241 Principles of Accounting, 360 Principles of Marketing, 303 Law of Commercial Transactions, and 302 Educational Psychology. A "C" average in all business subjects taken at Eastern Michigan University is required before enrollment.*

**365 Methods of Teaching Secretarial Subjects.**

**Two sem hours**

Methods of teaching typewriting, shorthand or office practice with applications to classroom situations. Emphasis on objectives, lesson planning, techniques of teaching and sources of materials.

*Prereq: 222 Office Services, 224 Office Machines, 227 Shorthand Speedbuilding (non-secretarial students are exempt from 227), and 302 Educational Psychology. A "C" average in all business subjects taken at Eastern Michigan University is required before enrollment.*

**395 Office Management.**

**Three sem hours**

Office problems from the **point** of view of the adminis-

trator. Consideration given to office organization, physical facilities, nature of office work, personnel relations and control of office output.

*Prereq: 382 Introduction to Management.*

**401 Business Internship.**

**One sem hour**

On-the-job experience in performing operational activities or in executing managerial and supervisory functions in the fields of accounting, marketing or secretarial. At least nine hours of weekly practical work experience must be gained with attendance at a one-hour weekly seminar. *Required for all business education students unless waived. Open to business education, secretarial administration and pre-professional majors only.*

**415 Records Administration.**

**Two sem hours**

A study of management methodology in records, control costs, protection, retention, retrieval and disposal. Emphasizes records administration as a management tool.

*Prereq: 395 Office Management.*

**466 Methods and Materials in Teaching Distributive Education.**

**Two sem hours**

Techniques and practices utilized in teaching distributive education in secondary schools, community colleges and in adult evening schools.

*Prereq: 241 Principles of Accounting, 360 Principles of Marketing, 363 Retailing, 368 Marketing Strategy and 302 Educational Psychology. A "C" average in all business subjects taken at Eastern Michigan University is required before enrolling.*



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# GENERAL BUSINESS

**Department Head:** Roger E. Hawkins  
**Professors:** Leland Brown, W. Oscar Collins, Robert I. Hislop  
**Associate Professors:** James H. Conley, Thomas M. Johnson, Robert L. Minter, John V. Sauter  
**Assistant Professors:** Sergio Antiochia, Robert H. Holland, David S. Howe, John D. Hurd, William E. Judnick, Asad S. Khailany, C. John Meeske, Larry C. Peppers, Pamela J. Schneider

The General Business Department teaches a variety of courses that provide students a view of the business entity and how it operates. General business students are exposed to the fundamentals of business and the technological tools of business.

Specifically, the general business program is designed to fit the needs of three different groups of students.

## MAJORS AND MINORS

### A General Business Major:

For those students who do not wish to specialize in a particular academic area, the general business major provides a broad background in business administration that will equip them for a variety of positions in business and industry. In addition to the basic courses in business administration required of all business majors, each student selects representative courses in accounting, finance, management, marketing and general business that will contribute to his or her educational and vocational objectives.

### Computer Systems:

The General Business Department offers a major in computer systems for those students who are interested in the field of business information and computer systems and related quantitative methods. This major provides the student with a comprehensive study of computers, quantitative methods, systems analysis and application to the functional areas of business. This course of study includes such topics as applied computer science analysis and design, designing computer information systems and programming of computer systems.

### Public Administration:

Students interested in public administration should pursue the general business major and contact the department head for developing a course of study.

### Business Major (23 Semester Hours)

To be completed in conjunction with the Bachelor of Administration degree):

#### Semester Hours

General Business Area of Concentration.....	23
Required.....	12
304 Law of Business Enterprises.....	3
306 General Insurance.....	3
354 Investments.....	3
300 or 400 Course in General Business.....	3
Restricted Electives.....	9
Get at least one course from three of the following four areas)	

### Accounting and Finance

340 Intermediate Accounting.....	3
341 Intermediate Accounting.....	3
343 Managerial Cost Accounting.....	3
344 Tax Accounting.....	3
355 Intermediate Financial Theory.....	3
453 Commercial Banking.....	3

### General Business

316 Programming of Business Information Systems.....	3
402 Business Report Writing.....	3
403 Labor Law.....	3
406 Life and Health Insurance.....	3
407 Property and Liability Insurance.....	3
415 Design of Computer-Based Information Systems.....	3
465 Business Statistics II.....	3

### Management

384 Personnel Administration.....	3
386 Organization Theory and Development.....	3
390 Management Systems.....	3
394 Production Management.....	3
399 Small Business Management.....	3
480 Management Responsibility in Society... ..	3

### Marketing

368 Marketing Strategy.....	3
369 Advertising.....	3
374 Industrial Marketing.....	3
472 International Business.....	3
470 Marketing Research.....	3
475 Marketing Management.....	3
Electives in Business Administration.....	2

### General Business Minor (20 semester hours)

(a non-teaching minor for non-business majors)

#### Semester Hours

Required Courses.....	9
240 Principles of Accounting.....	3
241 Principles of Accounting.....	3
303 Legal Environment of Business.....	3
Electives from the following.....	11
215 Computers in Business.....	3
302 Business Communication.....	3
304 Law of Business Enterprises.....	3
306 General Insurance.....	3
316 Programming of Business Information Systems.....	3
353 Principles of Finance.....	3
354 Investments.....	3
360 Principles of Marketing.....	3
382 Introduction to Management.....	3
402 Business Report Writing.....	3

### Business Computer Systems Major (23-24 Semester Hours)

(To be completed in conjunction with the Bachelor of Business Administration degree).

#### Semester Hours

Required:.....	15
316 Programming Business Information Systems.....	3
317 Simulation and Systems Analysis.....	3
415 Design of Computer-Based Information Systems.....	3

417 Administration of Computer-Based Information Systems . . . . .	3
418 Computers in Business Decision-Making Restricted Electives. . . . .	3 3
238 (Mathematics) Computer Programming Applications. . . . .	3
446 (Accounting) Financial Information Systems . . . . .	3
Electives in business administration and mathematics. . . . .	5-6
<b>Business Computer Systems Minor (21 Semester Hours)</b>	
	<b>Semester Hours</b>
	21
Required: . . . . .	15
215 Computers in Business. . . . .	3
240 Principles of Accounting. . . . .	3
316 Programming Business Information Systems . . . . .	3
382 Introduction to Management. . . . .	3
415 Design of Computer-Based Information Systems or	
418 Computers in Business Decision-Making	3
Electives from the following: . . . . .	6
317 Simulation and Systems Analysis. . . . .	3
337 (Mathematics) Computer Programming Languages . . . . .	3
417 Administration of Computer-Based Information Systems . . . . .	3
415 Design of Computer-Based Information Systems or	
418 Computers in Business Decision-Making	3
446 (Accounting) Financial Information Systems . . . . .	3

**COURSES**

**100 Business Enterprise: Theory and Practice.**

**Three sem hours**

This course is designed to examine the business enterprise system as illustrated by the American corporation. It identifies specific principles and practices essential for making various forms of business enterprises successful economic and social phenomena. It assists the individual student in determining whether business enterprise represents an attractive career opportunity and way of life. *Open to all freshmen and sophomores and non-business upper-classmen.*

**119 Mathematical Analysis for Social Sciences II.**

**Three sem hours**

(See Department of Mathematics).

**215 Computers in Business.**

**Three sem hours**

Basic elements of computer hardware, software and programming and the use of the computer in business data processing and decision making. Students will develop and execute a number of programs using the Fortran programming language.

*Prereq: 119 Mathematical Analysis for Social Sciences II. Credit will not be given for both 215 Computers in Business and Mathematics 236 Introduction to Computer Programming.*

**302 Business Communications.**

**Three sem hours**

Study of principles, elements and practices underlying administrative communication. Particular attention given to the thinking and creative processes involved in problem

solving. Emphasis on the psychology, planning and transmission of business information.

*Prereq: Junior standing or permission of the department.*

**303 Legal Environment of Business.**

**Three sem hours**

The nature of law, the judicial system and legal procedure. Basic ideas of the law of crimes and torts. Enforceability of contractual arrangements, sanctions for breach, justifiable excuses for non-performance. Sale of goods and other transactions under the Uniform Commercial Code. Reconciling the interests of parties to business transactions, including customers, dealers, managers, stockholders and the public.

*Prereq: Junior standing or permission of the department.*

**304 Law of Business Enterprises.**

**Three sem hours**

Legal problems of the business enterprises. The relationships of employer and employee, principal and agent, master and servant. Special advantages of corporations and partnerships. Legal problems of corporations, including rights and powers of directors and stockholders. Financial transactions, the law of bills and notes and creditors' rights.

*Prereq: 303 Legal Environment of Business.*

**306 General Insurance.**

**Three sem hours**

An introduction to the basic principles, concepts and understandings of the major types of insurance property and allied lines, casualty, life, health and social insurance. Emphasis is given to the identification and methods of handling personal and business risks.

*Prereq: Junior standing or permission of the department.*

**308 Personal Finance.**

**Three sem hours**

Money management, including budgeting, consumer credit and banking facilities, investments, including savings, insurance securities and real estate; wills and trusts; federal income taxes. Designed for teachers of high school general business courses, but of value to others, especially to married students. Does not apply toward accounting and finance major.

*Prereq: Junior standing or permission of the department.*

**309 Real Estate Principles and Practices.**

**Three sem hours**

General characteristics of real estate including land economics, real estate theory and markets, financial instruments, legal aspects, organizations for financing, appraisals, risk evaluation and federal legislation.

*Prereq: Junior standing or permission of the department.*

**316 Programming of Business Information Systems.**

**Three sem hours**

Programming languages and techniques typically encountered in computer-based business information systems. Includes a detailed study of the COBOL business-oriented programming language, data file organization and processing methods.

*Prereq: 215 Computers in Business or permission of department.*

**317 Simulation and Systems Analysis.**

**Three sem hours**

Computer-based models and simulation techniques business analysis and decision-making. Includes analytical development and computer implementation of simulation models of various types of business processes systems. Each student will use the computer to construct and process models of various degrees of sophistication.



including a term project related to the student's major area of interest.

*Prereq: 215 Computers in Business and 365 Business Statistics I.*

**365 Business Statistics I. Three sem hours**

Elementary statistics with emphasis on business, economic and sociological applications. Averages, dispersion, sampling, time series and correlation. (May be used to satisfy the Group II requirements.)

*Prereq: Junior standing and 119 Mathematical Analysis for Social Sciences II.*

**401 Internship Program. One sem hour**

Directed full-time work experience in the general business or business computer systems units of a business organization. This course may be repeated for a maximum total of three hours.

*Prereq: Major and permission of the department.*

**402 Business Report Writing. Three sem hours**

Study of principles and practices of business report writing required of men and women in their professional careers in business, industry, education and government. Emphasis is on concepts, their illustrations and applications. Attention given to the creative and functional aspects in understanding the problem, gathering and organizing data and presenting reports for management, employees and the public.

*Prereq: 302 Business Communication.*

**403 Labor Law. Three sem hours**

Designed to present the legal framework within which the business (or public) manager must make personnel and labor relations decisions; primary emphasis on labor relations, showing historical development of government policies and outlining major problem areas; limited coverage of labor standards and related matters.

*Prereq: 303 Legal Environment of Business.*

**406 Life and Health Insurance. Three sem hours**

A study of the purposes, uses and role of life insurance in our society. Major topics covered are nature and uses, legal aspects, types of policies, contract provisions, rate-making company organization and operation, underwriting practices and regulation.

*Prereq: 306 General Insurance or permission of the department.*

**407 Property and Liability Insurance. Three sem hours**

A study of the principles and practices of property and

liability insurance. Primary emphasis is on developing an understanding of the various property and liability insurance contracts and their uses. Role of risk manager in handling personal and business risk is stressed.

*Prereq: 306 General Insurance or permission of the department.*

**415 Design of Computer-Based Information Systems.**

**Three sem hours**

Analysis and design of computer-based business information systems. Analysis of information system requirements, design approaches, processing methods and data management.

*Prereq: 316 Programming of Business Information Systems or permission of the department.*

**417 Administration of Computer-Based Information Systems.**

**Three sem hours**

Study of the overall development of information systems with emphasis on integrated systems which support management planning and control; the flows and networks of information in organizations within a total systems framework technology.

*Prereq: 215 Computers in Business.*

**418 Computer Systems in Business Decision-Making.**

**Three sem hours**

This course presents computers and information systems as a decision making resource. Software packages, computer based decision models, peripheral equipment and computer system configurations suited for decision making are considered. Concepts such as decision trees, mathematical programming, CPM-PERT and management simulation games are presented within an integrated systems framework.

*Prereq: 215 Computers in Business and 365 Business Statistics I.*

**465 Business Statistics II. Three sem hours**

Testing of hypotheses, power functions and Bayesian inference. Chi squares, F and t distributions; analysis of variance. Index numbers and time series analysis. Simple and multiple regression and multiple correlation.

*Prereq: 365 Business Statistics I.*

**497, 498, 499 Independent Study.**

**One, two and three sem hours**

Directed study of a problem or group of problems in computer based information systems or selected general business topic not otherwise treated in departmental courses.

*Prereq: Permission of the department.*

## MANAGEMENT

**Department Head:** Claude I. Shell, Jr.

**Professors:** Lincoln W. Deihl, Floyd A. Patrick

**Associate Professors:** Jagdish T. Danak, Donald W. Magoon, Robert C. McCoy

**Assistant Professors:** Nicholas J. Beltsos, Douglas D. Cantrell, Alfred H. Jantz, Fat-hi F. Sokkar

Management's primary concern is with organization and maximization of efficiency in organized activities. The management curriculum is designed to provide the student with the necessary foundation to acquire an understanding of the problems of organizing human resources and activities. This will enable him to lend intelligent support and guidance to the enterprise system.

The management program seeks to demonstrate causal relationships in policy formulation, decision-making and productivity through utilization of the scientific method in the initiation and evaluation of various aspects of organizational practice and behavior. Embodied in the management approach to the solution of business problems is the study of organization theory and administration and a concern for the relevance of social and psychological elements which impinge upon the policy-making process.

Management majors will choose a concentration in either personnel-industrial relations or production-operations research. Because of the nature of the field of management, students are strongly urged to elect as many courses as possible in the supportive areas of sociology, psychology, economics and mathematics.

### MAJOR AND MINOR

**Management Major** (24 Semester hours)

(To be completed in conjunction with the Bachelor of Business Administration degree).

	Semester Hours
Required. . . . .	9
386 Organization Theory and Development	3
394 Production Management or	
491 Operations Research and Analysis . .	3
480 Management Responsibility in Society. . .	3
Concentrations (the student should select one of the two following concentrations)	
Personnel-Industrial Relations. . . . .	9
384 Personnel Administration. . . . .	3
482 Wage and Salary Administration. . . . .	3
487 Problems in Personnel Administration. . .	3
General electives. . . . .	6
Production-Operations Research. . . . .	9
491 Operations Research and Analysis. . . . .	3
494 Quantitative Techniques in Production. . .	3
317 Simulation and Systems Analysis or	
466 Marketing Models. . . . .	3
General Electives. . . . .	6
General Electives (Any of the following courses not taken as part of the core or area of concentration)	
342 Managerial Cost Accounting. . . . .	3
384 Personnel Administration. . . . .	3
390 Management Systems. . . . .	3
394 Production Management. . . . .	3

396 Materials Procurement and Inventory Control . . . . .	3
399 Small Business Management. . . . .	3
401 Management Internship. . . . .	1
403 Labor Law. . . . .	3
482 Wage and Salary Administration. . . . .	3
487 Problems in Personnel Administration. . . . .	3
491 Operations Research and Analysis . . . . .	3
494 Quantitative Techniques in Production. . . . .	3
497 Independent Study. . . . .	1
498 Independent Study. . . . .	2
499 Independent Study. . . . .	3

### Management Minor

	Semester Hours
Management Minor (for non-business majors)	
Required. . . . .	9
240 Principles of Accounting. . . . .	3
360 Principles of Marketing. . . . .	3
382 Introduction to Management. . . . .	3
Electives. . . . .	12
215 Computers in Business. . . . .	3
384 Personnel Administration. . . . .	3
386 Organization Theory and Development	3
390 Management Systems. . . . .	3
394 Production Management. . . . .	3
396 Materials Procurement and Inventory Control . . . . .	3
399 Small Business Management. . . . .	3
480 Management Responsibility in Society. . .	3
482 Wage and Salary Administration. . . . .	3
487 Problems in Personnel Administration. . .	3
491 Operations Research and Analysis. . . . .	3
494 Quantitative Techniques in Production. . .	3

### COURSES

**382 Introduction to Management.** **Three sem b**  
An analysis of the basic managerial functions and principles which guide their proper execution at the ministrative, staff and operational levels. Designed to students in developing a philosophy of management in acquiring administrative techniques. The course taught with emphasis on the production concepts as illustrative of management practices generally applicable to all managerial or administrative activities.  
*Prereq: 201 Principles of Economics.*

**384 Personnel Administration.** **Three sem boe**  
Industrial relations functions in business organization Recruitment, selection, placement, training, motivation and appraisal of personnel; emphasizing the scientific approach to the solution of practical problems of industrial manpower utilization.  
*Prereq: 382 Introduction to Management or permission of the department.*

**386 Organization Theory and Development.** **Three sem boe**  
The study of behavioral problems in administration. individual, group, intergroup and organizational behavior under dynamic environment conditions. Theory and analysis.  
*Prereq: 382 Introduction to Management.*

**390 Management Systems.**

**Three sem hours**  
Various concepts of systems theory and application. Methods of establishing, analyzing, standardizing and controlling administrative systems. Work simplification, workflow charting and systems control applications to organizational units.

*Prereq: 382 Introduction to Management.*

**394 Production Management.**

**Three sem hours**  
An introduction to the production function in business and industry through an acquaintance with the managerial aspects of manufacturing operations. Topics include manufacturing policy, product and design, manufacturing processes, plant location and layout, operational analysis, performance standards, inventory and production control. Implications of automation and technological change are discussed.

*Prereq: 382 Introduction to Management; prereq or coreq: 365 Business Statistics I.*

**396 Materials Procurement and Inventory Control.**

**Three sem hours**  
Materials procurement and management viewed as an essential adjunct to the production function in business and materials procurement, storage and production activity. Principles and practices conducive to effective production management through quantitative and qualitative controls in relation to the factors of time, place, and price are presented from an administrative policy viewpoint.

*Prereq: 394 Production Management or permission of the department.*

**399 Small Business Management.**

**Three sem hours**  
A study of the major concepts and fundamental principles involved in the management of a small business enterprise. Emphasis will be placed on the role of the small firm in the national economy, the managerial considerations involved in establishing such a venture and the managerial problems confronting the entrepreneur.

*Prereq: 382 Introduction to Management, 353 Principles of Finance and 360 Principles of Marketing.*

**401 Management Internship.**

**One sem hour**  
Approved on-the-job experience of students in the Management Internship Program, supplemented by seminars as appropriate. *Open only to students formally enrolled in the program and taken during their terms of supervised work experience.* May be repeated for a maximum of three semester hours credit.

*Prereq: Management major and permission of the department.*

**480 Management Responsibility in Society.**

**Three sem hours**  
Deals with social, legal and moral pressures of external and community groups on business operations, including management's role of responsibility and leadership in interacting with these forces and reducing and resolving conflicts with them.

*Prereq: Senior standing or permission of the department.*

**482 Wage and Salary Administration.**

**Three sem hours**  
Basic concepts of design and methodology for wage and salary administration in an organization. Fundamental considerations in evaluating jobs and positions. Compensation methods and wage incentive systems.

*Prereq: 384 Personnel Administration and 386 Organization Theory and Development or permission of the department.*

**487 Problems in Personnel Administration.**

**Three sem hours**  
Cases in the major functional areas of personnel administration are used to develop skill in analysis and solution or resolution of operating problems.

*Prereq: 384 Personnel Administration and 386 Organization Theory and Development or permission of the department.*

**490 Business Policy.**

**Three sem hours**  
Integration and analytical application of functional areas of business to case problems. Emphasis on policy issues in the identification and resolution of problem situations.

*Prereq: Senior standing in business administration or permission of department (senior standing implies completion of the College of Business core).*

**491 Operations Research and Analysis.**

**Three sem hours**  
Introduction to operations research techniques used in solving management problems. Emphasis is on formulation and solution of some deterministic and stochastic models.

*Prereq: 382 Introduction to Management and 365 Business Statistics I or equivalent.*

**494 Quantitative Techniques in Production.**

**Three sem hours**  
An advanced course in the application of operations research techniques to production problems.

*Prereq: 394 Production Management and 491 Operations Research or permission of the department.*

**497, 498, 499 Independent Study.**

**One, two and three sem hours**  
Directed study of a problem or group of problems in management not otherwise treated in departmental courses.

*Prereq: Senior status and permission of the department.*

## MARKETING

**Department Head: Robert J. Williams**

**Professor: Earl A. Roth**

**Associate Professors: Raymond J. Drake, David L. Kurtz, A. Edward Spitz**

**Assistant Professors: Charles R. Ashton, Joseph L. Braden, James D. Goodnow, James E. Hansz, Colin F. Neuhaus, Edith G. Phillips**

Marketing's primary concern is with developing marketing programs and systems which maximize the economic and social goals of the business firm.

The marketing curriculum is designed to provide the student with the necessary background and decision-making tools so that he can effectively develop and execute marketing strategy. Considerable time is devoted to analyzing the consumer, his characteristics and motivations, and developing a "mix" of the various tools which the marketing manager has at his disposal—product attributes, personal selling, advertising, distribution and pricing—to meet the desires of consumers.

With considerable emphasis on the consumer, marketing draws upon many of the contributions made by the behavioral sciences—economics, psychology and sociology—to the field of marketing. When appropriate, case studies, computer simulations and games are used to provide a dynamic decision-making environment.

### MAJOR AND MINOR

#### Major in Marketing

Students in the field of marketing are required to complete the following major area of concentration in addition to the general requirements for the Bachelor of Business Administration degree.

	Semester Hours
Marketing Area of Concentration. . . . .	24
Required. . . . .	12
365 Buyer Behavior. . . . .	3
368 Marketing Strategy. . . . .	3
*470 Marketing Research. . . . .	3
475 Marketing Management. . . . .	3
Restricted Electives. . . . .	12
363 Retailing. . . . .	3
364 Distribution Systems. . . . .	3
369 Advertising. . . . .	3
374 Industrial Marketing. . . . .	3
401 Internship Program. . . . .	1
461 Sales Management. . . . .	3
466 Marketing Models. . . . .	3
472 International Business. . . . .	3
478 Practicum in Marketing. . . . .	3
479 Senior Honors Program. . . . .	3
497 Independent Study. . . . .	1
498 Independent Study. . . . .	2
499 Independent Study. . . . .	3

\*365 Introduction to Business Statistics is a prerequisite and should be completed by the end of the junior year.

#### Minor in Marketing (A non-teaching minor)

Students who are not majors in the College of Business may elect to minor in marketing. Twenty-one semester hours as indicated below constitute a minor in this academic field.

	Semester Hours
Marketing Minor (for non-business majors). . . . .	21
Required. . . . .	9
240 Principles of Accounting. . . . .	3
360 Principles of Marketing. . . . .	3
382 Introduction to Management. . . . .	3
Restricted Electives. . . . .	12
215 Computers in Business. . . . .	3
363 Retailing. . . . .	3
364 Distribution Systems. . . . .	3
365 Buyer Behavior. . . . .	3
368 Marketing Strategy. . . . .	3
369 Advertising. . . . .	3
374 Industrial Marketing. . . . .	3
401 Internship Program. . . . .	1
461 Sales Management. . . . .	3
466 Marketing Models. . . . .	3
470 Marketing Research. . . . .	3
472 International Business. . . . .	3
475 Marketing Management. . . . .	3
478 Practicum in Marketing. . . . .	3
479 Senior Honors Program. . . . .	3
497 Independent Study. . . . .	1
498 Independent Study. . . . .	2
499 Independent Study. . . . .	3

### COURSES

**360 Principles of Marketing.** **Three sem hours**  
Marketing as a basic function in the firm and in the economy. Emphasis is placed on the relationship between marketing activities and the consumer. Includes both functional and institutional aspects of marketing.  
*Prereq: 201 Principles of Economics.*

**363 Retailing.** **Three sem hours**  
Principles of retail store management. Attention is given to store location, layout, personnel, organization, buying, inventory, sales promotion, customer services and operating expenses. Cases and outside speakers.  
*Prereq: 360 Principles of Marketing.*

**364 Distribution Systems.** **Three sem hours**  
Marketing organization through alternative channels of distribution. Emphasis is given to distribution system design, distribution costs, decision theory in channel choice and relations between microunits within the system.  
*Prereq: 360 Principles of Marketing.*

**365 Buyer Behavior.** **Three sem hours**  
Concepts and research related to consumer and industrial buyer behavior. Attention given to sociological and psychological aspects of consumer and industrial buyer behavior, product adoption and diffusion, fashion and family theory, household decision making, industrial buying decision making and other behavioral models.  
*Prereq: 360 Principles of Marketing and 101 General Psychology.*

**368 Marketing Strategy.**

Advanced policies and practices in marketing. Emphasis is on case analysis of marketing problems pertinent to product, price, promotion and channels of distribution policies. Quantitative data relevant to a marketing decision will be stressed.

*Prereq: 360 Principles of Marketing.*

**369 Advertising.**

In this course, advertising is approached from the management point of view. Topics considered include: the role of advertising in the marketing mix; advertising and the process of communication; influence of buyer behavior on the character of promotional efforts; determining basic promotional strategy; choice of appropriate methods to achieve desired objectives; planning creative strategy; coordinating and integrating program elements; effective execution of promotional programs; measuring the results of promotional efforts.

*Prereq: 360 Principles of Marketing.*

**374 Industrial Marketing.**

Marketing problems of manufacturers of industrial goods—such as machinery and equipment, raw and semi-fabricated materials, industrial supplies and component parts. The course emphasizes market planning, relationship between purchasing and marketing, industrial buyer behavior, pricing and negotiation and industrial procurement policies. Case problems and outside speakers used.

*Prereq: 360 Principles of Marketing.*

**401 Internship Program.**

Directed full-time work experience in the marketing phase of a business organization. This course may be repeated for a maximum total of three hours.

*Prereq: Marketing major and permission of the department.*

**461 Sales Management.**

Planning, organizing, directing and controlling the sales force. Includes recruiting, selecting, training, evaluating, compensating and supervising salesmen.

*Prereq: 360 Principles of Marketing.*

**466 Marketing Models.**

Introduction to quantitative methods in marketing. The application of inventory models, linear programming models, sales forecasting models, gaming and simulation of marketing decisions.

*Prereq: 365 Business Statistics I and 368 Marketing Strategy.*

**470 Marketing Research.**

Types of research techniques used by business to coordinate marketing activities with consumer demand. Includes planning the research project, collecting data,

analysis of data and preparation of the research report.

*Prereq: 365 Business Statistics I and 368 Marketing Strategy.*

**472 International Business.**

Analysis of the global economic, political, cultural and geographic environments and their impact on market entry. Strategies of multinational firms; and survey of changes in marketing, finance, personnel and production policies resulting from international environmental differences.

*Prereq: 360 Principles of Marketing, 382 Introduction to Management and 353 Principles of Finance.*

**473 Marketing Environment.**

Extensive treatment of the uncontrollable variables affecting marketing management. Emphasis given to the cultural and social environment, political and legal environment, business conditions and structure and the goals of the firm.

*Prereq: 360 Principles of Marketing.*

**474 Promotional Strategy.**

In this course the key problems of advertising and promotion are explored. Emphasis is given to the appropriate use of research as an aid in advertising decision-making. Topics considered include: development of advertising campaigns, determining the advertising effectiveness, client-agency relationships and societal impact of advertising.

*Prereq: 369 Advertising.*

**475 Marketing Management.**

Integration of marketing activities and planning the marketing program. Attention given to the contribution of economics, behavioral sciences, statistics and mathematics to the field of marketing. Case analysis used.

*Prereq: 470 Marketing Research and senior standing.*

**478 Practicum in Marketing.**

The purpose of this practicum will be to select a marketing topic and study it in depth emphasizing related disciplines and appropriate decision-making tools.

*Prereq: Permission of the department.*

**479 Senior Honors Program.**

A research and reading course for students majoring in marketing with senior standing.

*Prereq: 470 Marketing Research, cumulative grade-point average of 3.0 and permission of the department.*

**497, 498, 499 Independent Study.**

Directed study of a problem or groups of problems in marketing not otherwise treated in departmental courses.

*Prereq: Senior status and permission of the department.*



# **COLLEGE OF EDUCATION**

**DEAN: Allen Myers**

**Associate Dean: Francis M. Daly**

## **DEPARTMENTS**

**Curriculum and Instruction**

**Education**

**Educational Leadership**

**Educational Psychology**

**Guidance and Counseling**

**Health, Physical Education**

**and Recreation**

**Special Education and**

**Occupational Therapy**

## CURRICULUMS FOR TEACHERS

The College of Education is comprised of the departments of educational leadership, educational psychology, curriculum and instruction, guidance and counseling, health, physical education and recreation, special education and occupational therapy, the divisions of educational media and social foundations, and the offices of student teaching, pre-student teaching and admissions. The College of Education:

1. supervises selection, advisement and retention of students who are preparing for teaching certificates.
2. provides instruction in professional course work for students preparing for teaching certificates.
3. places and supervises pre-student teachers.
4. places and supervises student teachers.
5. provides service courses for other colleges and departments of the University.
6. provides specialized course work for students in curriculums other than teacher education.

A student seeking the bachelor's degree and a teacher's certificate may select from twelve curriculums the one which will allow him an opportunity to develop competency in the teaching field of his choice.

The twelve curriculums are:

### Curriculums for Elementary Teachers

1. Early Elementary
2. Later Elementary (including early childhood education)

### Curriculum for Secondary Teachers

1. Junior-Senior High School

### Curriculums for Teachers of Specialized Subjects

1. Art
2. Business Education
3. Home Economics
4. Industrial Education
5. Library (Librarians in elementary, junior and senior high schools)
6. Music
7. Physical Education
8. Recreation
9. Special Education

## TEACHING CURRICULUMS REQUIREMENTS

### Admissions and Pre-Student Teaching

Vernon H. Jones, Director

In addition to general University curricular requirements, there are certain requirements common to all teaching curriculums. They are as follows:

1. Admission to the College of Education curriculums

Admission to the College of Education curriculums is not automatic. Students apply for admission at the time they decide to pursue teaching as a career, usually in their first or freshman year. Application forms may be obtained in the Admissions and Pre-Student Teaching Office located in Boone Hall.

2. Admission to and continuance in professional education courses

Admission to and continuance in professional education

courses (Group IV courses) is based upon the following requirements:

1. Scholarship-minimum average "C"
2. Acceptable standing in the departments of instruction in which the major and/or minor curriculum is being pursued
3. Demonstrated competence in:
  - a. Speaking effectiveness as determined by test
  - b. Effective reading ability
  - c. Written expression
  - d. Arithmetical computation
4. Satisfactory health status certified by the University Health Service
5. Social and emotional adjustment: account will be taken of standards of conduct expected on this campus, the degree to which the student meets his academic, financial, moral, social and other obligations, and the extent to which he practices good citizenship among his fellow students
6. Freedom from any kind of probation--administrative, academic or social. While on academic probation, no student may register for, remain in, or receive credit for a Group IV Professional Education course offered by the following departments or divisions within the College of Education: Curriculum and Instruction; Educational Media and Library Science; Social Foundations; Student Teaching; Educational Psychology; Guidance and Counseling; and Special Education (but not Occupational Therapy). This includes all strictly Group IV methods classes listed by cross-reference in these departments, even though the courses are also listed by and taught in other departments. It does not include the following introductory courses: 100 Introduction to Education, 241 Introduction to Speech Correction, and 251 Education of Exceptional Children.

No credit may be earned in any graduate level course (500 and above) on-campus or off-campus, while an undergraduate student is on academic probation.

### 3. Pre-Student Teaching Requirement

Two twenty-four hour laboratory experiences (pre-student teaching) are required of all candidates for a teaching certificate.

The primary purpose for requiring such experiences is to enable students to understand college course work dealing with human growth and development, the nature of the learning-teaching process and the societal context within which the school operates. Though it is not always possible, the experiences are most valuable when they are an integral part of certain education courses and are supervised either directly or indirectly by class instructors.

These experiences also help the student to better understand himself—if he is really capable of working with children or youth, in what specialty and at what teaching level he can best function, and what knowledge, skills and attitudes he needs to develop before beginning student teaching.

There are opportunities available for pre-student teaching through school noon-hour and after school recreation programs, assisting in Boy's Clubs, Boy Scouts, Girl Scouts, YMCA and YWCA, assisting in hospitals, community centers, church youth groups, in classrooms in public schools, in day care centers and in nursery schools.

Other activities include tutoring, working with culturally deprived children in enrichment programs after school and on Saturdays and the school camping program.

Activities must be approved by the coordinator of pre-student teaching. Students usually engage in such activities several hours per week. A record of participation is required at the beginning and end of each semester. It is the responsibility of each student to keep an up-to-date record of pre-student teaching experiences. Records are filed in the office of the coordinator in Boone Hall, where information and assignment in pre-student teaching experiences may be obtained.

Speech correction majors may use Clinical Practice II to satisfy the pre-student teaching requirement. Majors in the area of the emotionally disturbed may use 240 Pre-Clinical Experience to satisfy the pre-student teaching requirement.

### Student Teaching

**Kenneth W. Stanley, Director**

All candidates for teaching certificates are required to engage in student teaching, for which eight semester hours of credit may be earned. The sequence of student teaching courses will be determined by the curriculum pursued.

Students in the special education curriculum are required to devote one semester to teaching in a regular classroom and another semester to teaching a class in special education.

Students in education for the deaf are required to complete four semester hours of student teaching with normal children and eight semester hours with the deaf and hard of hearing.

Students specializing in education for the visually handicapped (blind and partially seeing) are required to complete four semester hours of student teaching with normal children and six semester hours of student teaching with visually handicapped children.

Students specializing in education for the mentally retarded are required to complete four semester hours of student teaching with normal children and six semester hours of student teaching with mentally retarded children.

Students specializing in education for the physically handicapped are required to complete four semester hours of student teaching with normal children and six semester hours of student teaching with the physically handicapped.

Students specializing in speech correction are required to complete four semester hours of student teaching with normal children at the undergraduate level and four semester hours of student teaching in speech correction during the fifth year of study.

Students specializing in the teaching of emotionally disturbed children are required to complete four semester hours of student teaching with normal children and six semester hours with emotionally disturbed children.

All students preparing to teach junior and senior high school academic subjects or in the special fields of art, music, home economics, industrial education and physical education are required to engage in student teaching for a total of eight semester hours credit.

Persons who have completed satisfactorily one year of preparation in a Michigan county normal school are given credit for three semester hours of student teaching. They are required to take such additional units as are specified on the particular curriculum pursued.

1. A student must have fulfilled the requirements of pre-student teaching in order to be placed in a student teaching assignment.
2. No student will be assigned to student teaching whose scholarship index is less than 2.0 (below "C" average).
3. After having received this assignment, the student must enroll in the appropriate student teaching course. See pages 160 to 161 in this catalog for a description of these courses.
4. Priority in summer session student teaching is given those students who hold a regular special certificate and who are experienced teachers.
5. Students who are pursuing a four-year curriculum should not begin their student teaching before the first semester of the senior year.
6. The standard class load for student teachers is fifteen semester hours. To be considered by the coordinator of student teaching for more than fifteen semester hours, the student must have a 3.0 cumulative index and be recommended by his major department and the dean of students.
7. Students are expected to take work on campus prior to student teaching. Students applying for student teaching who have had no work on campus will be required to submit a record showing satisfactory completion of an approved program leading to student teaching. Recommendations from suitable officials at the applicant's former institution and/or from employers must be received at Eastern Michigan University prior to August 1 for fall semester and November 1 for winter semester student teaching.
8. During the time that the student is doing his teaching, he should so arrange his daily schedule that his teaching will take precedence over other interests and duties.
9. Conferences are designed for the assistance of student teachers. The student is expected to attend student teacher assemblies as called. He is expected to have conferences with his cooperating teachers and university supervisor.
10. The following prerequisites are to be completed prior to student teaching:
  - a. 302 Educational Psychology and 303 Principles of Teaching or 320 Human Growth and Development and 326 School and Society
  - b. Early Elementary: Two of the specific methods courses (310 Teaching of Reading, 381 Teaching of Mathematics or 402 Science for Elementary Grades)
  - c. Later Elementary: Two of the specific methods courses (310 Teaching of Reading, 381 Teaching of Mathematics, 402 Science for Elementary Grades or 348 Teaching Social Studies in the Elementary School).
  - d. Junior-Senior High School: A special methods course in the major or minor field.
  - e. Specialized fields: The appropriate special methods courses in the major field. Students who teach in their minor specialized field must complete the methods course in that field.

Applications for student teaching may be obtained from the Student Teaching Office in Boone Hall. Applications

should be completed and returned to the Student Teaching Office prior to the appropriate deadline date of January 15, for placement in the following fall semester, and March 15, for the winter semester. Applications for a student teaching in the summer session are to be completed and returned by the previous February 15.

**Coordinating Council on Professional Education**

Continuous integration of the teacher education program is the objective of the Coordinating Council on Professional Education, which is composed of representatives of the College of Education, a representative of the Division of Field Services and a representative from the Division of Student Affairs. The council recommends requirements for admission to professional course work, passes upon applications for student teaching, advises on relevant matters concerned with the operation of the teacher education program and plans the further development of the program.

**CURRICULUMS FOR ELEMENTARY TEACHERS**

**EARLY ELEMENTARY CURRICULUM**

**Bachelor of Science Degree  
State Elementary Provisional Certificate  
Kindergarten, Grades 1, 2 and 3**

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

	<b>Semester Hours</b>
Group I Drama, Language, Literature and Speech. . . . .	8-11
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or A foreign language course (121 through 222)	
207 Introduction to Children's Literature. . . . .	3
Group II Science. . . . .	14
101 Functional Mathematics. . . . .	3
101 General Psychology. . . . .	3
Any two of the following. . . . .	8
108 Earth Science. . . . .	4
105 Biological Science. . . . .	4
110 Physical Science. . . . .	4
119 Fundamentals of Chemistry. . . . .	4
(Or more advanced lab courses in the same departments)	
Group III Social Science. . . . .	9-12
101 or 102 History of Civilization. . . . .	3
Either of the following. . . . .	3-6
The remaining 101 or 102 History of Civilization or A two course sequence in sociology, economics, geography or cultural anthropology	
Either of the following. . . . .	3
112 American Government or 202 State and Local Government	

Humanities Area Requirements. . . . .	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
A fine arts course (Group V courses below automatically meet this requirement). . . . .	2-3
Either of the following. . . . .	6
101, 102 Reading of Literature or 221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education. . . . .	3
*310 The Teaching of Reading. . . . .	3
320 Human Growth and Development. . . . .	4
326 School and Society. . . . .	6
344 Audio-Visual Methods in Teaching. . . . .	1
*381 Teaching of Mathematics K-6. . . . .	3
*402 Science for Elementary Grades. . . . .	3
418 Seminar in Education. . . . .	2
492 Student Teaching. . . . .	8
Group V Fine Arts. . . . .	11
101, 300 Art. . . . .	6
104, 320 Music. . . . .	5
Group VI Practical Arts. . . . .	5
253, 354 Industrial Arts for Elementary Grades. . . . .	5
Group VII Physical Education and Health. . . . .	6
320 Health Education in Elementary Grades	2
Physical education activity courses (eight activity hours) All students may take 157 Physical Education for Classroom Teacher. . . . .	4
Note: Two semester hours of military science may be applied toward this requirement.	
Additional Required Work. . . . .	1
241 Introduction to Speech Correction	
Electives. . . . .	27-30
Total. . . . .	124

A science pilot program offers an alternative to the two sciences required in Group II plus the 402 Science for Elementary Grades in Group IV and 320 Health Education in Group VII. This program, which must be taken in sequence, offers the student a series of courses tailored to meet the needs of the elementary teacher. There is abundant laboratory experience using simple equipment that would be available in an elementary school classroom, and using experiments that could be readily modified for use in both early elementary and later elementary classroom situations. The series includes:

Science 100 (Physics)	Three sem hours
Science 101 (Chemistry)	Three sem hours
Science 102 (Earth Science)	Three sem hours
Science 103 (Biology)	Three sem hours
Science 104 (Health Education 320)	Two sem hours

Opportunity is given to teach practice lessons in science to children.

Students who have credit for 303 Principles of Teaching, or 340 Evaluation of Pupils should continue to satisfy those requirements. Prior to student teaching, 326 School and Society and two starred methods courses must be completed.

The student must complete:

1. A major of at least 30 semester hours or a group major

of 36 semester hours, and a planned program, which may consist of courses required on the Curriculum for Teachers in the Elementary Grades, of 20 semester hours in other substantive fields deemed appropriate to elementary education, or

2. Three minors each of at least 20 semester hours, two of which shall be in substantive fields which could include a group minor of 24 semester hours, and one of which may be a planned program, which may consist of courses required on the Curriculum for Teachers in the Elementary Grades, of 20 semester hours in a combination of methods and content appropriate to elementary education.

Majors and minors may be chosen from the following list where available and appropriate. See department requirements for details.

Art, Arts Group, Astronomy, Biology, Conservation, Dance, Dramatic Arts, Earth Science, Elementary Science, English Speech and Dramatic Arts, English Language, English Language and Literature, English Literature, French, General Science, Geography, Geology, German, Health, History, Home Economics, Industrial Education, Library Science, Mathematics, Music Education, Occupational Therapy, Physical Education, Physical Science, Political Science, Recreation, Science Group, Social Science Group, Spanish, Special Education, Speech, Speech and Dramatic Arts, Dramatic Arts for Children.

A person who fulfills the curriculum requirements for an elementary provisional certificate will have automatically completed the minimum requirements for a planned program minor of 20 semester hours. In cooperation with an academic adviser, the student will select appropriate electives to strengthen this program.

Specific curricular patterns by semester are provided for each student by the College of Education upon enrollment. Students are assigned to a faculty adviser who assists them in planning all programs of classes. The normal academic load per semester is 15 to 16 semester hours, until student teaching is undertaken in the senior year. Activity hours to satisfy physical education requirements are taken in addition to the normal academic load of 15 to 16 semester hours.

**LATER ELEMENTARY CURRICULUM**

**Bachelor of Science Degree**

**State Elementary Provisional Certificate  
Grades 4, 5, 6**

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

**Semester Hours**

Group I Drama, Language, Literature and Speech.....	8-11
121 or 124 Fundamentals of Speech.....	2-3
Either of the following (see page 68).....	3-5
121 English Composition or A foreign language course (121 through 222)	
207 Introduction to Children's Literature	3

Group II Science.....	14
101 Functional Mathematics.....	3
101 General Psychology.....	3
Any two of the following.....	8
108 Earth Science.....	4
105 Biological Science.....	4
110 Physical Science.....	4
119 Fundamentals of Chemistry.....	4
Group III Social Science.....	12
101 or 102 History of Civilization.....	3
110 World Regions.....	3
Continental Geography Course.....	3
Either of the following.....	3
112 American Government or 202 State and Local Government	
Humanities Area Requirements.....	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion.....	3
A fine arts course (Group V courses below automatically meet this requirement).....	2-3
Either of the following.....	6
101, 102 Reading of Literature or 221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education.....	32
302 Educational Psychology.....	3
303 Principles of Teaching.....	3
310 Teaching of Reading.....	3
340 Introduction to Measurement and Evaluation.....	2
344 Audio-Visual Methods in Teaching.....	2
348 Teaching Social Studies in Elementary Schools.....	3
381 Teaching of Mathematics K-6.....	3
402 Science for Elementary Grades.....	3
418 Seminar in Education.....	2
492 Student Teaching.....	8
Group V Fine Arts.....	11
101, 300 Art.....	6
104, 321 Music.....	5
Group VI Practical Arts.....	5
253, 254 Industrial Arts for Elementary Grades.....	5
Group VII Physical Education and Health.....	6
320 Health Education in Elementary Grades.....	2
Physical education activity courses (eight activity hours) All students may take 157 Physical Education for Classroom Teacher.....	4
Note: Two semester hours of military science may be applied toward this requirement.	
Electives.....	25-21
Total.....	124

In addition to the above requirements, students must complete one of the following options:

The student must complete:

1. A major of at least 30 semester hours or a group major of 36 semester hours, and a planned program, which may consist of courses required on the Curriculum for Teachers in the Elementary Grades, of 20 semester hours in other substantive fields deemed



appropriate to elementary education, or  
 2. Three minors each of at least 20 semester hours, two of which shall be in substantive fields which could include a group minor of 24 semester hours, and one of which may be a planned program, which may consist of courses required on the Curriculum for Teachers in the Elementary Grades, of 20 semester hours in a combination of methods and content appropriate to elementary education.

Majors and minors may be chosen from the following list where available and appropriate. See department requirements for details.

Art, Arts Group, Astronomy, Biology, Conservation, Dance, Dramatic Arts, Earth Science, Elementary Science, English Speech and Dramatic Arts, English Language, English Language and Literature, English Literature, French, General Science, Geography, Geology, German, Health, History, Home Economics, Industrial Education, Library Science, Mathematics, Music Education, Occupational Therapy, Physical Education, Physical Science, Political Science, Recreation, Science Group, Social Science Group, Spanish, Special Education, Speech, Speech and Dramatic Arts, Dramatic Arts for Children.

A person who fulfills the curriculum requirements for an elementary provisional certificate will have automatically completed the minimum requirements for a planned program minor of 20 semester hours. In cooperation with an academic adviser, the student will select appropriate electives to strengthen this program.

Specific curricular patterns by semester are provided for each student by the College of Education upon enrollment. Students are assigned to a faculty adviser who assists them in planning all programs of classes. The normal academic load per semester is 15 to 16 semester hours, until student teaching is undertaken in the senior year. Activity hours to satisfy physical education requirements are taken in addition to the normal academic load of 15 to 16 semester hours.

### Group Majors and Minors for Early and Later Elementary Teachers

The available options for satisfying the major subject and minor subject requirements of the elementary teaching curriculums are stated above. Students may use either the regular departmental major and minor sequences appearing under departmental headings earlier in this catalog, or the group majors and minors outlined below. The group minors are also acceptable on the special education curriculum.

#### Arts Group Major (36 Semester Hours)

	Semester Hours
101 Introduction to Art.....	3
104 Elements of Music.....	2
354 Experiences in Technology for Children... .	2
300 Creative Arts.....	3
222 The Child and Drama.....	3
253 Industrial Technology and the Elementary Teacher.....	3

320 Early Elementary Music Education or	
321 Later Elementary Music Education.....	3
Electives to complete major from courses in the following:	
Fine arts, industrial education, music or	
dramatic arts.....	17
Total.....	36

#### Arts Group Minor (24 Semester Hours)

222. Add electives to complete the minor from courses in the following: fine arts, industrial education, music or dramatic arts.	
Total.....	24

Electives for the arts group major and minor may be drawn from, but not limited to the following recommended courses:

Fine Arts: 115, 212, 213 or 421 History of Art; 122 Two Dimensional Design, 305 Graphics, 307 Ceramics and Art Workshops offered during the summer semester.  
 Industrial Education: 102 Woodwork, 104 Graphic Arts, 121 Graphic Communication, 152 Arts and Crafts and 255 Art Metalwork.

Music: 106 Introduction to the Performing Arts, 107 Music Appreciation, 207 and 208 Class Piano, 232 Voice Class, Applied Music Lessons, 131 University Choir, 134 University Women's Chorus, 135 University Men's Glee Club, 249 University Band, 248 University Orchestra and 322 Music Literature for Children.

Dramatic Arts: 222 The Child and Drama, 322 Theatre for Children, 323 Improvisation, 324 Oral Interpretation of Children's Literature, 100 Introduction to Theatre, 106 Introduction to the Performing Arts, 133 Introduction to Theatre Crafts and 422, 423 and 424 Independent Study in Dramatic Arts for Children.

#### Elementary Science Group Major (36 Semester Hours)

Required Courses:

*105 Biological Science (if exempt by test, substitute 205 Field Biology).....	4
*108 Earth Science.....	4
*110 Physical Science.....	4
119 Fundamentals of Chemistry.....	4
*102 or 101 General Psychology.....	4-3

Restricted electives in science from courses listed below..... 16-17

A pilot program in science may be used as the base for either the elementary science major or minor. It consists of the following sequence of courses:

Science 100 (Physics)	Three sem hours
101 (Chemistry)	Three sem hours
102 (Earth Science)	Three sem hours
103 (Biology)	Three sem hours
104 (Health Education 320)	Two sem hours

This may be applied on planned, group or content and methods minors. Consult your adviser for details.

\*Advanced courses to be selected in consultation with the adviser.

**Elementary Science Group Minor (24 Semester Hours)**

	<b>Semester Hours</b>
Courses starred above.....	15-16
Restricted electives from the courses listed below and may include 119 Fundamentals of Chemistry.....	9-8

A pilot program in science may be used as the base for either the elementary science major or minor. It consists of the following sequence of courses:

Science 100 (Physics)	Three sem hours
101 (Chemistry)	Three sem hours
102 (Earth Science)	Three sem hours
103 (Biology)	Three sem hours
104 (Health Education 320)	Two sem hours

This may be applied on planned, group or content and methods minors. Consult your adviser for details.

Courses from the following list may be elected to complete a major or minor in science for the elementary curriculum. Of the total of 36 hours required on the major, not more than 12 hours may be taken in any one department.

**Biology**

205 Field Biology, 207 Elements of Ecology, 209 Ornamental Plants, 215 Economic Botany, 224 Principles of Conservation, 232 Nature Interpretation and 405 Organic Evolution, 208 Local Flora, 209 Insects and 210 Birds are to be available only to students having credit in one or more of them.

**Chemistry**

118 Contemporary Materials, 120 Fundamentals of Chemistry, 131 General Chemistry I, 180 Chemistry Laboratory Techniques, 219 Elementary Organic Chemistry, 220 Elementary Organic Chemistry Laboratory, 451 Biochemistry and 452 Biochemistry Laboratory.

**Geography and Geology**

114 Geography of National Parks, 223 Weather and Climate, 266 The Oceans, 227 Topographic Maps, 229 Rocks of Michigan, 230 Historical Geology, 301 Introduction to Cartography, 303 Field Geography, 461 Geomorphology.

**Physics and Astronomy**

112 Physical Science II, 211 Elementary Physical Science, 303 Introduction to Astronomy, 221 Mechanics, Sound and Heat and 222 Electricity and Light.

**Foreign Language Minors (20 Semester Hours)**

**Semester Hours**

**French:**

343, 344 French Conversation and French Composition .....	5
412 Methods of Teaching Foreign Language in the Elementary Grades .....	2
Electives in French, any level.....	15
Total.....	<u>22</u>

**German:**

343, 344 German Conversation and German Conversation .....	5
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412 Methods of Teaching Foreign Language in the Elementary Grades .....	2
Electives in German, any level.....	15
Total.....	<u>22</u>

**Spanish:**

343, 344 Spanish Composition and Spanish Conversation .....	5
412 Methods of Teaching Foreign Language in the Elementary Grades .....	2
Electives in Spanish, any level.....	15
Total.....	<u>22</u>

**Library Science Minor (20 Semester Hours)**

207 Introduction to Children's Literature....	3
314 Literature for Young Adults.....	3
320 The Media Center in the School.....	3
402 General Reference.....	3
404 Selection and Use of Materials.....	3
405 Organization of Materials.....	3
406 Storytelling or	
409 History of Books and Libraries.....	2
Total.....	<u>20</u>

Also required is 496 Student Teaching (Library Practice), four semester hours, as part of the student teaching work.

**Literature, Language, Speech and Dramatic Arts Group Major**

Students may elect a group major consisting of 36 semester hours:

**Semester Hours**

**Literature:**

101 Reading of Literature.....	3
102 Reading of Literature.....	3
207 Introduction to Children's Literature....	3
210 Shakespeare.....	3

**Language:**

121 English Composition.....	3
Nine hours to be chosen from the following, three of which must be either 222 Expository Writing or 223 Narrative Writing.....	9
222 Expository Writing	
223 Narrative Writing	
221 History of the English Language	
301 Introduction to English Language	
302 Modern English Syntax	
320 Introduction to Linguistics	

**Speech and Dramatic Arts:**

121 or 124 Fundamentals of Speech.....	2-3
132 Interpretative Reading.....	3
222 Dramatic Arts for Children.....	3
Elective in speech or dramatic arts.....	4-3
Total.....	<u>36</u>

The courses listed above under Literature and 121 English Composition may be applied to the English language and literature minor by a student in elementary or special education. See the English Department listings.

See also the minors in dramatic arts for children and a special speech minor for students in elementary or special education offered by the Speech and Dramatic Arts Department on pages 114 and 115.

**Social Science Group Major for Elementary Education**  
(36 Semester Hours)

At least twelve semester hours, but no more than eighteen semester hours, in one of the five social science areas, and at least three semester hours in each of the remaining areas must be elected. The five social science areas are: economics, geography (Group III), history, political science and sociology.

Geography and geology courses in science (Group II) and philosophy courses do NOT count on a social science group major or minor.

**Social Science Group Minor for Elementary Education**  
(24 Semester Hours)

Elementary education and special education students may elect the following group minor:

105 Introductory Sociology.....	3
123 Evolution of American Democracy or two history courses.....	3-6
110 World Regions.....	3
200 American Economy (or 201 Principles of Economics I).....	3
112 American Government.....	3
Social science electives.....	6-9
Total.....	24

Geography and geology courses in science (Group II courses) and philosophy courses do NOT count on this minor.

**UNDERGRADUATE PILOT PROGRAM  
IN EARLY CHILDHOOD EDUCATION**

Eastern Michigan University is initiating a pilot program in Early Childhood Education, beginning fall semester, 1973. The program, an alternative to the present Early Elementary program, will include course work, pre-student teaching and student teaching experiences involving preschool as well as elementary school children. The graduates of the program will receive elementary certification plus nursery school endorsement and will be qualified to work in preschools and day care centers as well as teach at the elementary level in public schools.

Once the program is under way, students will join the program their freshman year by enrolling in Education 101 Introduction to Early Childhood Education, for two hours credit. However, fall semester, 1973, sophomores will be enrolled in the introductory course to establish the first group of students in the pilot program. Winter semester, 1974, freshman students only will enroll in the introductory course.

Unique features of the pilot program include large blocks of time for the professional courses instead of a number of independent courses. For example, the methods courses and audio-visual instruction have been incorporated into one 10-credit hour block called Professional Block III which will be taken the second semester of the junior year.

Each of the education courses will include field experiences with young children. These experiences will replace the required pre-student teaching experiences in the regular early elementary education curriculum at EMU. Students in the pilot program will have student teaching experiences at both the preschool and early elementary levels.

Present plans for the pilot program call for the required courses to be offered during the regular fall and winter

semesters. There are no specific provisions at present for accelerated programs, although students can take basic studies and major and minor classes during spring and summer terms.

Further information about the program can be obtained from the Academic Advising Office, 245 Pierce Hall (487-2170) or the Office of the Curriculum and Instruction Department, 325 Pierce Hall (487-3260).

**Early Childhood Education**

	Semester Hours
Group I Drama, Language, Literature and Speech.....	11-14
121 or 124 Fundamentals of Speech.....	2-3
Either of the following (see page 68).....	3-5
121 English Composition or a foreign language course (121 through 222)	
207 Introduction to Children's Literature....	3
222 Dramatic Arts for Children.....	3
Group II Science.....	10-11
101 Functional Mathematics.....	3
101 or 102 General Psychology.....	3-4
Any one of the following (or more advanced laboratory courses in the same departments).....	4
105 Biological Science (or 221 General Botany or 222 General Zoology).....	4
108 Earth Science.....	4
110 or 111 Physical Science.....	4
119 Fundamentals of Chemistry.....	4
Group III Social Science.....	11
101 or 102 History of Civilization.....	3
Two courses in sociology.....	6
105 Introductory Sociology.....	3
One of the following:	
204 Marriage and Family.....	3
214 Racial and Cultural Minorities....	3
306 The Urban Community.....	3
308 Social Psychology.....	3
Either of the following:.....	3
112 American Government or	
202 State and Local Government	
Humanities Area Requirements.....	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion.....	3
A fine arts course (Group V courses below automatically meet this requirement)....	2-3
Either of the following.....	6
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education.....	10
Introduction to Early Childhood Education	2
Early Childhood Education Professional Block I.....	5
Early Childhood Education Professional Block II.....	8
Early Childhood Education Professional Block III.....	10

Early Childhood Education Professional Block IV. . . . .	8	
Group V Fine Arts. . . . .	2-3	
Any one of the following:		
101 Introduction to Art. . . . .	3	
300 Creative Arts. . . . .	3	
104 Elements of Music. . . . .	2	
322 Music Literature for Children. . . . .	2	
Group VII Physical Education and Health. . . . .	4	
Physical education activity courses (eight activity hours)		
Must include:		
157 Physical Education for Classroom Teacher		
One dance course		
Note: Two semester hours of military science may be applied toward this requirement.		

**Sequence for Group IV Equivalents**

*Freshman Year*

**A. Introduction to Early Childhood Education**  
**Two sem hours**

A general overview of the educational profession. Opportunities and trends in education will be covered. Through the provision of an early orientation to the field, this course may help students to make decisions regarding their personal career goals. Group observations of children in settings ranging from preschools and day care centers through secondary schools will be required.

*Sophomore Year*

**B. Early Childhood Education Professional Block I**  
**Five sem hours**

Includes human development, birth through maturity, with emphasis on the early years. Psychological foundations and their application to early childhood curriculum will receive special focus. The study of the individual will be stressed, and will include observational skills in recording children's behavior. Learning theories will be studied as they relate to differing curriculum models. In this block students will have experiences with children such as listening or talking with children on a one to one basis or working with small groups in a pre-planned activity.  
*Prereq: 101 or 102 General Psychology.*

*Junior Year*

**C. Early Childhood Education Professional Block II**  
**Eight sem hours**

An overview of the relationships between contemporary social forces and trends in early childhood education. Early childhood curricular models, preschool and primary, will be studied. Topics will include current issues in education, the teacher as a change agent and dimensions of classroom climate. Interrelationships of society, community, family and classroom milieu will be analyzed. Special consideration will be given to the utilization of para-professional and community resource persons in the school. Directed field experiences in community settings such as day care centers, model cities programs and public and private school facilities will be required.

**D. Early Childhood Education Professional Block III**  
**Ten sem hours**

Curriculum development and evaluation will be studied through approaches simulating learning environments for young children. Content, methods and materials for literature, social studies, science and the creative arts will be studied through an integrated approach. Students will study skill development in communication (language arts and mathematics) as functional learning processes. Emphasis will be placed upon the development of positive learning attitudes in children and on helping them learn *how* to learn. The mathematics and science departments will be included in the planning and staffing of these professional blocks. Block students will be encouraged to think divergently and creatively as they develop and organize learning materials in a classroom setting. Evaluation of students will be considered as a continuous process. Procedures, techniques and measures for use in children's programs will be employed. Directed field experiences will provide students opportunities to test their proficiency in implementing their ideas.

*Senior Year*

**E. Early Childhood Education Professional Block IV**  
**Eight sem hours**

Directed student teaching. (a) Four hours student teaching at the preschool level. (b) Four hours student teaching at the kindergarten or primary level. During each four-hour block of directed teaching, one hour of released time each week will be provided for a seminar contact with a University supervisor.

Students must complete appropriate majors and minors. The following options are suggested:

	Hours from Above	Additional Hours	Total Hours
<i>Option A</i>			
Social Science Group			
Major	12	24	36
Substantive Field			
Planned Program			
selected from			
Group I courses	17-18	2-3	20
<i>Option B</i>			
English, Speech and			
Dramatic Arts			
Major	17	19	36
Substantive Field			
Planned Program			
selected from			
Group III courses	12	8	20
<i>Option C</i>			
Dramatic Arts for			
Children Minor	8	12	20

Social Science Group			
Minor	12	12	24
Content and Methods			
Planned Program	17-18	2-3	20

*Option D*

English, Language			
and Literature			
Minor	12	8	20
Social Science Group			
Minor	12	12	24
Content and Methods			
Planned Program	17-18	2-3	20

Academic hours, meeting all requirements, must total at least 120, exclusive of any hours used in lieu of physical education activity, such as military science or health hours.

With above options, required elective hours to complete 120 academic hours are:

- Option A*..... 15-16 elective hours
- Option B*..... 15 elective hours
- Option C*..... 15-16 elective hours
- Option D*..... 19-20 elective hours

## CURRICULUM FOR SECONDARY TEACHERS

### JUNIOR-SENIOR HIGH SCHOOL CURRICULUM

#### Bachelor of Arts or Bachelor of Science Degree\* State Secondary Provisional Certificate

(Students intending to teach the following specialized subjects in junior-senior high—art, business education, home economics, industrial education, library science, music, physical education, dance and recreation—should follow the curriculums listed in the next section, not the one listed on this page.)

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

	<b>Semester Hours</b>
Group I Drama, Language, Literature and Speech.....	5-8
121 or 124 Fundamentals of Speech.....	2-3
Either of the following (see page 68).....	3-5
121 English Composition or	
A foreign language course (121 through 222)	
Group II Science.....	10-12
101 General Psychology.....	3

\*Degree desired

*B.A.:* Completion of curriculum with 75 hours in Groups I, II, III and one year of college credit in one foreign language.

*B.S.:* Completion of curriculum.

Either of the following.....	7-9
Two laboratory science courses from the biology, chemistry, geography or physics departments (Both may be in the same department) or	
One laboratory science course from the above departments and one mathematics course	
Group III Social Science.....	9
101 or 102 History of Civilization.....	3
Either of the following.....	3-6
The remaining 101 or 102 History of Civilization or	
A two course sequence in sociology, economics, geography or cultural anthropology	
Either of the following.....	3
112 American Government or	
202 State and Local Government	
Humanities Area Requirements.....	11-1
A course in philosophy or religion.....	3
A fine arts course in art, music or dramatic arts.....	2-3
Either of the following.....	6
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education.....	24
320 Human Growth and Development.....	4
326 School and Society.....	6
Methods course.....	2-3
405 Guidance Function of Secondary School Teacher.....	2
418 Seminar in Education.....	2
492 Student Teaching.....	8
Group VII Physical Education and Health.....	4
Physical education activity courses (eight activity hours).....	4
Note: Two semester hours of military science may be applied toward this requirement.	
Electives.....	6
Total.....	64

All students are required to complete a major of at least 30 semester hours, or a group major of 36 semester hours, and a minor of 20 semester hours or a minor of 24 semester hours in subjects appropriate teaching in secondary schools.

Specific curricular patterns by semester are provided for each student by the department in which the student is majoring. Students are assigned to a faculty adviser who is a member of the department that offers his or her major. This adviser assists students in planning all programs of classes. The normal academic load per semester is 15 to 16 hours until student teaching is undertaken the senior year. Activity hours to satisfy physical education requirements are taken in addition to the normal academic load of 15 or 16 semester hours.

The following pattern of subjects by year is suggested in meeting the above requirement:

#### First Year

	<b>Semester</b>
121 or 124 Fundamentals of Speech.....	2-3

121 English Composition or A foreign language course (121 through 222) . . . . .	3-5
101, 102 Reading of Literature or 221, 222 Foreign Language . . . . .	6
Two laboratory science courses or One laboratory science course and A mathematics course . . . . .	6-8
101, 102 History of Civilization or One of these plus a course in economics, geography or sociology . . . . .	6
A fine arts course in art, music or dramatic arts . . . . .	2-3
Men: Physical Education (2) . . . . .	1
Women: Electives in physical education activity (4)	
Courses in major per adviser	

Note: Some courses above may be deferred to the second year, if patterned to enable work in major subject to begin.

**Second Year**

	Semester Hours
101 General Psychology . . . . .	3
12 American Government or 202 State and Local Government . . . . .	3
One sociology, geography or economics course (if needed) . . . . .	3
Men: physical education activity (4) . . . . .	2
Women: physical education activity major, minor or elective courses	

**Third Year**

	Semester Hours
20 Human Growth and Development . . . . . (Prereq: 101 General Psychology)	4
26 School and Society . . . . . (Prereq: 320 Human Growth and Development)	6
Methods course in major subject . . . . .	2-3
A course in philosophy or religion . . . . .	3
Major, minor or elective courses	

**Fourth Year**

	Semester Hours
492 Student Teaching . . . . .	8
418 Seminar in Education . . . . .	2
Guidance Function of Secondary Teacher or, minor or elective courses	2

	Semester Hours
Group I Drama, Language, Literature and Speech . . . . .	5-8
121 or 124 Fundamentals of Speech . . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or A foreign language course (121 through 222)	
Group II Science . . . . .	10-12
101 General Psychology . . . . .	3
Either of the following . . . . .	7-9
Two laboratory science courses from the biology, chemistry, geography or physics departments (both may be in the same department) or One laboratory science course from the above departments and one mathematics course	
Group III Social Science . . . . .	9-12
101 or 102 History of Civilization . . . . .	3
Either of the following . . . . .	3-6
The remaining 101 or 102 History of Civilization or A two course sequence in sociology, economics, geography or cultural anthropology	
Either of the following . . . . .	3
112 American Government or 202 State and Local Government	
Humanities Area Requirements . . . . .	11-12
In addition to the courses above, the se- lected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion . . . . .	3
A fine arts course (automatically completed in Group V courses below) . . . . .	2-3
Either of the following . . . . .	6
101, 102 Reading of Literature or 221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education . . . . .	20
302, 303 Education . . . . .	6
418 Seminar in Education . . . . .	2
416, 417 Teaching of Art . . . . .	4
492 or 495, 496 Student Teaching . . . . .	8
Group V Fine Arts . . . . .	54
107 Art Survey I . . . . .	3
108 Art Survey II . . . . .	3
122 Two Dimensional Design . . . . .	3
123 Drawing I . . . . .	3
124 Drawing II . . . . .	3
210 Life Drawing . . . . .	3
216 History of Contemporary Art . . . . .	3
231 Three Dimensional Design . . . . .	3
235 Design in Materials . . . . .	3
301 Commercial Design . . . . .	2
305 Graphics . . . . .	3
307 Ceramics . . . . .	3

**CURRICULUMS FOR TEACHERS OF SPECIALIZED SUBJECTS**

**CURRICULUM FOR TEACHERS OF ART**

**Bachelor of Art Education Degree**

**\*Elementary, Secondary Provisional Certificate**

Adviser Chairman, **Kingsley Calkins**

A minimum total of 40 semester hours in the Basic  
H- areas—Groups I, II, III and the Humanities—is  
2-3 requ required of all students.

*\*If elementary provisional certificate is desired, consult  
with the dean of Academic Records and Teacher Cer-  
tification regarding special requirements. Include 101  
Functional Mathematics in Group II courses.*



310 Sculpture.....	3
313 Oil Painting.....	3
314 Water Color.....	2
320 Jewelry.....	3
Electives.....	8
Group VII Physical Education and Health.....	4
Physical education activity courses (eight activity hours).....	4
Note: Two semester hours of military science may be applied toward this requirement.	
Electives.....	11-2
Total.....	124

*Students completing the above curriculum will have satisfied all major and minor requirements for graduation. A maximum of 60 semester hours in Group V fine arts courses is allowed.*

### BUSINESS TEACHER EDUCATION CURRICULUM

#### Bachelor of Business Education Degree

- Secondary Provisional Certificate
- Vocational Distributive Education Certificate
- Vocational Office Education Certificate

Adviser Chairman, **Robert A. Ristau**

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities— is required of all students.

	Semester Hours
Group I Drama, Language, Literature and Speech.....	5-8
121 or 124 Fundamentals of Speech.....	2-3
Either of the following (see page 68).....	3-5
121 English Composition or A foreign language course (121 through 222)	
Group II Science.....	10
One laboratory science course from the biology, chemistry, geography or physics departments.....	4
101 General Psychology.....	3
118 Mathematical Analysis for Social Sciences I.....	3
Group III Social Science.....	12
101 or 102 History of Civilization.....	3
220, 221 Elements of Economics.....	6
Either of the following.....	3
112 American Government or 202 State and Local Government	
Humanities Area Requirements.....	11-12
In addition to the courses above, the selected courses below from Group I, III and V must be taken to complete the Basic Studies.	
A fine arts course in art, music or dramatic arts.....	2-3
Either of the following.....	6
101, 102 Reading of Literature or 221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	

Any of the following.....	3
180 Introduction to Logic	
200 Types of Philosophy	
201 The Comparative Study of Religion	
Group IV Education.....	3
302 Educational Psychology.....	3
303 Principles of Teaching.....	3
340 Introduction to Measurement and Evaluation.....	2
Methods in business subjects (select two)....	4
364 Methods of Teaching General Business Subjects.....	2
365 Methods of Teaching Secretarial Subjects.....	2
466 Methods and Materials in Teaching Distributive Education.....	2
418 Seminar in Education.....	2
492 Student Teaching.....	8
Group VI Practical Arts.....	38-3
Business Education Core.....	3
(Required of all Majors)	
215 Computers in Business.....	3
*121 Typewriting Applications.....	2
***224 Office Machines.....	3
240 Principles of Accounting.....	3
241 Principles of Accounting.....	3
302 Business Communications.....	3
303 Legal Environment of Business.....	3
353 Principles of Finance.....	3
360 Principles of Marketing.....	3
382 Introduction to Management.....	3
**401 Business Internship.....	1
Areas of Concentration.....	8-11
(Select two areas plus other business electives to total 20 semester hours, or select one area plus one academic subject minor).	
Shorthand	
226 Shorthand Dictation.....	3
227 Shorthand Speedbuilding.....	3
325 Shorthand Transcription.....	3
Office Administration and Data Processing	
316 Programming of Business Information Systems.....	3
395 Office Management.....	3
415 Records Administration.....	1
Accounting	
340 Intermediate Accounting.....	3
341 Intermediate Accounting.....	3
344 Tax Accounting.....	3
General Business	
304 Law of Business Enterprises.....	3
306 General Insurance.....	3
308 Personal Finance.....	3
Distributive Education	
363 Retailing.....	3
368 Marketing Strategy.....	3

*\*May be waived if two years of typewriting instruction have been completed. To be certified to teach typewriting, students must complete 222 Office Services.*

*\*\*May be waived upon proof of one year of work experience related to area of specialization.*

*\*\*\*A machine rental fee is charged for each course in which specialized equipment is required.*

461 Sales Management. . . . .	3
Group VII Physical Education and Health. . . . .	4
Physical education activity courses (eight activity hours) . . . . .	4
Note: Two semester hours of military science may be applied toward this requirement.	
Electives. . . . .	20-6
Total. . . . .	124

Students completing the above curriculum will have satisfied all major and minor requirements for graduation.

Students who have successfully completed the accounting, distributive education, office administration and data processing, or shorthand areas of concentration may qualify for vocational endorsement of their Provisional Secondary Certificate. Such endorsement can be obtained either office or distributive education if 2,000 hours actual, related, recent work experience can be shown. A student interested in such endorsement should discuss this with his adviser the possibility of enrollment in certain elective courses.

**CURRICULUM FOR TEACHERS OF HOME ECONOMICS**

**Bachelor of Science Degree**

**Secondary Provisional Certificate  
Vocational Homemaking Certificate**

Adviser Chairman, **Mary Krieger**

	<b>Semester Hours</b>
Group I Drama, Language, Literature and Speech. . . . .	5-8
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or A foreign language course (121 through 222)	
Group II Science. . . . .	10-12
101 or 102 General Psychology. . . . .	3-4
Alternate 1: One laboratory-science course in biology, chemistry, earth science, physics or psy- chology (102, 301). One mathematics course. Electives in this area (including courses in any of the above-listed sciences, or courses in mathematics, or courses in psy- chology) to total the required minimum hours. Alternate 2: Two laboratory-science courses in biology, chemistry, earth science, physics or psy- chology (both of which may be taken in the same department). Electives in this area to total the required minimum hours.	
Group III Social Science. . . . .	9-12
101 or 102 History of Civilization. . . . .	3
Either of the following. . . . .	3-6
The remaining 101 or 102 History of Civ- ilization or A two course sequence in sociology or economics	

Either of the following. . . . .	3
112 American Government or 202 State and Local Government	
Humanities Area Requirements. . . . .	12
In addition to the courses above, the select- ed courses below from Group I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
105 Integrated Arts. . . . .	3
Either of the following. . . . .	6
101. 102 Reading of Literature or 221. 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education. . . . .	23
320 Human Growth and Development. . . . .	4
326 School and Society. . . . .	6
418 Seminar in Education. . . . .	2
371 Methods and Materials in Homemaking Education . . . . .	3
492 Student Teaching. . . . .	8
Group VI Practical Arts. . . . .	44
Home Economics Core. . . . .	20
106 Orientation to Home Economics. . . . .	1
114 Clothing for Consumers. . . . .	3
116 Food for the Family. . . . .	4
117 Clothing Principles Lecture. . . . .	1
204 Home Management and Family Economics . . . . .	4
206 Contemporary Family Relations. . . . .	4
208 Aesthetics of the Home and Family. . . . .	3
Specialization. . . . .	24
235 Textiles for Consumers. . . . .	3
201 Nutrition for the Family. . . . .	3
211 Advanced Foods. . . . .	3
213 Family Health Care . . . . .	1
302 Experimental Clothing. . . . .	3
269 Housing the Family. . . . .	2
271 Household Equipment. . . . .	2
309 Home Furnishings. . . . .	3
406 Seminar in Home Economics. . . . .	1
410 Home Management Seminar. . . . .	3
Physical education activity courses (eight activity hours) . . . . .	4
Electives. . . . .	17-9
Total. . . . .	124

Through electives, a minor must be earned in area of student preference or in group minors as follows:  
Literature and language arts,  
Science or Social Science  
Completion of above program earns a Secondary Pro-  
visional Vocational Home making Certificate.

**CURRICULUM FOR TEACHERS OF INDUSTRIAL EDUCATION**

**Bachelor of Science Degree**

**Secondary Provisional Certificate  
Vocational Trade and Industrial Certificate\***

Adviser Chairman, **Gerald Jennings**

\*May be recommended upon completion of the require-  
ments stated by The Michigan Plan for Vocational Trade  
and Industrial Teacher Education, as adopted, 1969.

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

	Semester Hours
Group I Drama, Language, Literature and Speech. . . . .	5-8
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68). . . . .	3-5
121 English Composition or	
A foreign language course (121 through 222)	
Group II Science. . . . .	13
***107 Trigonometry. . . . .	2
Two courses in physics, chemistry or mathematics that are consistent with the requirements for the area of concentration. . . . .	8-10
101 General Psychology. . . . .	3
Group III Social Science. . . . .	12
101 or 102 History of Civilization. . . . .	3
A two-course sequence in 200-level or higher courses in economics, geography, history, political science or sociology. . . . .	6-9
Either of the following. . . . .	3
112 American Government or	
202 State and Local Government	
Humanities Area Requirements. . . . .	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
A fine arts course in art, music or dramatic arts . . . . .	2-3
Either of the following. . . . .	6
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education. . . . .	22
320 Human Growth and Development. . . . .	4
326 School and Society. . . . .	6
461 The Teaching of Industrial Education. . . . .	2
418 Seminar in Education. . . . .	2
492 Student Teaching. . . . .	8
Group VI Practical Arts. . . . .	50
Basic Sequence. . . . .	30
116 Elements of Production. . . . .	3
121 Graphic Communication. . . . .	3
123 Metal Processes. . . . .	3
200 Electricity and Electronics. . . . .	3
202 Wood and Plastics Technology. . . . .	3
218 Energy Systems. . . . .	3
250 Foundations of Industrial Education. . . . .	3
317 Structure of Industry. . . . .	2
350 Curriculum in Industrial Education. . . . .	3
460 Practicum in Industrial Education. . . . .	2
Electives (Must relate to the area of concentration. See adviser) . . . . .	2
Area of Concentration. . . . .	20

\*\*\*Students who have had high school trigonometry should enroll in 120 Calculus and Analytic Geometry I.

*In addition to the basic sequence, each industrial education major will complete a 20-hour concentration in any one of the following areas: materials processing, graphic communication or energy systems. Courses for the concentration will be determined by consultation with a department adviser.*

Group VII Physical Education and Health. . . . .	
Physical education activity courses (eight activity hours). . . . .	
Note: Two semester hours of military science may be applied toward this requirement.	
Electives. . . . .	
Total. . . . .	

*Students completing the above curriculum will have satisfied all major and minor requirements for graduation.*

**CURRICULUM FOR LIBRARY SCIENCE**

**Bachelor of Science or Bachelor of Arts Degree**

**\*Elementary or Secondary Provisional Certificate**

Adviser Chairman, **Francis M. Daly, Jr.**

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

	Semester Hours
Group I Drama, Language, Literature and Speech. . . . .	2-3
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or	
A foreign language course (121 through 222)	
**207 Introduction to Children's Literature. . . . .	3
**314 Literature for Young Adults. . . . .	3
**406 Storytelling. . . . .	2
**402 General Reference. . . . .	3
Electives. . . . .	6
Group II Science. . . . .	16
101 General Psychology. . . . .	3
Either of the following. . . . .	7-9
Two laboratory science courses from the biology, chemistry, geography or physics departments (both may be in the same department) or	
One laboratory science course from the above departments and one mathematics course	

*\*If Elementary Academic Provisional Certificate is desired, consult with the dean of Academic Records Teacher Certification regarding special requirements. In Group II election of 101 Functional Mathematics recommended.*

*\*\*In addition to the courses designated\*\*, an additional six hours of electives from Groups I, II and III are selected with the approval of the adviser chairman. 30-hour major requires the addition of a 20-hour or a 24-hour group minor in Groups I, II or III. The minor must be in an appropriate teaching area if the student is to secure a Provisional Teaching Certificate. See page 163 for the 20-hour minor in library science.*

Group III Social Science. . . . .	11
101. 102 History of Civilization. . . . .	6
Either of the following. . . . .	3
112 American Government or	
202 State and Local Government	
**409 History of Books and Libraries. . . . .	2
Humanities Area Requirements. . . . .	11-12
In addition to the courses above, the selected	
courses below from Groups I, III and V must	
be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
A fine arts course (automatically met by	
Group V courses below). . . . .	2-3
Either of the following. . . . .	6
101. 102 Reading of Literature or	
221, 222 Intermediate Foreign Language	
(for more advanced foreign language	
literature courses)	
Group IV Education. . . . .	22
302, 303, 418 Education. . . . .	8
310 Teaching of Reading or	
311 Teaching Secondary Reading. . . . .	3
**344 Audio-Visual Methods. . . . .	2
495 Student Teaching. . . . .	4
498 Student Teaching (Library Practice). . . . .	5
Students working toward a secondary teach-	
ing certificate will take, in addition, the meth-	
ods course in their minor subject field.	
Group V Fine Arts. . . . .	5-6
Electives. . . . .	5-6
Group VI Practical Arts. . . . .	9
320 Media Center in the School. . . . .	3
404 Selection and Use of Materials. . . . .	3
405 Organization of Materials. . . . .	3
Group VII Physical Education and Health. . . . .	4
Physical education activity courses (eight	
activity hours) . . . . .	
4	
Note: Two semester hours of military science	
may be applied toward this requirement.	
Electives. . . . .	30-23
Total. . . . .	124

A minimum total of 40 semester hours in the Basic Studies area—Groups I, II, III and the Humanities—is required of all students.

**Semester Hours**

Group I Drama, Language, Literature and	
Speech. . . . .	5-8
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or	
A foreign language course (121 through	
222)	
Group II Science. . . . .	11-13
101 General Psychology. . . . .	3
210 Musical Acoustics. . . . .	2
Either of the following. . . . .	6-8
Two laboratory science courses from the	
biology, chemistry, geography or physics	
departments (both may be in the same	
department) or	
One laboratory science course from the	
above departments and one mathematics	
course	
Group III Social Science. . . . .	9-12
101 or 102 History of Civilization. . . . .	3
Either of the following. . . . .	3-6
The remaining 101 or 102 History	
of Civilization or	
A two course sequence in sociology,	
economics, geography or cultural	
anthropology	
Either of the following. . . . .	3
112 American Government or	
202 State and Local Government	
Humanities Area Requirements. . . . .	9
In addition to the courses above, the selected	
courses below from Groups I, III and V must	
be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
A fine arts course (automatically met by	
Group V music courses)	
Either of the following. . . . .	6
101. 102 Reading of Literature or	
221, 222 Intermediate Foreign Language	
(for more advanced foreign language	
literature courses)	
Group IV Education. . . . .	22
302, 303, 418 Education. . . . .	8
332 Instrumental Music in Public Schools. . . . .	4
333 Orchestral Methods or	
334 Band Methods. . . . .	2
495, 496 Student Teaching. . . . .	8
Group V Fine Arts. . . . .	69
Basic Courses. . . . .	33
101, 102 Music Theory-Literature I, II. . . . .	8
201, 202 Music Theory-Literature III, IV. . . . .	8
232 Voice Class. . . . .	1
301, 302 History of Music. . . . .	6

**CURRICULUM FOR TEACHERS OF INSTRUMENTAL MUSIC\***

**Bachelor of Music Education Degree**

**Elementary or Secondary Provisional Certificate**

Adviser Chairman, **William D. Fitch**

\*In addition to the courses designated\*\*, an additional hours of electives from Groups I, II and III must be taken with the approval of the adviser chairman. The major requires the addition of a 20-hour minor or 24-hour group minor in Groups I, II or III. The minor must be in an appropriate teaching area if the student secures a Provisional Teaching Certificate.

\*The instrumental music education curriculum includes all courses needed to award a Secondary Provisional Certificate. If an Elementary Provisional Certificate is desired, consult with the dean of Academic Records and Teacher Certification regarding special requirements.

413 Orchestration.....	2
414 Band Arranging.....	2
Six of the following courses.....	6
Required:	
211 Basic Brass (trumpet, trombone)	
241 Basic Percussion	
261 Basic Strings (violin)	
281 Basic Woodwind (clarinet)	
Elect additional from:	
212 Brass Class (horn, euphonium, tuba)	
242 Percussion (mallet)	
262 String Class (viola)	
263 String Class (cello, bass)	
282 Woodwind Class (flute, saxophone)	
283 Woodwind Class (oboe, bassoon)	
Music Performance.....	32
Applied Music	
251, 252, 253, 254 Functional Piano (if secondary instrument).....	4
1X1-1X8 Applied Music (principal instrument).....	16
Conducting	
326 Conducting.....	2
327 Instrumental Conducting.....	2
Ensembles.....	8
Electives.....	4
Group VII Physical Education and Health.....	4
Physical education activity courses (eight activity hours).....	
	4
Note: Two semester hours of military science or two semesters of Marching Band may be applied toward this requirement.	
Total.....	129-137

## CURRICULUM FOR TEACHERS OF VOCAL MUSIC\*

### Bachelor of Music Education Degree

#### Elementary or Secondary Provisional Certificate

Adviser Chairman, **William D. Fitch**

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

	Semester Hours
Group I Drama, Language, Literature and Speech.....	5-8
121 or 124 Fundamentals of Speech.....	2-3
Either of the following (see page 68).....	3-5
21 English Composition or	
A foreign language course (121 through 22)	

*\*Students in this curriculum elect either organ, piano or voice as their principal instrument. In addition to their private lessons, all students meet with their instructor for a weekly class session.*

*The vocal music education curriculum includes all courses needed to award a Secondary Provisional Certificate. If an Elementary Provisional Certificate is desired, consult with the dean of Academic Records and Teacher Certification regarding special requirements.*

Group II Science.....	
101 General Psychology.....	
210 Musical Acoustics.....	
Either of the following.....	
Two laboratory science courses from the biology, chemistry, geography or physics departments (both may be in the same department) or	
One laboratory science course from the above departments and one mathematics course.	
Group III Social Science.....	
101 or 102 History of Civilization.....	
Either of the following.....	
The remaining 101 or 102 History of Civilization or	
A two course sequence in sociology, economics, geography or cultural anthropology	
Either of the following.....	
112 American Government or	
202 State and Local Government	
Humanities Area Requirements.....	
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion.....	
A fine arts course (automatically met by Group V music courses)	
Either of the following.....	
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education.....	
302, 303, 418 Education.....	
330 Music Education in the Elementary School.....	
331 Music Education in the Secondary School.....	
495, 496 Student Teaching.....	
Group V Fine Arts.....	
Basic Courses.....	
101, 102 Music Theory-Literature I, II.....	8
201, 202 Music Theory-Literature III, IV.....	8
301, 302 History of Music.....	6
413 Orchestration.....	2
Two of the following courses.....	
211 Basic Brass Class	
241 Basic Percussion Class	
261 Basic String Class	
281 Basic Woodwind Class	
Music Performance.....	
Applied Music	
1X1-1X8 Applied Music (principal instrument).....	
251-4, 051-2 Applied Music, if keyboard is secondary instrument.....	
071-6 Applied Music (voice), if secondary instrument	
Conducting	
326 Conducting.....	
328 Choral Conducting.....	
Ensembles.....	
Electives.....	

Group VII Physical Education and Health. . . . .	4
Physical education activity courses (eight activity hours). . . . .	4
Note: Two semester hours of military science may be applied toward this requirement.	
Total. . . . .	124-132

Students completing the above curriculum will have satisfied all major and minor requirements for graduation.

**CURRICULUM FOR TEACHERS OF PHYSICAL EDUCATION**

(Men)

**Bachelor of Science Degree**

**\*Elementary or Secondary Provisional Certificate**

Adviser Chairman, **Patric L. Cavanaugh**

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

	<b>Semester Hours</b>
Group I Drama, Language, Literature and Speech. . . . .	5-8
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or	
A foreign language course (121 through 222)	
Group II Science. . . . .	10-12
101 General Psychology. . . . .	3
105 Biological Science. . . . .	4
One mathematics course or another laboratory science course from the biology, chemistry, geography or physics departments. . . . .	3-5
Group III Social Science. . . . .	9-12
101 or 102 History of Civilization. . . . .	3
Either of the following. . . . .	3-6
The remaining 101 or 102 History of Civilization or	
A two course sequence in sociology, economics, geography or cultural anthropology	
Either of the following. . . . .	3
112 American Government or	
202 State and Local Government	
Humanities Area Requirements. . . . .	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
A fine arts course in art, music or dramatic arts (automatically met by all dance majors)	2-3

If an elementary provisional certificate is desired, consult with the dean of Academic Records and Teacher Certification or director of Academic Advising regarding special requirements. In Group II, 101 Functional Math is recommended for those seeking elementary certification.  
The student will complete as a minimum: a major in physical education as listed above and one minor of 20 semester hours or a group minor of 24 semester hours in a subject field which the student expects to teach.

Either of the following. . . . .	6
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education. . . . .	21
302 Educational Psychology. . . . .	3
303 Principles of Teaching. . . . .	3
367 Methods and Materials in Physical Education . . . . .	3
418 Seminar in Education. . . . .	2
440 Tests and Measurements in Physical Education . . . . .	2
492 Student Teaching. . . . .	8
Group VII Physical Education and Health. . . . .	30
120 Healthful Living. . . . .	3
200 Anatomy and Physiology. . . . .	5
203 Kinesiology. . . . .	2
240 History and Philosophy of Physical Education . . . . .	2
263 Theory and Practice of Football. . . . .	1
265 Theory and Practice of Baseball. . . . .	1
267 Theory and Practice of Basketball. . . . .	1
269 Theory and Practice of Track. . . . .	1
300 Physiology of Exercise. . . . .	3
310 Physiology of Nutrition. . . . .	2
311 First Aid and Athletic Training. . . . .	2
330 Health Work in the Schools. . . . .	2
333 Adapted Physical Education. . . . .	2
441 Organization and Administration of Physical Education . . . . .	3
Physical education activity courses (see page 171). . . . .	4
Physical education major activity courses (24-25 activity hours)	
Electives. . . . .	34-25
Total. . . . .	124

**CURRICULUM FOR TEACHERS OF PHYSICAL EDUCATION**

(Women)

**Bachelor of Science Degree**

**\*\*Elementary or Secondary Provisional Certificate**

Adviser Chairman, **Patric L. Cavanaugh**

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

	<b>Semester Hours</b>
Group I Drama, Language, Literature and Speech. . . . .	5-8

\*\*If an elementary provisional certificate is desired, consult with the dean of Academic Records and Teacher Certification or director of Academic Advising regarding special requirements. In Group II, 102 Functional Math is recommended for those seeking elementary certification.  
The student will complete as a minimum: major in physical education as listed above and one minor of 20 semester hours or a group minor of 24 semester hours in a subject field which the student expects to teach.



121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or	
A foreign language course (121 through 222)	
Group II Science. . . . .	10-12
101 General Psychology. . . . .	3
105 Biological Science. . . . .	4
One mathematics course or another laboratory science course from the biology, chemistry, geography or physics departments	3-5
Group III Social Science. . . . .	9-12
101 or 102 History of Civilization. . . . .	3
Either of the following. . . . .	3-6
The remaining 101 or 102 History of Civilization or	
A two course sequence in sociology, economics, geography or cultural anthropology	
Either of the following. . . . .	3
112 American Government or	
202 State and Local Government	
Humanities Area Requirements. . . . .	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
A fine arts course in art, music or dramatic arts . . . . .	2-3
Either of the following. . . . .	6
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education. . . . .	21
252 Methods and Materials in Physical Education . . . . .	3
302, 303, 418 Education. . . . .	8
440 Tests and Measurements in Physical Education . . . . .	2
492 Student Teaching. . . . .	8
Group VII Physical Education and Health. . . . .	30
120 Healthful Living. . . . .	3
200 Anatomy and Physiology. . . . .	5
204 Kinesiology. . . . .	2
240 History and Philosophy of Physical Education . . . . .	2
242 Organization and Administration of Physical Education . . . . .	3
264 Theory of Coaching Individual Sports. . . . .	2
266 Theory of Coaching Team Sports. . . . .	2
300 Physiology of Exercise. . . . .	3
310 Physiology of Nutrition. . . . .	2
312 First Aid, Athletic Training and Physiotherapy . . . . .	2
330 Health Work in the Schools. . . . .	2
334 Adapted Physical Education. . . . .	2
Physical education major activity courses (43-45 activity hours, see page 171) . . . . .	4
Electives. . . . .	21-30
Total. . . . .	124

CURRICULUM FOR DIRECTORS AND TEACHERS OF RECREATION

Bachelor of Science Degree

\*Elementary or Secondary Provisional Certificate

Adviser Chairman, Ronald J. Saunders

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—required of all students.

	Semester Hours
Group I Drama, Language, Literature and Speech. . . . .	5-6
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or	
A foreign language course (121 through 222)	
Group II Science. . . . .	10-12
101 General Psychology. . . . .	3
Either of the following. . . . .	7-9
Two laboratory science courses from the biology, chemistry, geography or physics departments (both may be in the same department) or	
One laboratory science course from the above departments and one mathematics course	
Group III Social Science. . . . .	11-12
101 or 102 History of Civilization. . . . .	3
105 Introductory Sociology. . . . .	3
Either of the following. . . . .	3
112 American Government or	
202 State and Local Government	
354 Juvenile Delinquency. . . . .	3
Humanities Area Requirements. . . . .	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
One of the following. . . . .	3
100 Introduction to the Theatre	
106 Introduction to the Performing Arts or	
222 Dramatic Arts for Children	
Either of the following. . . . .	12
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education*. . . . .	21
252 (Women), 367 (Men) Methods and Materials in Physical Education . . . . .	3

\*If an Elementary Provisional Certificate is desired consult with the dean of Academic Records and Teaching Certification regarding special requirements.

\*These courses are optional; required only if desired a teaching certificate.

302, 303, 418 Education.....	8
495 Student Teaching in Major (Recreation)	4
496 Student Teaching in Minor or Physical Education .....	4
Elective.....	2
Group VI Practical Arts.....	6
**152 Arts and Crafts.....	3
**A general course in business.....	3
Group VII Physical Education, Health and Recreation.....	34
**106 Introduction to the Performing Arts... ..	3
**120 Healthful Living.....	3
**210 American Standard Red Cross.....	2
**252 (Women) 367 (Men) Methods and Materials in Physical Education .....	3
**270 Organization and Administration of Community Recreation .....	3
**280 Camping.....	2
**370 Youth Organizations.....	2
**380 Community Recreation Leadership....	3
**470 Field Work in Recreation.....	4
(for those not on the education curriculum)	
**480 Recreation Therapy.....	2
Men: physical education activity courses (25 activity hours).....	4
Women: physical education activity courses (25 activity hours).....	4
Electives.....	36-31
Total.....	124

**CURRICULUM FOR TEACHERS OF DANCE**

**Bachelor of Science Degree**

**\*\*Elementary or Secondary Provisional Certificate**

Adviser Chairman, **Jeannine Galetti**

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

**Semester Hours**

Group I Drama, Language, Literature and Speech.....	5-8
121 or 124 Fundamentals of Speech.....	2-3
Either of the following (see page 68) .....	3-5
121 English Composition or A foreign language course (121 through 222)	

*\*\*The student will complete as a minimum: a major in recreation consisting of above courses marked with two asterisks and a minor subject of 20 semester hours or a group minor of 24 semester hours.*

*\*\*\*If an elementary provisional certificate is desired, consult with the dean of Academic Records and Teacher Certification or director of Academic Advising regarding special requirements. In Group II, 101 Functional Math is recommended for those seeking elementary certification.*

*The student will complete as a minimum: major in physical education as listed above and one minor of 20 semester hours or a group minor of 24 semester hours a subject field which the student expects to teach.*

Group II Science.....	10-12
101 General Psychology.....	3
105 Biological Science.....	4
One mathematics course or another laboratory science course from the biology, chemistry, geography or physics departments.....	3-5
Group III Social Science.....	9-12
101 or 102 History of Civilization.....	3
Either of the following.....	3-6
The remaining 101 or 102 History of Civilization or A two course sequence in sociology, economics, geography or cultural anthropology	
Either of the following.....	3
112 American Government or 202 State and Local Government	
Humanities Area Requirements.....	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion.....	3
106 Introduction to the Performing Arts....	3
Either of the following.....	6
101, 102 Reading of Literature or 221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education.....	21
252 Methods and Materials in Physical Education .....	3
302, 303, 418 Education.....	8
440 Tests and Measurements in Physical Education .....	2
492 Student Teaching.....	8
Group VII Physical Education and Health....	30
107 Rhythmic Analysis and Dance Accompaniment.....	3
200 Anatomy and Physiology.....	5
245 Elements of Dance Composition.....	3
255 Dance Production.....	3
350 Dance History.....	3
355 Labanotation.....	3
450 Advanced Dance Composition.....	4
455 Seminar in Dance.....	2
Electives: to be chosen from related areas with department approval.....	4
Dance major studio courses (28 activity hours, see page 172).....	4
Electives.....	29
Total.....	124

**CURRICULUM FOR TEACHERS OF THE SPEECH AND LANGUAGE IMPAIRED**

**Bachelor of Science Degree**

**Master of Arts Degree**

**Elementary Provisional Certificate**

Adviser Chairman, **Frank J. Wawrzaszek**

The program for teachers of speech and language impaired is a five-year master's degree program, conforming

to the requirements of the American Speech and Hearing Association. Upon completion of 124 credit hours (reflecting all requirements in basic studies and undergraduate major and minor sequences), the student will be granted the Bachelor of Science degree, *without certification*.

When registering for the last term of undergraduate studies, the student should apply for admission to the Graduate School. Upon completion of 30-36 planned graduate hours, and completion of a scholarly paper (with or without credit), the student will be eligible to receive a Master of Arts degree and will have completed academic requirements for the certificate of clinical competence by the American Speech and Hearing Association. Student teaching with speech and language impaired children may only be done as a graduate intern. Following this, the student may apply for certification by the State Department of Education as a teacher of the speech and language impaired K-12 and as a K-6 elementary classroom teacher with a provisional certificate.

**Bachelor of Science Sequence**

A minimum total of 40 semester hours in the basic studies areas—Groups I, II, III and the humanities—is required of all students.

	Semester Hours
Group I Drama, Language, Literature and Speech. . . . .	8-11
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following (see page 68). . . . .	3-5
121 English Composition or	
A foreign language course (121 through 222)	
207 Introduction to Children's Literature. . . . .	3
Group II Science. . . . .	12
Any one of the following: . . . . .	4
105 Biological Science	
108 Earth Science	
110 Physical Science	
101 General Psychology. . . . .	3
206 Mental Hygiene. . . . .	2
360 Abnormal Psychology. . . . .	3
Group III Social Science. . . . .	12
101 or 102 History of Civilization. . . . .	3
105 Introductory Sociology. . . . .	3
Either of the following. . . . .	3
112 American Government or	
202 State and Local Government	
202 Social Problems . . . . .	3
Humanities Area Requirements. . . . .	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
A fine arts course (automatically met by Group V courses below). . . . .	2-3
Either of the following. . . . .	6
101, 102 Reading of Literature or	
foreign language (by advisement only)	
Group IV Education. . . . .	20
251 Education of Exceptional Child. . . . .	2
303 Principles of Teaching. . . . .	3
310 Teaching of Reading. . . . .	3
320 Human Growth and Development. . . . .	4
344 Audio Visual Methods in Teaching. . . . .	2

390 Measurement and Diagnosis in Special Education (or approved substitute). . . . .	2
495 Student Teaching in Regular Classroom	1
Group V Fine Arts. . . . .	
101 Introduction to Art. . . . .	1
104 Elements of Music. . . . .	2
Group VII Physical Education and Health. . . . .	
Physical education activity courses (eight activity hours). . . . .	4
Note: Two semester hours of military science may be applied toward this requirement. All students must take eight physical education activity hours. Courses must include 157 Physical Education for Classroom Teacher.	

<b>Major Concentration. . . . .</b>	
243 Applied Phonetics. . . . .	2
301 Introduction to English Language. . . . . (English Department)	1
336 Anatomy and Physiology of the Speech and Hearing Mechanism (lab required) . . . . .	2
338 Speech Pathology. . . . .	2
339 Speech Evaluation. . . . .	2
340 Speech Correction Methods I. . . . .	3
341 Directed Observation in Speech Correction . . . . .	1
342 Speech Correction Methods II. . . . .	2
343 Clinical Practice in Speech Correction I	2
344 Clinical Practice in Speech Correction II	2
378 Introduction to Audiology. . . . .	2
394 Auditory Training and Speech Reading for the Deaf. . . . .	1
416 Experimental Phonetics I. . . . .	1
437 Psychology of Speech and Hearing. . . . .	1
478 Audiometric Testing. . . . .	1
Electives (Optional). . . . .	0-4
241 Introduction to Speech Correction. . . . .	2
345 Clinical Practice in Speech Correction III . . . . .	2
Electives (to complete 124 hours). . . . .	20
Total. . . . .	14

**Master of Arts Sequence**

Area of Concentration. . . . .	
Required Courses:	
SPA 550 Articulation. . . . .	2
SPA 552 Voice. . . . .	2
SPA 554 Stuttering. . . . .	2
SPA 594 Public School Internship. . . . .	4
SPA 596 Seminar in Public School Internship. . . . .	2
SPA 620 Diagnostic Methods in Speech, Hearing and Language. . . . .	3
Electives in speech education and education. . . . .	34
Cognates. . . . .	38
EDP. 592 Research Techniques. . . . .	39
Electives outside of special education. . . . .	41
Total. . . . .	44
Other Requirements: Scholarly paper or independent study. Consult with the graduate adviser for details.	
Students will complete as a minimum a major concentration of 30 semester hours and one minor subject	

# Addendum A

## CURRICULUM FOR TEACHERS OF SPECIAL EDUCATION

Mentally Handicapped, Emotionally Disturbed, Physically Handicapped, Hearing Impaired, Visually Handicapped.

**Bachelor of Science Degree  
Elementary Provisional Certificate**  
Adviser Chairman, **Frank J. Wawrzaszek**

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

	<b>Semester Hours</b>
<b>Group I</b> Drama, Language, Literature and Speech 8-11	
121 or 124 Fundamentals of Speech.....	2-3
Either of the following (see page 68) .....	3-5
121 English Composition or A foreign language course (121 through 222)	
207 Introduction to Children's Literature.....	3
<b>Group II</b> Science .....	15
101 Functional Mathematics.....	3
Any one of the following .....	4
105 Biological Science.....	4
108 Earth Science.....	4
110 Physical Science .....	4
*101 General Psychology .....	3
*206 Mental Hygiene.....	2
*360 Abnormal Psychology.....	3
<b>Group III</b> Social Science.....	12
101 or 102 History of Civilization.....	3
105 Introductory Sociology .....	3
Either of the following.....	3
112 American Government or 202 State and Local Government	
*202 Social Problems .....	3
<b>Humanities Area Requirements</b> .....	11-12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion.....	3
A fine arts course (automatically met by Group V courses below).....	2-3
Either of the following.....	6
101, 102 Reading of Literature or Foreign language (by advisement only)	
<b>Group IV</b> Education.....	29-33
*251 Education of Exceptional Child.....	2
303 Principles of Teaching .....	3
310 Teaching of Reading.....	3
*320 Human Growth and Development.....	4
344 Audio Visual Methods in Teaching.....	2
381 Teaching Math K-12.....	3
*390 Measurement and Diagnosis in Special Education (or approved substitute).....	2
**418 Seminar in Education .....	2
*** Student Teaching.....	8-12
Deaf and hard of hearing majors take 492 and 495 for 12 hours credit.	
Emotionally disturbed, mentally handicapped, physically handicapped and vi-	

sually handicapped majors take 495 and 499 for 10 hours credit	
<b>Group V</b> Fine Arts.....	5
101 Introduction to Art .....	3
104 Elements of Music .....	2
<b>Group VI</b> Practical Arts.....	5
*253 Industrial Arts for Elementary Grades ...	3
354 Industrial Arts for Elementary Grades ...	2
<b>Group VII</b> Physical Education and Health.....	6
*320 Health Education in Public Schools .....	2
Physical education activity courses (eight activity hours).....	4
Two semester hours of military science may apply toward this requirement.	
All students take eight physical education activity hours. Courses must include 157.	
Electives.....(to complete 124 hours)	
<b>Total</b> .....	124

### Major Concentration

<b>A. Deaf and Hard of Hearing</b> .....	<b>24</b>
228 Survey of Education and Guidance of the Deaf.....	2
326 Introductory Practicum with the Deaf I..	1
327 Introductory Practicum With the Deaf II	1
336 Anatomy and Physiology of the Speech and Hearing Mechanisms .....	2
378 Introduction to Audiology .....	2
391 Language for the Deaf.....	4
394 Auditory Training and Speech Reading for the Deaf.....	2
395 Speech for the Deaf I.....	2
396 Speech for the Deaf II.....	2
397 School Subjects for the Deaf .....	4
442 Deaf Education Seminar .....	2
<b>B. Emotionally Disturbed</b> .....	<b>17</b>
240 Pre-Clinical Training in Special Education	2
241 Introduction to Speech Correction.....	2
301 Emotionally Disturbed Children .....	4
354 Juvenile Delinquency (or approved substitute).....	3
401 Methods and Curriculum for the Emotionally Disturbed.....	2
402 Education and Organization of Programs for the Emotionally Disturbed.....	2
448 Seminar in Emotionally Disturbed .....	2
<b>C. Mentally Handicapped</b> .....	<b>12</b>

*\*Each student must complete a special education major of at least 36 hours consisting of the courses starred (\*) above, plus a major concentration selected from the areas listed.*

*\*\*Special Education Seminars 442, 444, 446, 448, 450 may be used for fulfilling this requirement.*

*\*\*\*A semester of regular student teaching must be completed before doing special student teaching.*

241 Introduction to Speech Correction .....	2
350 Mental Deficiency .....	2
357 Education of the Mentally Handicapped I	2
358 Education of the Mentally Handicapped II	2
444 Seminar in Mental Retardation.....	2
468 Children with Learning Disabilities .....	2
<b>D. Physically Handicapped.....</b>	<b>21</b>
240 Pre-Clinical Training in Special Education	2
241 Introduction to Speech Correction.....	2
310 Developmental Aspects of Teaching Physically Handicapped Children (laboratory required) .....	5
312 Applied Aspects of Teaching Physically Handicapped Children (lab. required).....	6
350 Mental Deficiency .....	2
446 Seminar in Physically Handicapped .....	2
468 Children With Learning Disabilities .....	2
<b>E. Visually Handicapped .....</b>	<b>14</b>
241 Introduction to Speech Correction.....	2
364 Methods of Teaching the Blind .....	3
365 Braille.....	3
366 Hygiene and Anatomy of the Eye.....	2
367 Education of Children With Impaired Vision.....	2
368 Mobility Training for the Blind.....	2

(Students in the area of the visually handicapped should be able to demonstrate reasonable proficiency in typing.)

Students will complete as a minimum a major concentration of 36 semester hours and one minor subject of 6 semester hours or a group minor of 24 hours.

Group minors are acceptable on the special education curriculum. (See pages 144 to 146).

Specific curricular patterns by semester are provided each student by the College of Education upon enrollment. Students are assigned to a faculty adviser who assists them in planning programs of classes. The normal academic load per semester is 15-16 semester hours, and student teaching is undertaken in the senior year. Additional hours to satisfy physical education requirements are required in addition to the normal academic load.

Students in the area of the visually handicapped complete their student teaching at either the Michigan School for the Blind (usually during the seventh semester) or at public school resident centers. When residence is required in off-campus center programs, early planning will be to the student's advantage. Off-campus centers are available for students who plan to take campus courses concurrently with the student teaching experience.

Students in the area of the emotionally disturbed may elect to do their student teaching in one of the off-campus psychiatric centers, or, if interested primarily in social work, in one of the off-campus centers such as the Boys Vocational School in Lansing, or the Girls' Training School in Adrian. Prerequisites for the student teaching in the area of the Emotionally Disturbed include 240 Pre-Clinical Training, 301 Emotionally Disturbed Child Psychology, and 360 Abnormal Psychology.

semester hours or a group minor of 24 hours. Group minors are acceptable on the Special Education curriculum. (See pages 144 to 146). Specific curricular patterns by semester are provided each student by an assigned faculty adviser who assists in planning programs of classes. The normal academic load per semester is 15-16 semester hours, until student teaching is undertaken in the senior year. Activity hours to satisfy physical education requirements are taken in addition to the normal academic load. A speaking performance test must be taken during the

sophomore year or while enrolled in 339 Speech Evaluation, whichever occurs first. The purpose of this test is to determine if there is any speech disorder that would interfere with a successful career in speech and language pathology. This speech performance test is more vigorous and may be used in lieu of the screening test required as part of the application for student teaching.

During the senior year and prior to full acceptance into the graduate program, students may take the National Speech and Hearing Examination. See the graduate adviser for details.





## DEPARTMENTS

Unless otherwise designated, the courses in these departments are classified in Group IV. The Group IV courses listed in the 300 and 400 series are open only to students of junior standing or above who have a scholarship average of "C" or better, and who have made application and have been admitted to professional education. The courses 206 Mental Hygiene, 320 Human Growth and Development, and 321 Child Psychology may be taken by students of sophomore standing.

## CURRICULUM AND INSTRUCTION

**Department Head:** W. Scott Westerman, Jr.  
**Professors:** Ranjit S. Bajwa, Barbara J. Borusch, Gordon W. Fielder, Robert J. Fisher, R. Stanley Gex, Bert I. Greene, Martha E. Irwin, Louis P. Porretta, Wilma I. Russell, Scott W. Street  
**Associate Professors:** Irene A. Allen, Clifford Birleson, Robert H. Hoexter, Hebert M. Jones, Robert E. Krebs, Noel S. Moore, Jerome A. Weiser, Ingrid P. Ylisto, Stephen C. Zambito  
**Assistant Professors:** Leah D. Adams, Norma G. Bartin, Gordon A. Belt, Victor Cocco, William E. Goldsmith, Emile F. Gosseaux, Imogene D. Jones, Ben J. Koepke, Alister MacDonald, Leon E. Neeb, Jean O. Scott, Robert T. Tibbals, Juanita M. Wilmoth

## GRADUATE STUDY

The Curriculum and Instruction Department offers graduate work leading to the master's degrees in elementary education, middle school/junior high school teaching, secondary school teaching, secondary school curriculum and reading. For descriptions of graduate courses and programs in the Curriculum and Instruction Department, please consult the Graduate Catalog.

## COURSES

- 100 Introduction to Education.** **Two sem hours**  
 Provides an opportunity to study the work of the teacher, the advantages and disadvantages of teaching and the requirements of the teacher education program. Group observations in laboratory and public schools and work with children, which will meet one of the present requirements for admission to the education courses at the junior level, are included. One class hour and two laboratory hours per week.
- 207 Literature for the Elementary Grades.** **Three sem hours**  
 (For description see Department of English Language and Literature.)
- 252 (Women) Methods and Materials in Physical Education.** **Three sem hours**  
 A study of the methods and the use of materials used in the teaching of indoor activities. Opportunity is given to do practice teaching and to receive constructive criticism. Observations and reports of the work carried on in the laboratory schools are required.
- 303 Principles of Teaching.** **Three sem hours**  
 To be taken in the semester immediately preceding teaching. Deals with the application of the principles of psychology and teaching to the classroom. Diagnosing, plan-

ning, teaching and maintaining favorable working conditions in teaching will be considered.

*Prereq: 302 Educational Psychology, 321 Child Psychology or 320 Human Growth and Development. Not open to students on early elementary or junior/senior high school curriculums.*

- 306 Teaching of High School Mathematics.** **Three sem hours**  
 (For description see Department of Mathematics.)
- 307 The Teaching of Speech.** **Three sem hours**  
 (For description see Department of Speech and Dramatic Arts.)
- 308 High School English.** **Three sem hours**  
 (For description see Department of English Language and Literature.)
- 310 The Teaching of Reading.** **Three sem hours**  
 Required of all students in the early elementary and later elementary curriculums, the course deals with the developmental sequence of reading skills and with methods for teaching this sequence. The range is from the pre-reading period through the sixth grade.
- 311 Teaching Secondary Reading.** **Three sem hours**  
 The developmental sequence for reading skills at the junior and senior high school levels and methods for teaching the sequence. Teaching programs are considered for both the normal and retarded reader at this level. Particular attention is given to providing reading instruction within the context of the various areas.  
*Prereq: Junior or senior standing.*
- 325 Methods in Science Teaching.** **Two sem hours**  
 (For description see Physics and Astronomy Department.)
- 326 School and Society.** **Six sem hours**  
 The school in relationship to the society and the community in which it exists, the principles of effective learning, the foundations of curriculum, the school as a social institution, and the classroom as an effective group. Supervised observation and experience with children required. *Not open to students who have had 303 Principles of Teaching.*  
*Prereq: 320 Human Growth and Development.*
- 330 Music Education in the Elementary School.** **Three sem hours**  
 (For description see Department of Music.)
- 331 Music Education in the Secondary School.** **Three sem hours**  
 (For description see Department of Music.)
- 332 Instrumental Materials and Methods.** **Four sem hours**  
 (For description see Department of Music.)
- 333 Orchestral Methods.** **Two sem hours**  
 (For description see Department of Music.)
- 334 Band Methods.** **Two sem hours**  
 (For description see Department of Music.)
- 347 Teaching of Earth Science.** **Three sem hours**  
 (For description see Department of Geography and Geology.)

- 348 **Teaching Social Studies in Elementary Schools.** **Three sem hours**  
(For description see Department of Geography and Geology.)
- 361 **The Teaching of Industrial Education.** **Two sem hours**  
(For description see Department of Industrial Education.)
- 364 **Methods of Teaching General Business Subjects.** **Two sem hours**  
(For description see Department of Business Education.)
- 365 **Methods of Teaching Secretarial Subjects.** **Two sem hours**  
(For description see Department of Business Education.)
- 367 **(Men) Methods and Materials in Physical Education.** **Three sem hours**  
A study of the techniques and aids used in teaching physical education activities in the elementary and secondary grades.
- 371 **Methods and Materials in Homemaking Education.** **Three sem hours**  
(For description see Department of Home Economics.)
- 375 **Methods and Materials in Family Life.** **Three sem hours**  
(For description see Department of Home Economics.)
- 381 **The Teaching of Mathematics K-6.** **Three sem hours**  
(For description see Department of Mathematics.)
- 402 **Science for Elementary Grades.** **Three sem hours**  
(For description see Department of Biology.)
- 403 **Current Research in Elementary School Mathematics.** **Three sem hours**  
(For description see Department of Mathematics.)
- 403 **Methods and Materials for Teaching Biology.** **Two sem hours**  
(For description see Department of Biology.)
- 411 **Methods of Teaching Modern Languages.** **Two sem hours**  
(For description see Department of Foreign Languages and Literature.)
- 412 **Methods of Teaching Modern Languages in the Elementary Grades.** **Two sem hours**  
(For description see Department of Foreign Languages and Literature.)
- 416 **Directed Observation.** **Two sem hours**  
Semester session on demand.
- 416 **Art Methods and Materials.** **Two sem hours**  
(For description see Department of Art.)
- 417 **Teaching of Art.** **Two sem hours**  
(For description see Department of Art.)
- 418 **Seminar in Education.** **Two sem hours**  
opportunity to continue the development of a personal philosophy of education through the exploration of problems arising from (a) placement and professional ability, (b) the student teaching experience, and (c) the alternative solutions proposed for persistent, professional problems.  
*Prereq or coreq: Student teaching.*
- 419 **Instructor's Course in Driver Education.** **Three sem hours**  
Introduction to driver education; the task of the driver education teacher. Course content, methods and media for secondary schools. Laboratory experiences in the dual-control car, car handling techniques and the driving simulator.
- 420 **Advanced Instructor's Course in Driver Education.** **Three sem hours**  
Methods and materials used in driver education. Organization, scheduling, administration, records, etc. Student teaching with a beginning driver. *Effective July 1, 1972, eight hours of courses in driver education and traffic safety required to be approved initially to teach driver education.*  
*Prereq: 419 Instructor's Course in Driver Education.*
- 421 **Seminar in Driver Education.** **Two sem hours**  
Advanced study in methods and techniques of teaching driver education with emphasis on the psychological aspects of driving.  
*Prereq: 419 Instructor's Course in Driver Education.*
- 440 **Tests and Measurements in Physical Education.** **Two sem hours**  
To prepare students for the discriminating selection, administration, interpretation and use of standardized tests and measurements in physical education.  
*Prereq: 302 Educational Psychology*
- 481 **The Teaching of Social Studies.** **Three sem hours**  
(For description see the Department of History and Social Sciences.)
- 490-491 **Special Work (Honors Courses).** **Two sem hours each**  
Designed to provide additional experiences for exceptionally promising students who are seeking certification. Work based on problem or research interest with written and/or oral report.  
*Prereq: Senior standing, 3.5 average and all regulations regarding honors courses stated on page 19. Permission of the department head is required.*
- 492 **Student Teaching.** **Eight sem hours**  
Practical experience under guidance of supervising teachers in planning for teaching, in managing the classroom, in directing the learning activities of pupils. The student teacher is expected to assume increasing responsibility for directing the activities of the classroom group to the point that during the semester he will be expected to assume full responsibility. For eight semester hours of student teaching the student teacher is required to spend 20 clock hours per week in the student teaching center.  
*Prereq: 326 School and Society or 303 Principles of Teaching, requirements for student teaching (see page 141), requirements for admission to courses in education (see pages 140 to 141), plus prerequisites as follows in designated curriculums.*  
a. Early Elementary: Two of the methods courses. (310 Teaching of Reading, 381 Teaching of Mathematics or 402 Science for Elementary Grades.)  
b. Later Elementary: Three of the methods courses. (310 Teaching of Reading, 381 Teaching of Mathematics, 402 Science for Elementary Grades or 348 Teaching Social Studies in the Elementary School.)

c. Junior-Senior High School: A special methods course in major and minor field.

• Specialized fields: The appropriate special methods course or courses in the major field. Students who student teach in their minor specialized field must complete the methods course in that field.

**493 Student Teaching. Two sem hours**  
For experienced teachers attending the summer session. *Permission of director of student teaching is required.*

**494 Student Teaching. Three sem hours**  
For experienced teachers attending summer session. *Permission of director of student teaching is required.* Also for special education majors in deaf and hard of hearing and speech.

**495 Student Teaching. Four sem hours**  
*Permission of director of student teaching required.*

**496 Student Teaching. Four sem hours**  
*Prereq: 495 Student Teaching and permission of director of student teaching.*

**497 Student Teaching. Four sem hours**  
*Prereq: Credit toward certification in either 495 or 496 Student Teaching.*

**498 Student Teaching. Five sem hours**  
Approval of Coordinating Council on Professional Education required.

**499 Student Teaching. Six sem hours**  
Approval of Coordinating Council on Professional Education required.



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## EDUCATION

**Department Head:** Francis M. Daly  
**Professors:** Roger L. Leatherman, Calvin B. Michael, Thomas O. Monahan, Erma F. Muckenhirn, Quirico S. Samonte, Phillip G. Wells  
**Associate Professors:** Thomas M. Gwaltney, Ralph G. Peterson, Robert S. Robinson, Wilfred R. Smith  
**Assistant Professors:** Arthur L. Carpenter, Frances C. Cook

### EDUCATIONAL MEDIA (Library Science)

This curriculum is offered to meet the increased demands for school librarians in the elementary and secondary schools. Election may be made with the approval of the adviser.

All courses listed as library science count toward certification for school library work. With the exception of Audio-Visual Methods, none of the courses may be taken for professional education credit.

All courses, except 405 Organization of Materials, are as electives to all students in the University.

Only students take either minor or major with Student Teaching (Library Practice).

### MAJOR AND MINOR

**Major**  
 For required courses for a major in library science, see the curriculum for library science planned for specializing students on page 152.

At least nine semester hours must be taken at Eastern from courses on pages 163 to 164 from Group VI.

#### Minor (20 semester hours)

	Semester Hours
<b>Required courses:</b>	
207 Introduction to Children's Literature. . . . .	3
314 Literature for Young Adults. . . . .	3
320 The Media Center in the School. . . . .	3
402 General Reference. . . . .	3
404 Selection and Use of Materials. . . . .	3
405 Organization of Materials. . . . .	3
Elect one of the following:	
406 Storytelling. . . . .	2
409 History of Books and Libraries. . . . .	2
430 Special Problems of the School Library . . . . .	2
*496 Student Teaching (Library Practice). . . . .	4

For physical science majors electing a library science minor, 471 History of Chemistry will be substituted for 314 Literature for Young Adults. Degree-only students take the minor without library practice.

At least six semester hours must be taken at Eastern from courses in Group VI.

\*These are four of the eight hours of student teaching.

## GRADUATE STUDY

The Education Department offers graduate work leading to the master's degree in social foundations. For descriptions of graduate courses and programs in the Education Department, please consult the Graduate Catalog.

### COURSES

**100 Library Orientation. One sem hour**  
 A study of the resources of the University library, including basic reference tools, such as the card catalog, periodical indexes and yearbooks. *For non-library science majors and minors only.*

**101 Use of Books and Libraries. Two sem hours (Group I)**  
 Open to any student who wants practical instruction in the use of the library's tools and materials. May not be taken by students who plan to major or minor in library science. *On demand.*

**314 Literature for Young Adults. Three sem hours (Group I)**  
 Intensive study of the literature for young adults, grades 7-12; the techniques of reading guidance and an understanding of adolescents' interests and abilities in accordance with their developmental growth.  
*Prereq: 207 Introduction to Children's Literature.*

**320 The Media Center in the School. Three sem hours (Group VI)**  
 Introduction to the philosophy, objectives, functions, standards, programs and services of the school library as a media center in relation to the curriculum and educational goals of the school, with emphasis on the role of the media specialist.

**344 Audio-Visual Methods in Teaching. Two sem hours (Group IV)**  
 A methods course in which instructional materials are considered in their relationship to the why of their use, what the materials are and how to use them in the classroom. Provision is made for students to gain experience in the selection, utilization and evaluation of teaching materials.  
*Prereq: 303 Principles of Teaching or equivalent.*

**402 General Reference. Three sem hours (Group I)**  
 The emphasis is on the selection, critical examination, evaluation and use of general reference materials, and the techniques of reference service.

**404 Selection and Use of Materials. Three sem hours (Group VI)**  
 Sources and criteria for selection of all types of book and non-book materials for grades K-12; study of selection policies and censorship. Two hour lab required.

**405 Organization of Materials. Three sem hours (Group VI)**  
 Theory and methods of organizing book and non-book materials in school media centers, with emphasis on classification and cataloging. Two hour lab required.  
*Prereq: 320 The Media Center in the School and 404 Selection and Use of Materials.*

**406 Storytelling. Two sem hours (Group I)**  
 Survey of folk and contemporary literature appropriate for oral interpretation; techniques and practice in the art of storytelling.



**409 History of Books and Libraries.**

**Two sem hours (Group III)**

The evolution of books and printing from earliest times to the present day; the rise and development of libraries.

**410 School Library Problems.**

**Two sem hours (Group VI)**

Deals with problems common to all school libraries. *Prereq: School library or teaching experience. In-Service Education.*

**411 School Library Problems.**

**Two sem hours (Group VI)**

School librarians work on individual library problems under professional guidance. Special arrangements must be made with the instructor before taking this course. It is possible to enroll in 410 and 411 at the same time. In-Service Education.

**430 Special Problems of the School Library.**

**Two sem hours (Group VI)**

Seminar restricted to advanced students making a more detailed study of some phase of library work. *Prereq: 404 Selection and Use of Materials, 405 Organization of Materials and the permission of the instructor.*

(Social Foundations)

**326 School and Society.**

**Six sem hours**

The school in relationship to the society and the community in which it exists, the principles of effective learning, the foundations of curriculum, the school as a social institution, and the classroom as an effective group. Supervised observation and experience with children required. *Not open to students who have had 303 Principles of Teaching.*

*Prereq: 320 Human Growth and Development.*

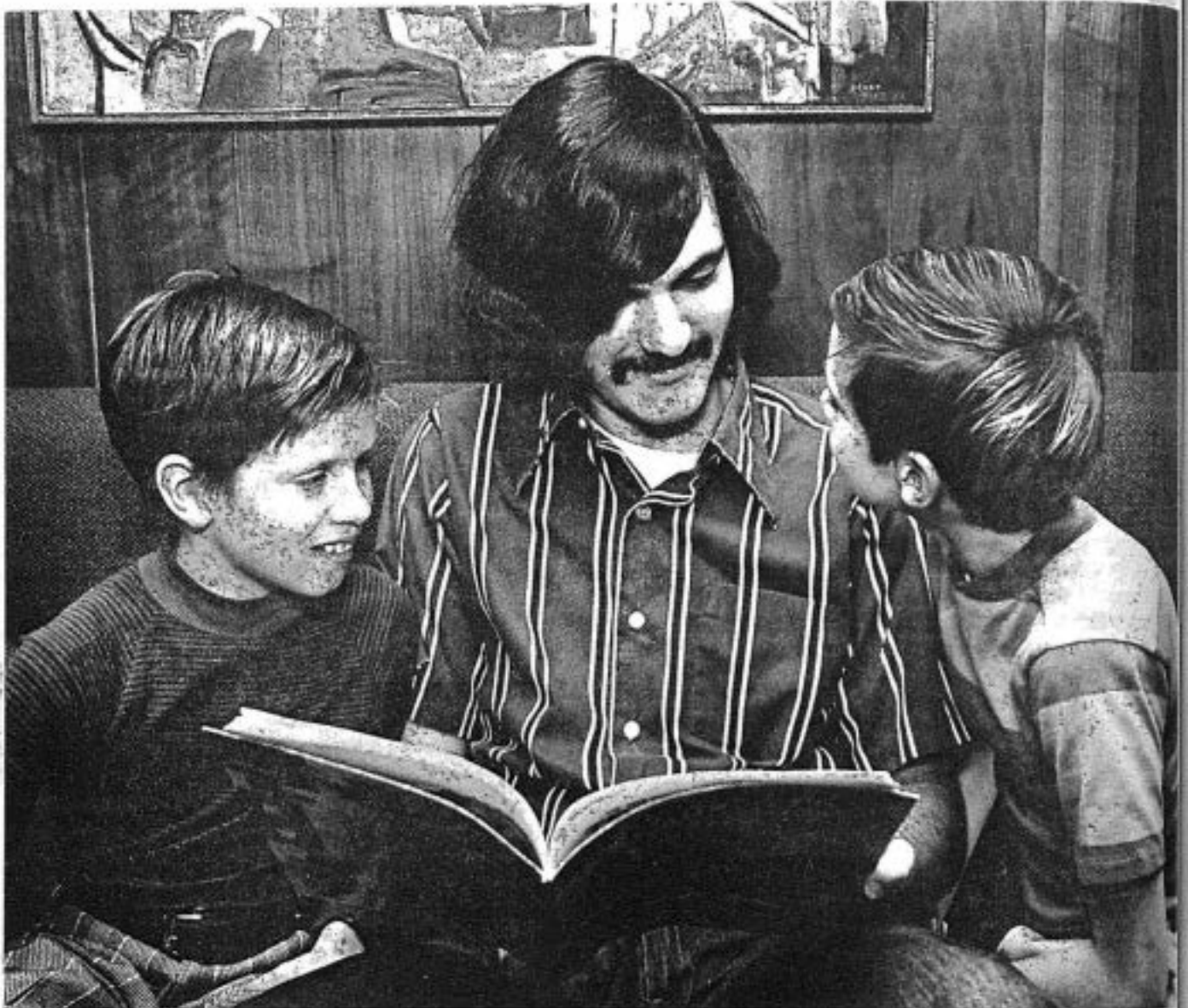
**354 Juvenile Delinquency.**

**Three sem hours (Group III)**

Factors contributing to personal and social maladjustment, symptoms of behavior disorders, work of agencies which serve children, constructive community programs to prevent and control delinquency. Laboratory experiences in school and community agencies.

*Prereq: 101 or 102 General Psychology. Not open to freshmen or sophomores.*

*See Graduate Catalog for further course listings.*

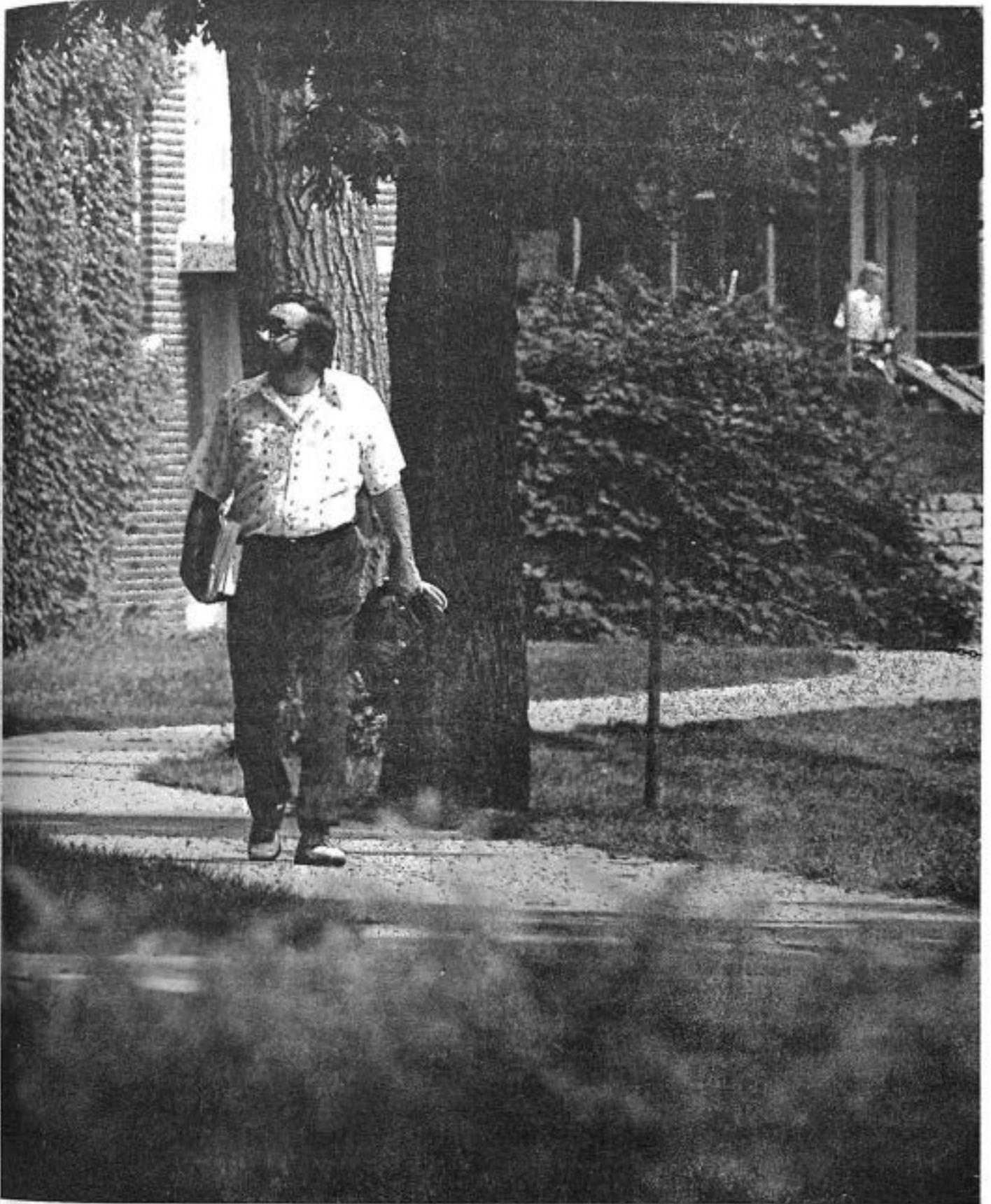


**EDUCATIONAL LEADERSHIP**

## GRADUATE STUDY

Acting Department Head: Kenneth L. Grinstead  
Professors: George Brower, Francis M. Daly, Elven E. Duvall, Bruce K. Nelson  
Associate Professors: Donald R. Fox, Jack D. Minzey  
Assistant Professors: Clyde E. LeTarte, Doris Kilanski, William F. Kromer

The Educational Leadership Department offers graduate work leading to the master's and specialist's degrees in educational administration. For descriptions of graduate courses and programs in the Educational Leadership Department, please consult the Graduate Catalog.





## EDUCATIONAL PSYCHOLOGY

**Department Head:** Wilbur A. Williams

**Professors:** Anton Brenner, Eugene E. Haddan, Everett Marshall, Israel Woronoff

**Associate Professors:** Wallace D. LaBenne, John W. Metler, Marvin L. Skore, Kishor N. Wahi

**Assistant Professors:** John Blair, Thomas T. Bushey, Marie Dellas, Louise F. Jernigan, Mildred Kaminsky, Edward Lederman, Judith A. McKee, Darlene W. Mood, Warren S. Williams

### GRADUATE STUDY

The Educational Psychology Department offers graduate work leading to the master's degree in educational psychology and the specialist's degree in school psychology. For descriptions of graduate courses and programs in the Educational Psychology Department, please consult the Graduate Catalog.

### COURSES

**206 Mental Hygiene.** **Two sem hours (Group II)**  
Understanding the basic factors which contribute to adequate or inadequate adjustment. Consideration is given to kinds of conflicts which may cause maladjustment: nature, prevention and control of mental disorders.  
*Prereq: 101 or 102 General Psychology. Not open to freshmen.*

**302 Educational Psychology.** **Three sem hours (Group IV)**  
Introduction to principles in human growth and development, learning, personality and adjustment and measure-

ment and evaluation applied to education.

*Prereq: 101 or 102 General Psychology. Not open to students in early elementary or junior-senior high school curriculums.*

### 320 Human Growth and Development.

**Four sem hours**  
The study of social, emotional, physical and mental growth processes and developmental stages and their applications for learning and teaching. *Not open to students who have had 302 Educational Psychology or 321 Child Psychology.*

*Prereq: 101 or 102 General Psychology.*

### 340 Introduction to Measurement and Evaluation.

**Two sem hours**  
(Formerly Evaluation of Pupils)

General introduction to basic principles and problems of measuring, evaluating and reporting growth and development. Students learn how to construct teacher-made tests. Other topics include measurement of cognitive abilities, interests, attitudes and personal and social adjustment.

*Prereq: 302 Educational Psychology or 320 Human Growth and Development for Teacher Education or students: 101 General Psychology and junior standing or other students.*

### 446 Advanced Educational Psychology.

**Two sem hours**  
Designed to supplement and intensify educational psychology by involving both a broader and more detailed application of the facts of psychology to the problems of learning in the schools. These problems involve both elementary school and the high school. The most important experimental studies of the learning process are examined and discussed. Individual and class experiments in learning are performed.

*Prereq: 302 Educational Psychology.*

## GUIDANCE AND COUNSELING

Department Head: John G. Pappas

Professors: Winton A. Kloosterman, Herbert O. Tothill

Associate Professors: Paul A. Nau, Kenneth Stanley,  
Benjamin W. Van Riper

Assistant Professors: Kent D. Beeler, Hugh P. Gaston,  
Gary M. Miller, Louis C. Thayer, John W. Waidley

### GRADUATE STUDY

The Guidance and Counseling Department offers graduate work leading to the master's and specialist's degrees in guidance and counseling. For descriptions of graduate

courses and programs in the Guidance and Counseling Department, please consult the Graduate Catalog.

### COURSES

#### 405 Guidance Function of the Secondary School Teacher.

Two sem hours

Designed to provide the prospective secondary school teacher with an orientation to basic guidance principles and practices, with an emphasis on the guidance role and responsibilities of the classroom teacher. *Open to juniors and seniors; recommended to be taken concurrently with student teaching.*

*Prereq: 303 Principles of Teaching or 326 School and Society.*



## HEALTH, PHYSICAL EDUCATION AND RECREATION

**Department Head:** Patric L. Cavanaugh  
**Professors:** John A. Adams, F.L. Ferzacca, Elizabeth A. Menzi, John E. Sheard, Peggy A. Steig  
**Associate Professors:** Mary I. Bell, Marguerite E. Grills, Marvin J. Johnson, Fred Trosko, Roger L. Williams, Robert J. Willoughby  
**Assistant Professors:** Lillian L. Avner, Gary C. Banks, Geraldine K. Barnes, Daniel B. Boisture, David L. Brazil, Russell L. Bush, Jean S. Cione, Sanford J. Dornbos, Mary A. Drake, Thelma R. Faulkner, Allan P. Freund, Jeannine M. Galetti, Michael H. Jones, Marilyn E. Lavinge, Donald F. Lutz, Susan M. Madley, William P. Milne, Valerie T. Moffett, Ronald E. Oestrike, Robert C. Parks, Erik J. Pedersen, Albert H. Pingel, Joyce A. Ridgway, Ronald J. Saunders, Matilda Sayegh, Harold E. Simons, Ronald M. Venis, Charles X. Witten, Claudia B. Wasik, Charlotte K. Wixom, Myrna A. Yeakle  
**Instructors:** Margaret E. Bell, Edward Chlebek, Carole J. Huston, Patricia A. Knowles, Judith A. Leffler, Judith M. Marr, Gloria D. Neve, Janet C. Schmitt, Gary Strickland

### HEALTH

**Minor** (20 semester hours)

	Semester hours
Required courses.....	20
<b>Biological Science</b>	
150 Scientific Foundations of Health Education .....	3
<b>Behavioral Science</b>	
105 Introductory Sociology.....	3
204 Marriage and Family.....	3
321 Child Psychology or	
322 Psychology of Adolescence.....	3
<b>Professional Health Education</b>	
250 Psychosocial Concepts of Health.....	2
320 Health Education for Elementary Grades or 330 Health Work in the Schools .....	2
430 Community Health Resources.....	2
Electives as approved by health education advisers.	

### Graduate Study

The Health, Physical Education and Recreation Department offers graduate work leading to the master's degree in physical education. For descriptions of graduate courses and programs in the department, please consult the Graduate Catalog.

### Courses

**110 Introduction to Safety Education.** Two sem hours  
 Stress is placed on the scope and methods of safety education, along with securing and evaluating up-to-date information on the safety needs of students, parents and the community. Materials to be utilized in the various areas of safety education will be presented.

**120 Healthful Living.** Three sem hours  
 Should develop in each student the responsibility for guiding and evaluating his own health. It promotes the

acquisition of attitudes, habits, skills and ideas favorable to efficient and healthful living. It includes material and information concerning mental, physical and social well-being. Presented and developed through group discussion, lectures, instructional aids.

**150 Scientific Foundations in Health.** Three sem hours  
 Basic instruction in the physiological and anatomical concepts related to the health of the human organism. Laboratory work included.

**250 Psychosocial Concepts of Health.** Two sem hours  
 Investigation of the mental and social factors as they affect the health of the human being. The course explores all health concepts and correlates the mental and social phenomena with the physiological principles presented in the scientific foundations course.  
*Prereq: 150 Scientific Foundations in Health.*

**320 Health Education in the Elementary Grades.** Two sem hours  
 For students preparing to teach primary and intermediate grades. Health observation of school children, survey of environmental conditions and other methods of determining the health needs of the child are taught. A study is made of the application of educational principles in health instruction. Practice is given in evaluating the newer courses in health education.

**330 Health Work in the Schools.** Two sem hours  
 The content of this course is based upon student objectives, scientific facts and current practices and trends in school health education on the secondary level. An attempt is made to solve problems of instruction, curriculum content, health service, health environment and various vital topics such as: safety emergency care, teaching materials, methods, school safety emergency care, hygiene social hygiene, school examinations and records. Here the student becomes acquainted with the dynamic role he will have in secondary education as a health educator.

**360 Concepts in School Sex Education.** Two sem hours  
 A study of the concepts of sex education as they apply to the school setting. Included in the course is a study of the biological, sociological and psychological foundations of sex education and the methods and materials for use in presenting sex education in the schools.  
*Prereq: 101 or 102 General Psychology.*

**430 Community Health Resources.** Two sem hours  
 Exploration and study of community health programs and resources as they apply to the school health program.  
*Prereq: 320 Health Education in the Elementary Grades or 330 Health Work in Schools.*

### PHYSICAL EDUCATION

#### Major

For required courses for a major in physical education, see curriculum for teachers of physical education, for specializing students only, page 155.

**Minor** (men)(20 semester hours) Designed for those who want to coach but not teach physical education.

	Semester Hours
Required courses.....	
200 Anatomy and Physiology.....	5

203 Kinesiology.....	2
Three of the following four courses:.....	3
263 Theory and Practice of Football.....	1
265 Theory and Practice of Baseball.....	1
267 Theory and Practice of Basketball.....	1
269 Theory and Practice of Track.....	1
311 Athletic Training.....	2
367 Methods and Materials in Physical Education.....	3
441 Organization and Administration of Physical Education.....	3
Electives from Group VII.....	2

**Activity Hours**

Required courses.....	15-16
Four of the following six courses:.....	11-12
p 15 Gymnastics.....	3
p 17 Rhythms and Games.....	3
p 21 Individual and Team Sports.....	3
p 22 Couple, Square and Ballroom Dancing.....	3
p 23 Wrestling.....	2
p 29 Aquatics.....	3
The following service teaching courses:	
p 31 Service Teaching.....	2
p 33 Service Teaching.....	2

**RECREATION**

**Major**

For required courses for a major in recreation, see curriculum for directors and teachers of recreation, page 156.

**Minor**

**Semester Hours**

Required Courses.....	20
270 Organization and Administration of Community Recreation.....	3
252 or 367 Methods and Materials in Physical Education.....	3
280 Camping.....	2
380 Community Recreation Leadership.....	3
480 Recreation Therapy.....	2
*Electives.....	7

**Activity Hours**

Physical Education Activity Courses:.....	14
P 31 or P 34 Service Teaching.....	2
Major elective classes.....	12

**DANCE**

**Major**

For required courses for a major in dance: see curriculum for teachers of dance, page 157.

**Minor (20 semester hours)**

**Semester Hours**

Required academic courses:	
106 Introduction to the Performing Arts.....	3
107 Rhythmic Analysis as Related to Dance.....	3
200 Art Appreciation.....	3

\*See coordinator of recreation education for list of acceptable electives.

350 History of Dance.....	3
377 Stage Costume History and Theory.....	3
450 Advanced Dance Composition.....	4
**Electives.....	1

**Activity Hours**

103 Couple, Square and Ballroom Dancing.....	3
P 24 Folk Dance.....	2
P 20 Modern Dance II.....	3
P 32 Modern Dance III.....	3
P 50 Modern Dance IV.....	2
160 Beginning Ballet.....	2
260 Intermediate Ballet.....	2
P 36 Service Teaching in Dance.....	2
P 46 Service Teaching in Dance.....	2

**COURSES**

**106 Introduction to the Performing Arts.**

**Three sem hours**

The arts of dance, theatre and music are studied both individually and collectively with the objective of determining their respective elements and of arriving at a better understanding and appreciation of the great works of art in the three fields. The place of these arts in our present day environment and their contribution to a richer life receive special emphasis. Labs to be arranged. Attendance required at specified on-campus performances. (Music, Physical Education, Speech and Dramatic Arts Departments).

**107 Rhythmic Analysis and Dance Accompaniment.**

**Three sem hours**

The study of rhythm, sound, and music literature as related to the teaching and performing of dance. The course will be supplemented by assigned listening experiences and designated explorations of pertinent elements of music.

**200 Anatomy and Physiology.**

**Five sem hours**

A textbook course, supplemented by lectures and demonstrations, on the structure and functions of the bones, joints and muscles and the organs of digestion, respiration and excretion.

**203 (Men), 204 (Women) Kinesiology (Mechanics of Exercise).**

**Two sem hours**

A textbook course in the mechanism of bodily movements. The separate movements of the upper limbs, lower limbs and trunk are studied first, and then those of the body as a whole, as it is used in gymnastics, games and sports and the various occupations of life.

*Prereq: 200 Anatomy and Physiology.*

**210 Standard American Red Cross First Aid.**

**Two sem hours**

Outlined by the American Red Cross, this course consists of lectures, textbooks and practice work in first aid. A certificate is awarded to each student completing the course. *Persons enrolling in this course may not take 311 or 312 First Aid, Athletic Training and Physiotherapy.*

**240 History and Philosophy of Physical Education.**

**Two sem hours**

A lecture and reference course covering the history and philosophy of physical education and play and how they

\*\*Electives to be chosen in the areas of art, music, drama and related subjects.

have influenced the social structure of the various countries and their educational implications.

**242 (Women) Organization and Administration of Physical Education. Three sem hours**

The study of principles and objectives in physical education in the light of the needs, interests and characteristics of public school students. Principles of organization and administration of programs in departments, classes, clubs, intramurals, athletics and leadership are studied. Functional construction of gymnasiums, swimming pools, athletic fields and various facilities are reviewed and discussed.

**245 Elements of Dance Composition. Three sem hours**

An introduction to the fundamentals of choreography, including the use of improvisation and the development of compositions. Emphasis will be placed on the exploration and manipulation of the elements of dance.

*Prereq: PI6 Modern Dance I.*

**252 (Women) Methods and Materials in Physical Education and Recreation. Three sem hours**

(See Education)

**255 Dance Production. Three sem hours**

A study of the fundamentals of dance production including publicity, planning and organization, set design and construction, stage lighting, sound effects and recording, costuming and stage make-up. Laboratory projects will be coordinated with dance productions.

**261 (Men) Techniques of Officiating. Two sem hours**

A study of the rules and techniques of officiating several interscholastic sports.

**262 (Women) Techniques of Officiating. Two sem hours**

The following activities are covered: field hockey, basketball, volleyball, softball. In volleyball and basketball, national ratings are given. One hour theory, two hours practice.

**263 (Men) Theory and Practice of Football. One sem hour**

Lectures, demonstrations, use of motion pictures and practice in teaching the fundamentals and various styles of offensive and defensive play. The course is designed for those expecting to coach this sport. Includes laboratory periods.

**264 Theory of Coaching Individual Sports for Women. Two sem hours**

Includes the following activities: badminton, golf, tennis, archery. It is designed to coordinate, correlate and supplement the skills and information already conveyed in activity classes through the following methods: survey of D.G.W.S. policies concerning participation and competition, place of individual sports in the school intramural and inter-school programs, lesson plans, unit plans, panel discussions, discussion of techniques and strategems of advanced play, organization of a large class, evaluation of current literature pertinent to each activity.

*Prereq: P 14 Badminton and Tennis, P 42 Golf and Bowling.*

**265 (Men) Theory and Practice of Baseball. One sem hour**

Consists of lectures, use of motion pictures, demonstrations and field work in teaching the skills involved in this

sport. The course is for those expecting to coach this activity. Includes laboratory periods.

**266 Theory of Coaching and Teaching Team Sports. Two sem hours**

Designed to coordinate, correlate and supplement skills and coaching techniques introduced in activity courses. Field sports, volleyball and basketball are covered.

*Prereq: P 12 Hockey and Volleyball, P 40 Basketball and Softball, P 52 Track and Field and Field Sports.*

**267 (Men) Theory and Practice of Basketball. One sem hour**

Lectures, demonstrations, use of motion pictures and practice in teaching the fundamentals and various styles of offensive and defensive play. The course is designed for those expecting to coach this sport. Includes laboratory periods.

**269 (Men) Theory and Practice of Track. One sem hour**

Consists of a study of the organization, administration and field work in teaching the skills involved in this sport. The course is for those expecting to coach this activity. Includes laboratory periods.

*Prereq: P 12 Hockey and Volleyball, P 40 Basketball and Softball, P 52 Track and Field and Field Sports.*

**270 Organization and Administration of Community Recreation. Three sem hours**

Consists of a study of the organization, administration and financing of community recreation as well as a study of recreation areas and facilities, various types of programs, public relations, program planning and personnel.

**280 Camping. Two sem hours**

A study is made of the various kinds of organized camps. The course includes the methods of planning and managing camps, how to choose a camp site, kinds of camp shelters, both permanent and temporary, sanitation, survival techniques, safety provisions, leadership and woodcraft. This course is planned to meet the demand for trained leaders for private, semi-public and school camps.

**300 Physiology of Exercise. Three sem hours**

A comprehensive course involving lectures and laboratory work on the physiology of muscle, nerve circulation and respiration, with special relation to the effects of bodily exercise.

*Prereq: 200 Anatomy and Physiology (for physical education majors).*

**310 Physiology of Nutrition. Two sem hours**

A study of the processes of digestion, metabolism and the fundamentals of diet. A textbook is used, supplemented by lectures, assigned readings and studies of the personal diet of students.

**311 (Men), 312 (Women) First Aid, Athletic Training and Physiotherapy. Two sem hours**

The principles of first aid, athletic training and physiotherapy are studied. In addition to lectures, special attention is given to demonstration and practice of mass bandaging, taping and therapeutic measures as applied in athletic activities and injuries. *Persons enrolling in this course may not take 210 First Aid.*

*Prereq: 200 Anatomy and Physiology (for physical education majors).*



**33 (Men), 334 (Women) Adapted Physical Education.****Two sem hours**

lecture and participation course covering the philosophy and goals of adapted physical education: the relationship of adapted physical education to the general program in physical education, the needs of the exceptional student, the organization of such a program, the public relations involved, body mechanics, body conditioning, posture, physical examinations and exercises for defects.

**34 History of Dance.****Three sem hours**

lecture and reference course designed to cover the history, philosophy and theory of dance from primitive man to modern man, including the social and educational applications of dance today.

**35 Labanotation.****Three sem hours**

study of the basic elements of Labanotation with special emphasis on the analysis of dance movements. The course will also include the development of skills necessary to record movement and read notation.

*Prereq: 245 Elements of Dance Composition, P 16, P 20 Modern Dance I and II.*

**37 (Men) Methods and Materials in Physical Education and Recreation.****Three sem hours**

(see Education)

**38 Youth Organizations.****Two sem hours**

includes a short history, aims and objectives of the programs sponsored by various organizations serving youth at a local and national level. Special emphasis will be placed on the need for trained leadership of youth and youth serving organizations.

**380 Community Recreation Leadership.****Three sem hours**

Designed to give students an opportunity to study the problems of leadership. The following areas will be considered: summer playgrounds, social recreation, music, arts, dramatics, senior citizens, community center programs and industrial groups.

**390 Sports Summary.****Two sem hours**

study of rules and administration of both men's and women's individual and team sports.

**40 Tests and Measurements in Physical Education.****Two sem hours**

(see Education)

**41 (Men) Organization and Administration of Physical Education.****Three sem hours**

The study of principles and objectives in physical education in the light of the needs, interests and characteristics of public school students. Principles of organization and administration of programs in departments, classes, clubs, intramurals, athletics and leadership are studied. Functional construction of gymnasiums, swimming pools, athletic fields and various facilities are reviewed and discussed.

**420 Advanced Dance Composition.****Four sem hours**

extension of the principles explored in the Elements of Dance Composition with emphasis on structural development and experiences in the use of thematic materials, selected dance idioms, multi-media resources and group choreography. A choreographic work will be required of students

majoring in dance.

*Prereq: 107 Rhythmic Analysis and Dance Accompaniment and P 50 Modern Dance IV.*

**455 Seminar in Dance.****Two sem hours**

A lecture-discussion course designed for the review of current literature and dance research, the study of trends in dance education and the analysis of developments in contemporary concert dance.

*Prereq: 350 History of Dance, 450 Advanced Dance Composition or permission of the department.*

**470 Field Work in Recreation.****Four sem hours**

Practical experience under supervision in a recreation program directing activities and learning about the administration and supervision of programs. The student would be required to spend at least 10 clock hours per week in the recreation center. *Not open to students seeking a teaching certificate.*

**480 Recreation Therapy.****Two sem hours**

Designed to assist occupational therapists and majors in recreation in the performance of recreational skills required in hospital programs. The following areas are given attention: music as recreation and recreation through games and sports. Field trips to nearby hospitals.

**490 Organization and Planning of School and Community Programs.****Two sem hours**

A study of the problems involved in organizing and program planning for school assemblies, playdays, carnivals, circuses, demonstrations, swimming pageants and community pageants. Deals with the selection of themes, costuming, musical accompaniment and other factors involved in such programs.

**497 Independent Study.****One sem hour****498 Independent Study.****Two sem hours****499 Independent Study****Three sem hours**

Designed to provide an opportunity for directed study in areas not provided in other course offerings, or greater depth of study in areas in which the student has a continuing interest. Students will be assigned to selected faculty members for direction, consultation and evaluation of the completed study or project. *Open only to department majors and minors who have attained junior status, with a grade point average of 3.0 or above and who have completed the appropriate background courses.*

*Prereq: Permission of the department.*

**MAJOR ACTIVITY COURSES**

The importance of physical education activity classes lies in their contribution to such educational objectives as organic development, neuromuscular coordination, social efficiency, and the preparation of teachers and athletic coaches in the elementary and secondary fields of public schools.

**Activity Courses for Women Majoring in Physical Education and Recreation**

Women students majoring in physical education or recreation must complete the following activity courses and are required to do six hours service teaching.

**First Year  
First Semester**

	Activity Hours
P10 Fundamentals of Movement. . . . .	3
P12 Hockey and Volleyball. . . . .	3

**Second Semester**

P18 Activities for the Elementary Grades. . . . .	3
P24 Folk Dancing. . . . .	2
P26 Beginning Swimming. . . . .	3

**Third Semester**

P14 Badminton and Tennis. . . . .	2
P56 Swimming-Analysis and Life Saving. . . . .	3
P40 Basketball and Softball. . . . .	2
P34 Service Teaching. . . . .	2

**Fourth semester**

P22 Couple, Square and Ballroom Dancing. . . . .	3
P28 Gymnastics. . . . .	2
P36 Service Teaching. . . . .	2
P48 Swimming Instructors' Course. . . . .	3
(Optional dependent on proficiency)	

**Fifth Semester**

P32 Beginning Modern Dance. . . . .	3
P42 Golf and Bowling. . . . .	2
P46 Service Teaching. . . . .	2

**Sixth Semester**

P50 Advanced Technique and Composition of Modern Dance. . . . .	2
P52 Track and Field and Field Sports (Soccer, Speedball, Speedway). . . . .	3
P30 Synchronized Swimming (Optional dependent on proficiency). . . . .	3

**Fourth Year**

**Seventh Semester**

P 54 Senior Seminar. . . . .	2
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**Activity Courses for Students  
Majoring in Dance**

Students majoring in dance must complete the following activity courses and are required to do six hours of service teaching.

P16 Modern Dance I. . . . .	3
160 Beginning Ballet. . . . .	2
P20 Modern Dance II. . . . .	3
260 Intermediate Ballet. . . . .	2
103 Couple, Square and Ballroom Dancing. . . . .	3
P24 Folk Dance. . . . .	2
P32 Modern Dance III. . . . .	3
P50 Modern Dance IV. . . . .	2

**Activity Courses for Men Majoring in  
Physical Education and Recreation**

Men students majoring in physical education must complete a minimum of 16 hours of selected major activities plus 10 hours of service teaching. The activity classes may be taken in any sequence but should be completed during the freshman and sophomore years. Service teaching is an out-growth of these classes and should be taken during the junior and senior years, but prior to student teaching.

Major students are required to wear the regulation uniform.

**Required Major Activity Classes:**

P15 Gymnastics. . . . .	3
P17 Rhythms and Games. . . . .	3
P21 Individual and Team Sports. . . . .	3
P23 Wrestling. . . . .	2
P29 Aquatics. . . . .	3
<b>Elective Major Activity Classes (select one)</b>	
P22 Couple, Square and Ballroom Dancing. . . . .	3
P35 Advanced Gymnastics. . . . .	2
*P39 Water Safety Instructor's Course. . . . .	2
<b>Required Service Teaching:</b>	
P31 Service Teaching. . . . .	2
P33 Service Teaching. . . . .	2
P41 Service Teaching. . . . .	2
P43 Service Teaching. . . . .	2

**ACTIVITY COURSES FOR GENERAL STUDENTS**

The physical education activity requirement is explained on page 30 in this catalog. Additional information may be obtained in the Department Office in Room 235 Warner Gymnasium.

Students are required to wear apparel appropriate to safe and efficient participation in the particular course activity. This apparel is available in the University Book store. It is also required that students enrolled in these courses pay a locker and towel fee. This fee is assessed at the time of registration.

Students may not repeat activity courses for activity credit unless approved by the head of the department.

**Co-educational Activity Courses**

The following courses are open to both men and women students. Additional courses open only to either men students or women students are listed under the appropriate headings.

	Activity Credit Hours
103 Couple, Square and Ballroom Dancing. . . . .	3
140 Marching Band. . . . .	2
* 141 Adapted Activities. . . . .	2
142 Gymnastics. . . . .	2
143 Fencing. . . . .	2
144 Trap and Skeet Shoot. . . . .	2
145 Judo. . . . .	2
146 Beginning Snow Skiing. . . . .	2
147 Archery. . . . .	2
148 Tennis. . . . .	2
149 Badminton. . . . .	2
150 Golf. . . . .	2
151 Bowling. . . . .	2
152 Sailing. . . . .	2
153 Swimming. . . . .	2
154 Lifesaving. . . . .	2
157 Physical Education for Classroom Teacher. . . . .	4

\*Open to card carrying Red Cross WSI's whose appointments have lapsed and persons holding current State Life Saving certificates. ARC W.S.I. cards will be issued to those completing course satisfactorily.

158 Folk Dancing.....	2
159 Tap Dancing.....	2
160 Ballet.....	2
161 Modern Dance.....	2
219 Intermediate Apparatus.....	2
242 Intermediate Tumbling.....	2
243 Intermediate Fencing.....	2
244 Recreational Shooting and Hunting Safety.....	2
248 Intermediate Swimming.....	2
254 Diving Techniques and Competitional Swimming.....	2
256 Water Safety Instruction.....	2
258 Intermediate Folk Dancing.....	2
260 Intermediate Ballet.....	2
261 Intermediate Modern Dance.....	2

\*Note: Not elective. Students found by physical examination to be in need of this course are assigned by the University physician.

Activity Courses for Men

	Activity Credit Hours
120 Physical Education I.....	2
126 Conditioning Activities.....	2
128 Wrestling and Judo.....	2
130 Physical Education II.....	2
220 Varsity Rifle Team.....	2
230 Varsity Cross Country.....	2
231 Varsity Football.....	2
232 Varsity Basketball.....	2
233 Varsity Swimming.....	2
234 Varsity Gymnastics.....	2
235 Varsity Wrestling.....	2
236 Varsity Track.....	2
237 Varsity Baseball.....	2
238 Varsity Golf.....	2
239 Varsity Tennis.....	2
240 Precision Drill Team.....	2

Activity Courses for Women

101 Fundamental Activity.....	4
109 Basketball.....	2
111 Volleyball.....	2
117 Synchronized Swimming.....	3
119 Gymnastics.....	2

INTERCOLLEGIATE ATHLETICS FOR WOMEN

The Intercollegiate Athletic Program for Women is organized within the Department of Health, Physical Education and Recreation. Participation is open to all women students who have an interest and ability in those activities offered. At the present time, the intercollegiate competitive program for women includes:

Field Hockey	Tennis
Basketball	Speedswimming
Volleyball	Gymnastics
Softball	Synchronized Swimming

INTRAMURAL SPORTS FOR MEN AND WOMEN

A wide variety of intramural activities are provided for both men and women. All students are cordially invited to participate. Selected sports activities are offered on a co-educational basis, and additional offerings are provided for either men or women.

Co-Educational	Men	Women
Cross Country	Softball	Basketball
Softball	Football	Softball
Tennis	Tennis	Tennis
Inner-Tube Water Polo	Golf	Bowling
Bowling	Bowling	Swimming
Basketball	Basketball	Volleyball
Free Throw Contest	Volleyball	
Paddleball	Track	
Horseshoes	Wrestling	
Float-A-Thon	Swimming	

CLUB SPORTS

Inter-university sports competition is another program sponsored by the department or made available through a student club, organized and operated by students. At the present time, competition is available in the following sports:

Men only	Co-educational	Women only
Soccer	Sailing	Gymnastics
Ice Hockey	Scuba	Tennis
	Snow Skiing	
	Fencing	
	Badminton	
	Trap and Skeet	

## SPECIAL EDUCATION AND OCCUPATIONAL THERAPY

Department Head: Frank J. Wawrzaszek

Professors: Angelo A. Angelocci, C. Wayne Fulton, Henry L. Gottwald, Joseph J. Motto, Allen Myers

Associate Professors: Garl E. Garber, Lawrence F. Gefen, Frances E. Herrick, James R. Palasek, David E. Palmer, Dale L. Rice, Mary S. Ufford

Assistant Professors: Thelma P. Albritton, George J. Barach, Normajan M. Bennett, George E. Caputo, Marjorie Chamberlain, Linda Collins, Joe E. Coyner, Sophie L. French, Harvey H. Gregerson, Nina Homel, Patricia Ann Laboda, Marylyn Lake, Nora Martin, Eva R. Meyer, Gerald Moses, Gary B. Navarre, Kathleen S. Quinn, Margaret P. Seabert, Ronald A. Trapp, Bernard M. Treado, Merry Maude Wallace

Instructors: Laurence Bemish, Sharon Burnham, Marla Gousseff, Sandra E. McClennon, Arlene E. Post, Mary Rogowski, Yvonne L. Russell, Lee F. Shough, Sheridan S. Warden, Benny C. Yow

The work of this department is divided into two main divisions:

1. Curriculums for training teachers of exceptional children
  - a. Hearing Impaired
  - b. Emotionally Disturbed
  - c. Mentally Handicapped
  - d. Physically Handicapped
  - e. Speech and Language Impaired
  - f. Visually Handicapped
2. Curriculum for occupational therapists

### HORACE H. RACKHAM SCHOOL OF SPECIAL EDUCATION

This campus laboratory school and the contemporary philosophy of its faculty affords students a unique opportunity to gain practical as well as theoretical experience in all areas of special education. The Rackham School accommodates more than 100 children with various kinds of handicaps. The school maintains programs for the deaf, the hard of hearing, the physically handicapped and the mentally handicapped.

Disciplines represented on the staff include classroom teaching, physical therapy, occupational therapy, speech therapy, audiology, psychology and medicine. Moreover, the department maintains liaison for internships for student teaching with almost every state institution in Michigan accommodating children.

### SPEECH AND HEARING CLINIC

The Speech and Hearing Clinic is maintained in the Rackham School as part of the program in the Department of Special Education. This program provides clinical training for majors in speech correction and, in addition, provides for observations for other students in the special education program. Clinical services are available to college students and to children and adults from the surrounding areas in the out-patient clinic.

The speech and hearing program is maintained as a part of the program in the Department of Special Education and Occupational Therapy. In addition to clinical speech and language evaluations and therapy, complete audiological services are also provided. These services include

diagnostic audiology, hearing aid evaluations and tition, aural rehabilitation, pre-nursery evaluation training and parent counselling. As part of their tra majors in speech correction and deaf education m directly involved in the delivery of these services staff supervision.

### PARENT COUNSELING CLINIC FOR DEAF AND HARD OF HEARING

The purpose of this program is to provide guid to the parents of the deaf and hard of hearing chil enabling them to help their child to attain language velopment during the formative years. Our aim being establish cooperation between the home and the se parent participation in the program is required.

Parents will have an opportunity to learn how t might help their child develop speech and speech re skills. They will explore the techniques of auditory t ing and the use of hearing aids. Time will be given t observation of staff members working with their and the parents will be able to discuss problems conc ing the child with staff members.

### MAJOR AND MINOR

#### Major:

For required courses for a major in special educati see pages 158 to 159 for curriculum for teachers of spee education. For specializing students only.

These curriculums lead to the degree of Bachelor Science and the provisional certificate. Beginning stud who wish to specialize in special education should f the outline closely. Students entering the depart with advanced credits should confer with the head of department before registering.

Persons admitted to the curriculum must be free i physical and/or emotional handicaps which int with or are likely to interfere with success as a t

Admission to the University does not guarantee mission to the department. A test battery must be pleted before a student is admitted to the special cation or occupational therapy divisions. This batte tests must be completed before the student does his sial student teaching.

#### Minor:\*

#### Semester H

- 206 Mental Hygiene.....
- 251 Education of Exceptional Children. . . .
- Electives (must have approval of adviser) . . .

The student who wishes to take a minor in special education must obtain, in advance, the approval of the h of the department.

Minors will be restricted to those students receiv a Michigan Provisional Certificate, having a major a home economics, physical education or recreation, i dustrial education and music education.

### AFFILIATIONS

In order to give students specializing in special education an acquaintance with the broad problems of the f

*\*This minor provides background but does not sufficient specialized work to obtain state approval teach a specialized type of handicapped children.*

visits for observation and study will be made to special schools and classes and to the following state institutions and services:

- The Wayne County Training School at Northville
- The Michigan Home and Training School at Lapeer
- The Michigan School for the Deaf at Flint
- The Michigan School for the Blind at Lansing
- The Boys' Vocational School at Lansing and Whitmore Lake
- The Girls' Training School at Adrian
- The University Hospital School at Ann Arbor
- The Ypsilanti State Hospital
- The Huron Valley Children's Center, Ypsilanti
- The Hawthorn Center, Northville
- The Children's Psychiatric Hospital, Ann Arbor
- Public schools in this area
- Plymouth State Home and Training School, Northville
- Detroit Day School for the Deaf, Detroit

### GRADUATE STUDY

The Special Education and Occupational Therapy Department offers graduate work leading to the master's degree in special education and the specialist's degrees in school psychology and special education. For descriptions of graduate courses and programs in the Special Education and Occupational Therapy Department, please consult the Graduate Catalog.

### COURSES

- 206 Mental Hygiene. Two sem hours**  
For description see Education)
- 228 Survey of Education and Guidance of the Deaf. Two sem hours**  
Designed to cover the history of the education of the deaf including an overview of the current educational programming. The second half of the course deals with problems of parent counseling, social and psychological adjustment of the deaf and vocational training and habilitation.
- 240 Pre-Clinical Experiences in Special Education. Two sem hours**  
These experiences will provide the student with an opportunity to work with handicapped children, helping the student to understand these children and also enabling him to evaluate his own personal qualifications for work with children in his chosen field. Evaluations of the student's performance will be obtained from a supervising person. Majors in the area of the emotionally disturbed and physically handicapped will complete 120 hours of experience before the end of their junior year; 10 hours of which should be completed as a freshman. See your academic adviser for further information.
- 241 Introduction to Speech Correction. Two sem hours**  
Introductory course providing background preparation in the basis of speech and simple phonetics. A study of various types of speech defects. Designed to help classroom teachers understand and correct minor defects and help them cooperate with the speech therapist.
- 243 Applied Phonetics. Two sem hours**  
The use of I.P.A. symbols for transcription of speech. Emphasis will be placed on analysis of deviant speech. *Intended primarily for majors in speech correction.*

**251 Education of Exceptional Children. Two sem hours**  
A consideration of the problems connected with the education of the non-typical child—the visually handicapped, the deaf, the crippled, speech defective, mentally handicapped, gifted, socially maladjusted and educationally disadvantaged. Principles and methods of differentiation, by means of which the schools may be enabled to meet the needs of every child, will be discussed.

**301 Emotionally Disturbed Children. Four sem hours**  
Dynamics of individual growth and behavior, theories of emotional disturbance in children, illustrated by case materials.  
*Prereq: 360 Abnormal Psychology.*

**310 Developmental Aspects of Teaching Physically Handicapped Children. Five sem hours**  
The basic concepts of anatomy, physiology and pathology as related to the types of disability found in an orthopedic classroom. Laboratory periods (two one-hour periods per week) are required and case studies of physically handicapped children are made.  
*Prereq: 251 Education of Exceptional Children, and 240 Pre-Clinical Experiences in Special Education.*

**312 Applied Aspects of Teaching Physically Handicapped Children. Six sem hours**  
To help the student understand the educational and psychological needs of physically handicapped children and to learn about the various teaching techniques to meet these needs, a study of the various therapies and services necessary for the habilitation of physically handicapped children. Two one-hour laboratory periods are required per week.  
*Prereq: 251 Education of Exceptional Children and 310 Developmental Aspects of Teaching Physically Handicapped Children.*

**326 Introductory Practicum With the Deaf I. One sem hour**  
Thirty clock hours supervised observation and work with deaf and hard of hearing children. Experience is designed to permit the student and University to examine the individual's qualifications for working with the deaf.  
*Coreq: 391 Language for the Deaf.*

**327 Introductory Practicum With the Deaf II. One sem hour**  
Thirty additional clock hours supervised observation and work with the deaf and hard of hearing. *326 and 327 must be completed prior to Student Teaching with the Deaf.*

**336 Anatomy and Physiology of the Speech and Hearing Mechanisms. Two sem hours**  
The anatomy and physiology of normal production and auditory reception are studied in detail. Emphasis is placed on understanding the physical processes of speaking and listening as dynamic, interdependent processes.  
*Lab required.*

**338 Speech Pathology. Two sem hours**  
Designed to provide the student with a detailed knowledge of the nature, causes and development of speech disorders. An intensive study will be made of the literature regarding delayed speech, articulatory defects, voice problems, stuttering, cleft palate, cerebral palsy and hearing disorders. *A minimum of 15 clock hours of speech diagnosis will be required. Lab required.*  
*Prereq: 241 Introduction to Speech Correction, 243 Ap-*



plied Phonetics and 336 Anatomy and Physiology of the Speech and Hearing Mechanisms.

**339 Speech Evaluation. Two sem hours**  
Supervised clinical experience in evaluating speech disorders. Theory, observation and practice in obtaining a case history; testing articulation; conducting a speech mechanism exam; preliminary evaluation of various disorders.

*Prereq: Concurrent enrollment in 338 Speech Pathology.*

**340 Speech Correction Methods I. Three sem hours**  
Deals with diagnosis and treatment of functional articulatory problems, stuttering, language impairment and functional voice disorders.

*Prereq: 338 Speech Pathology.*

**341 Directed Observation in Speech Correction. One sem hour**  
Observation and evaluation of the methods and materials used in treating speech and hearing disorders. Opportunity for supervised clinical practice. *Must be taken concurrently with 340 Speech Correction Methods I.*

**342 Speech Correction Methods II. Two sem hours**  
Methods of treatment of speech disorders associated with cerebral palsy, cleft palate, hearing losses and mental handicaps.

*Prereq: 340 Speech Correction Methods I and 341 Directed Observation in Speech Correction.*

**343 Clinical Practice in Speech Correction I. Two sem hours**  
A minimum of 30 clock hours of supervised clinical experience with children and adults in individual and group settings. Functional articulation, voice disorders and rhythm problems are given special emphasis.

*Prereq: 341 Directed Observation in Speech Correction and 340 Speech Correction Methods I.*

**344 Clinical Practice in Speech Correction II. Two sem hours**  
A minimum of 30 clock hours of supervised clinical experience with speech disorders associated with organic impairment. Emphasis is given to problems of children with cerebral palsy, cleft palate, hearing losses and mental handicaps.

*Prereq: 343 Clinical Practice in Speech Correction I. Concurrent enrollment in 342 Speech Correction Methods II.*

**345 Clinical Practice in Speech Correction III. Two sem hours**  
A minimum of 30 clock hours of supervised clinical experience with a variety of speech and hearing disorders.

*Prereq: 343 and 344 Clinical Practice in Speech Correction I and II.*

**350 Mental Deficiency. Two sem hours**  
A study of the etiology and incidence of mental deficiency, the historical and current philosophy, preventive measures and the educational facilities. Opportunities are provided for observation and clinical studies.

*Prereq: 101 General Psychology and 251 Education of Exceptional Children.*

**354 Juvenile Delinquency. Three sem hours**  
(For description see Education)

**357 Education of the Mentally Handicapped I. Two sem hours**  
Designed for the consideration of problems in selection and preparation of curriculum materials for mentally handicapped children and the methods and devices in presenting these materials. Opportunities are provided for functional experiences.

*Prereq: 350 Mental Deficiency.*

**358 Education of the Mentally Handicapped II. Two sem hours**  
A continuation of 357 Education of the Mentally Handicapped I.

*Prereq: 357 Education of the Mentally Handicapped I.*

**364 Methods of Teaching the Blind. Three sem hours**  
A study of the various methods used in educating children. The adaptation of these methods to the teaching of elementary and secondary school subjects to students. Further emphasis on Nemeth code, Crabbacus and other teaching materials and devices.

*Prereq: 365 Braille.*

**365 Braille. Three sem hours**  
Students will work on the development of personal skills in the reading and writing of Braille. Methods of teaching Braille to the blind will be emphasized. A portion of the time will be spent in Nemeth Code and Braille science and music notations. Use of abacus and braille-writer will be taught.

*Prereq: 251 Education of Exceptional Children.*

**366 Hygiene and Anatomy of the Eye. Two sem hours**  
Lectures by ophthalmologists on anatomy, physiology and pathology of the organs of vision, refractive errors and principles of correction. Special attention is given to diseases and causes of visual handicaps in children. Educational implications of these conditions are given. Ancillary functions as orthoptic training, social work and parent counselling are included.

*Prereq: 251 Education of Exceptional Children.*

**367 Education of Children with Impaired Vision. Two sem hours**  
Organization and administration of various plans for educating partially sighted children. Adaptation of various teaching methods and materials to partially sighted children. A comparison of various vision testing methods and devices. Visits to classes for visually handicapped children.

*Prereq: 366 Hygiene and Anatomy of the Eye.*

**368 Mobility Training for the Blind. Two sem hours**  
A concentration on sensory training, study and development of cane techniques as they apply to mobility for the blind. Introduction to leader dog program. A practical program included. Offered on the junior, senior and graduate levels.

**378 Introduction to Audiology. Two sem hours**  
Structure and functions of the auditory mechanisms. Included is a study of sound as the auditory stimulus, anatomy and physiology of the hearing mechanisms, diseases of the ear and treatment, pure tone audiometry.

**390 Measurement and Diagnosis in Special Education. Two sem hours**  
Psychological evaluation and assessment, the role of tests in the assessment of intellectual capacity, educational

emotional adjustment, visual and auditory limitations.  
 Preq: 251 *Education and Exceptional Children and*  
*Junior or senior standing.*

**391 Language for the Deaf. Four sem hours**  
 Examines the effects of a hearing loss on language development, the structure of English and principles of grammatical techniques of developing language in the young deaf child and a detailed study of a structured language teaching system with emphasis on practical use at all levels.  
*Must be taken concurrently with 395 Speech for the Deaf I.*

**392 Auditory Training and Speech Reading for the Deaf. Two sem hours**  
 A study of the avenues of receptive language available to deaf and hard-of-hearing children, the training of residual hearing and the development of speech reading. Includes the use and care of group and individual hearing aids.  
 Preq: 378 *Introduction to Audiology.*

**393 Speech for the Deaf I. Two sem hours**  
 Speech development of the pre-school deaf child. Analysis of speech as a motor skill, with presentation of typical problems of speech for the deaf: i.e. breathiness, voice quality, articulation, rhythm, phrasing, accent and fluency. Methods of analyzing and transcribing speech will be emphasized.

**394 Speech for the Deaf II. Two sem hours**  
 A continuing analysis of speech as a psycho-acoustic-motor skill, intensive analysis of methods of developing speech and of achieving intelligible, connected speech. An integral part of this course is a one-to-one tutoring experience for a minimum of 30 clock hours during the semester.  
 Preq: 395 *Speech for the Deaf I.*

**397 School Subjects for the Deaf. Four sem hours**  
 Principles and methods of teaching reading and school subjects to the deaf. Classroom procedures and materials especially designed for the deaf as well as the adaptation of regular curriculum and materials will be presented.  
 Preq: 228 *Survey of Education and Guidance for the Deaf.*

**398 Methods and Curriculum for Emotionally Disturbed. Two sem hours**  
 Curriculum materials, methods and techniques for educating the emotionally disturbed child are explored.  
 Preq: 301 *Emotionally Disturbed Children and senior standing.*

**399 Programs for Emotionally Disturbed Children. Two sem hours**  
 Covers program variations and their adaptations for the education of emotionally disturbed children. The focus is on the theoretical and philosophical foundations of programs and some attention is given to behavior management techniques, teacher role and professional relationships within given programs.  
 Preq: 301 *Emotionally Disturbed Children and senior standing.*

**400 Experimental Phonetics. Three sem hours**  
 Theoretical consideration of speech as motor behavior as an acoustical phenomenon. Physiological and acoustical investigations of speech and voice. Principles

and methods of measuring speech action and acoustical phenomena.  
 Prereq: *Senior standing.*

**437 Psychology of Speech and Hearing. Two sem hours**  
 The development of speech, language and hearing from birth with emphasis on these areas within the total concept of child development. The normal functions and uses of language in children and adults will be considered as a basis for understanding the effects of speech, language and hearing problems of the individual.  
 Prereq: *Senior standing only.*

**440 Seminar in Speech Correction. Two sem hours**  
 Concurrent with Special Student Teaching (See SPA596 Public School Internship in Speech Correction, Graduate Catalog).

**442 Seminar in Deaf Education. Two sem hours**  
 History, nature and structure of the Michigan Public School system. Problems related to integration of the functional units within the system are discussed. Organization of special services as they relate to these units is included. Students are encouraged to discuss their public school internship experiences. Several times during the semester there will be large meetings of all students enrolled in the several sections for the purpose of discussing common topics. Must be taken concurrently with Special Student Teaching.

**444 Seminar in Mental Retardation. Two sem hours**  
 History, nature and structure of the Michigan Public School system. Problems related to integration of the functional units within the system are discussed. Organization of special services as they relate to these units is included. Students are encouraged to discuss their public school internship experiences. Several times during the semester there will be large meetings of all students enrolled in the several sections for the purpose of discussing common topics. Must be taken concurrently with Special Student Teaching.

**446 Seminar in Physically Handicapped. Two sem hours**  
 History, nature and structure of the Michigan Public School system. Problems related to integration of the functional units within the system are discussed. Organization of special services as they relate to these units is included. Students are encouraged to discuss their public school internship experiences. Several times during the semester there will be large meetings of all students enrolled in the several sections for the purpose of discussing common topics. Must be taken concurrently with Special Student Teaching.

**448 Seminar in Emotionally Disturbed. Two sem hours**  
 History, nature and structure of the Michigan Public School system. Problems related to integration of the functional units within the system are discussed. Organization of special services as they relate to these units is included. Students are encouraged to discuss their public school internship experiences. Several times during the semester there will be large meetings of all students enrolled in the several sections for the purpose of discussing common topics. Must be taken concurrently with Special Student Teaching.

**450 Seminar in Visually Handicapped.** Two sem hours  
History, nature and structure of the Michigan Public School system. Problems related to integration of the functional units within the system are discussed. Organization of special services as they relate to these units is included. Students are encouraged to discuss their public school internship experiences. Several times during the semester there will be large meetings of all students enrolled in the several sections for the purpose of discussing common topics. Must be taken concurrently with Special Student Teaching.

**468 Education of Children with Learning Disabilities.** Two sem hours

A study of the educational and psychological problems of children with neurological and perceptual defects. Preparation and evaluation of materials.

*Prereq: 251 Education of the Exceptional Child and senior standing.*

**478 Audiometric Testing.** Two sem hours

Advanced 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.*

**497 Independent Study in Special Education.** One sem hour

**498 Independent Study in Special Education.** Two sem hours

**499 Independent Study in Special Education.** Three sem hours

Advanced study on an individual basis in areas in which the department does not offer a formal course.

*Prereq: 3.0 grade point average and senior standing and permission of the department.*

### OCCUPATIONAL THERAPY

The curriculum of occupational therapy consists of four years of academic work on campus, plus six to nine months of hospital experience. Upon completion of the four years work, the graduate is eligible for a Bachelor of Science degree, with a major in occupational therapy and minor in science. Upon completion of the hospital portion of the program the candidate is eligible to qualify for entrance by examination to the registry maintained by the American Occupational Therapy Association. With permission, students may have a summer assignment between the junior and senior year, thus shortening the hospital affiliation period by three months. With careful planning, and an extra semester, students can qualify for a Michigan Provisional Teacher's Certificate, along with the above. See page 179 for required courses.)

Students may enter the program in occupational therapy at freshman, transfer or post degree level. Applicants holding a bachelor's degree must be on campus at least two semesters. They fulfill the hospital assignment as the other students do.

*Occupational Therapy may be chosen as a major field only.*

The curriculum of occupational therapy at Eastern Michigan University has been approved and accredited by the Council of Medical Education of the American Medical Association. It also meets all training requirements for professional registration with the American

Occupational Therapy Association. Assignments for hospital experience are made with those centers maintain occupational therapy departments, under direction of registered occupational therapists.

A special bulletin on occupational therapy at Eastern Michigan University is available upon request from the director of occupational therapy.

### Affiliations

- University of Michigan Hospital
- Ypsilanti State Hospital
- The Rehabilitation Institute, Detroit
- Neuropsychiatric Institute, University of Michigan
- Mary Free Bed Hospital
- Lafayette Clinic
- Detroit Memorial Hospital
- Northville State Hospital
- Detroit Orthopedic Clinic
- Children's Hospital, Detroit
- Veteran's Administration Hospitals
- Traverse City State Hospital
- Pontiac State Hospital
- Annapolis Hospital, Wayne

### OCCUPATIONAL THERAPY CURRICULUM

**Bachelor of Science Degree**  
Adviser Chairman, **Frances Herrick**

	Semester
Group I Drama, Language, Literature and Speech. . . . .	
121 or 124 Fundamentals of Speech. . . . .	2-3
Either of the following. . . . .	3-5
121 English Composition or a foreign language course (121 through 222)	
Group II Science. . . . .	
101 General Psychology. . . . .	3
105 Biological Science (unless exempt by passing test). . . . .	
200 Anatomy for Occupational Therapy Students. . . . .	5
270 Human Physiology. . . . .	3
300 Neuroanatomy and Neurophysiology. . . . .	3
301 Kinesiology. . . . .	3
360 Abnormal Psychology. . . . .	3
361 Psychiatry Lectures. . . . .	2
390 Measurement and Diagnosis in Special Education. . . . .	2
404 and 405 Medical Lectures. . . . .	6
Group III Social Science. . . . .	
101 or 102 History of Civilization. . . . .	3
105 Introductory Sociology. . . . .	3
Either of the following. . . . .	3
112 American Government or	
202 State and Local Government	
308 Social Psychology. . . . .	3
Humanities Area Requirements. . . . .	11
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies	
A course in philosophy or religion. . . . .	3
101, 102 Reading of Literature. . . . .	6
A fine arts course (met automatically by Group V courses below). . . . .	2-3

Group IV Education.....	21
201 Theory A—Survey of Occupational Therapy and Rehabilitation.....	2
240 Pre-clinical Experience.....	2
301 The Emotionally Disturbed Child.....	4
305 Theory B—Psychiatric Theory.....	2
320 Human Growth and Development.....	4
400 Theory D—Rehabilitation Techniques.....	2
407 Theory C—Physical Disabilities Theory.....	3
408 Theory E—Senior Seminar.....	2
Group V Fine Arts.....	9
101 Introduction to Art.....	3
300 Creative Arts (o.t. section with ceramics).....	3
Art Elective.....	3
Group VI Practical Arts.....	14
102 Woodwork.....	3
104 Graphic Arts Processes.....	3
304 Therapeutic Media I.....	3
428 Adaptive Equipment.....	2
453 Therapeutic Media II.....	3
Group VII Physical Education and Health.....	4
Physical education activity courses (eight activity hours).....	4
Note: Two semester hours of military science may be applied toward this requirement.	
Electives.....	14-10
Total.....	124

Note: Occupational therapy majors who wish to qualify for a Michigan Provisional Teaching Certificate must make application to the College of Education and fulfill the requirements necessary for a student teaching experience. (Hours credit and placement to be arranged by adviser and student teaching office.)

**Courses**

- 200 Anatomy for Occupational Therapy Students. Five sem hours**  
 Study of the skeletal and muscular systems of the human body. Emphasis placed on upper extremity. Laboratory required.  
*Prereq: 105 Biological Science.*
- 201 Theory A—Survey of Occupational Therapy and Rehabilitation. Two sem hours**  
 A study of the history, development and scope of the field of occupational therapy. Study of the philosophy of rehabilitation and the relationship of occupational therapy to the broad field of rehabilitation.
- 240 Pre-Clinical Experience. Two sem hours**  
 One semester of lecture, observation and participation in the Occupational Therapy programs at Rackham School and Ypsilanti State Hospital to provide opportunity for self and staff evaluation relative to the student's potential in the field of occupational therapy. *To be taken after 200 Anatomy for Occupational Therapy Students and 201 Theory A—Survey of Occupational Therapy and Rehabilitation.*
- 300 Neuroanatomy and Neurophysiology. Three sem hours**  
 Study of the nervous system of the human body, lesions of the nervous system and resulting disabilities. Laboratory required.  
*Prereq: 200 Anatomy for Occupational Therapy Students.*

- 301 Kinesiology for Occupational Therapy Students. Three sem hours**  
 Study of neuromuscular functions of the human body. Application of principles of kinesiology in choosing therapeutic activities. Pathological gaits. Muscle testing. Joint measurement. Laboratory required.  
*Prereq: 200 Anatomy for Occupational Therapy Students.*
- 304 Therapeutic Media I. Three sem hours**  
 Instruction in planning treatment programs for individuals with physical disabilities and/or psychological illnesses through variations and adaptations in weaving. Procedures for floor looms and portable looms. Materials and sources.  
*Prereq: 201 Theory A—Survey of Occupational Therapy and Rehabilitation and 101 Introduction to Art.*
- 305 Theory B—Principles of Occupational Therapy for Patients Hospitalized for Psychological Reasons. Two sem hours**  
 Treatment programs in psychiatric settings. Rapport with patients. Adjusting program to needs of patients. Records, case histories, case conferences. Treatment planning and reporting. Organization and administration.  
*Prereq: 101 or 102 General Psychology and 360 Abnormal Psychology.*
- 361 Psychiatry Lectures. Two sem hours**  
 Lectures on the psychoses, major and minor, and the abnormal psychological reactions, from the standpoint of etiology, symptomatology and treatment. *For occupational therapy majors only.*  
*Prereq: 101 or 102 General Psychology and 360 Abnormal Psychology.*
- 400 Theory D—Physical Disability Theory. Two sem hours**  
 Patient evaluation, treatment planning and techniques in the areas of perception, vocational exploration, activities of daily living, work simplification, mobility and prosthetic training.  
*Prereq: 200 Anatomy for Occupational Therapy Students, 300 Neuroanatomy and Neurophysiology and 301 Kinesiology for Occupational Therapy Students.*
- 404 Medical Lectures. Three sem hours**  
 A series of lectures on orthopedic, neurological, medical and surgical conditions with emphasis on the important signs and symptoms, etiologies, complications, psychological reactions and convalescent care. *For occupational therapy majors only.*
- 405 Medical Lectures. Three sem hours**  
 Continuation of 404 Medical Lectures.
- 407 Theory C—Rehabilitation Techniques. Three sem hours**  
 Exploration and study of the use of occupational therapy in all areas of physical disability including the psychological aspects. Utilization of this knowledge for treatment planning. Reporting and record keeping. Administrative procedures.
- 408 Theory E—Senior Seminar. Two sem hours**  
 A seminar to promote independent study, written and oral reporting, professional reading.



**428 Adaptive Equipment and Appliances.**

**Two sem hours**

(Graduate course, 528)

Laboratory course covering use of materials and designs for the making of supportive devices used in the field of rehabilitation.

**453 Therapeutic Media II.**

**Three sem hours**

Laboratory study of crafts (leatherwork, copper tooling, square knotting). Adaptation of above crafts to treatment programs for patients with physical disabilities and/or psychological illnesses.

*Prereq: 201 Theory A—Survey of Occupational Therapy and Rehabilitation.*

**495 Student Affiliations in Occupational Therapy.**

Hospital practice-training period of six—nine months required of all occupational therapy majors. Experience is procured in a department directed by a registered therapist and organized to afford the student adequate educational opportunities. Assignments are in physical disabilities, psychiatry, general setting.

*Requirement of occupational therapy curriculum.*





# **APPLIED SCIENCE DEPARTMENTS**

## **DEPARTMENTS**

**Home Economics**  
**Industrial Education**  
**Military Science**  
**Nursing Education**

## HOME ECONOMICS

**Department Head:** Anita L. Fielder

**Professors:** Betty L. Bornemeier, Duane M. Laws, Madeleine M. Lloyd, Ruby L. Meis

**Associate Professors:** R. Elaine Found

**Assistant Professors:** Betty L. Barber, Mary M. Krieger, Richard B. Leinbach, Karen L. Miller, Sarah E. Moore, N. Annette Peel, Judith C. Williston

**Instructors:** B. Joy Hansen, Carolyn T. Johnson, Jo H. Webb, Phyllis A. Young

Home economics, as a field of study, offers the student a unique combination of careers for a wide variety of professional opportunities and a valuable preparation for marriage and community service as well. All courses are open as electives to any student in the University if prerequisites are met.

To provide all students with the opportunity to gain the minimum of preparation for marriage and family life, the Home Economics Department offers the:

### FAMILY LIFE LECTURE SERIES

101 Family Resources, one sem hour, elective credit

102 Family Food Management, one sem hour, elective credit

103 Family Clothing Problems, one sem hour, elective credit

104 Family Living, one sem hour, elective credit

This series is offered each semester. One or several of the courses may be elected by any student. See course descriptions on page 186.

### CURRICULUM IN GENERAL HOME ECONOMICS

#### Bachelor of Science Degree

Adviser Chairman, **B. Joy Hansen**

This curriculum is designed for the student who wishes to combine interests in home economics and the liberal arts. It gives a broad general training in all phases of home economics with minor and electives in the field of the student's special interest.

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

#### Semester Hours

Group I Drama, Language, Literature and Speech. . . . . 5-8

121 or 124 Fundamentals of Speech. . . . . 2-3

Either of the following (see page 68) . . . . . 3-5

121 English Composition or  
A foreign language course (121 through 222)

Group II Science. . . . . 10-12

101 or 102 General Psychology. . . . . 3-4

#### Alternate 1:

One laboratory-science course in biology, chemistry, earth science, physics or psychology (102, 301). One mathematics course. Electives in this area (including courses in any of the above-listed sciences, or courses in mathematics, or

courses in psychology) to total the required minimum hours.

#### Alternate 2:

Two laboratory-science courses in biology, chemistry, earth science, physics or psychology (both of which may be taken in the same department). Electives in this area to total the required minimum hours.

Group III Social Science. . . . .	9-12
101 or 102 History of Civilization. . . . .	3
Either of the following. . . . .	3-6
The remaining 101 or 102 History of Civilization or	
A two course sequence in sociology or economics	
Either of the following. . . . .	3
112 American Government or	
202 State and Local Government	
Humanities Area Requirements. . . . .	12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
105 Integrated Arts. . . . .	3
Either of the following. . . . .	6
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language or more advanced foreign language literature courses)	
Group VI Practical Arts. . . . .	4
Home Economics Core. . . . .	20
106 Orientation to Home Economics. . . . .	1
114 Clothing for Consumers. . . . .	3
117 Clothing Principles Lecture. . . . .	1
116 Food for the Family. . . . .	4
204 Home Management and Family Economics. . . . .	4
206 Contemporary Family Relations. . . . .	4
208 Aesthetics of the Home and Family. . . . .	3
Advanced Sequence. . . . .	24
235 Textile for Consumers. . . . .	3
201 Nutrition for the Family. . . . .	3
211 Advanced Foods. . . . .	3
213 Family Health Care. . . . .	1
269 Housing the Family. . . . .	2
271 Household Equipment. . . . .	2
302 Experimental Clothing. . . . .	3
309 Home Furnishings. . . . .	3
406 Seminar in Home Economics. . . . .	1
410 Home Management Seminar. . . . .	3
Physical education activity courses. . . . .	1
*Electives	40-33
Total. . . . .	174

### CURRICULUM FOR TEACHERS IN HOME ECONOMICS

This curriculum prepares students to certify as vocational homemaking teachers for junior and senior high schools as well as for adult education and occupational programs. See Curriculum for Teachers of Home Economics, page 151.

*\*Electives should be chosen to satisfy the requirements of a minor chosen by the student.*

# CURRICULUM FOR HOME ECONOMICS IN BUSINESS

## Bachelor of Science Degree

Adviser Chairman. **B. Joy Hansen**

This curriculum has been specifically designed for those students who plan to enter the business field in one of the areas of home economics. Some of the career possibilities in the various areas of specialization are:

- A. Consumer Management  
Home service and demonstrator for utilities companies, consumer consultant, retailing, family welfare agencies, consultant for housing developments
- B. Interior Design  
Decorating consultant, retailing of furniture or home accessories, kitchen planning consultant, publications.
- C. Fashion Merchandising  
Buyer for fashion department, pattern company personnel, fashion design, fashion consultant, publication
- D. Foods in Business  
Food industry technology, dietetics assistants, cafeteria or restaurant management, food demonstrator or nutrition consultant

All home economics in business majors enroll in the basic core, followed by the professional sequence and a specialization of the student's choice. Wider professional opportunities are available through chosen electives.

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

	<b>Semester Hours</b>
Group I Drama, Language, Literature and Speech. . . . .	6-8
124 TV Fundamentals of Speech. . . . .	3
Either of the following (see page 68) . . . . .	3-5
121 English Composition or	
A foreign language course (121 through 222) if student qualifies.	
Group II Science. . . . .	10-12
101 or 102 General Psychology. . . . .	3-4

**Alternate 1:**

One laboratory-science course in biology, chemistry, earth science, physics or psychology (102, 301). One mathematics course.

Electives in this area (including courses in any of the above-listed courses, or courses in mathematics, or courses in psychology) to total the required minimum hours.

**Alternate 2:**

Two laboratory-science courses in biology, chemistry, earth science, physics or psychology (both of which may be taken in the same department). Electives in this area to total the required minimum hours.

Group III Social Science. . . . .	9-12
101 or 102 History of Civilization. . . . .	3
Either of the following. . . . .	3-6
The remaining 101 or 102 History of Civilization or	
A two course sequence in sociology or economics	
Either of the following. . . . .	3
112 American Government or	
202 State and Local Government	
Humanities Area Requirements. . . . .	12
In addition to the courses above, the selected courses below from Groups I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
105 Integrated Arts. . . . .	3
Either of the following. . . . .	6
101, 102 Reading of Literature or	
221, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group IV Education	
(Optional, as in teacher's curriculum if certificate is desired.)	
Group VI Practical Arts. . . . .	59
General Home Economics Core. . . . .	20
106 Orientation to Home Economics. . . . .	1
114 Clothing for Consumers. . . . .	3
116 Food for the Family. . . . .	4
117 Clothing Principles Lecture. . . . .	1
204 Home Management and Family Economics. . . . .	4
206 Contemporary Family Relations. . . . .	4
208 Aesthetics of the Home and Family. . . . .	3
Professional Sequence. . . . .	14
215 Journalism. . . . .	3
220 Elements of Economics. . . . .	3
210 Display Techniques. . . . .	2
360 Principles of Marketing. . . . .	3
390 Demonstration Methods. . . . .	3
Specialization Courses. . . . .	25
Group VII Physical Education Activity Courses	4
**Electives. . . . .	24-17
Total. . . . .	124

### Specialization Areas for Home Economics in Business Curriculum

Select one of the four specialization groups making certain to include the starred courses.

	<b>Semester Hours</b>
A. Consumer Management. . . . .	25
*269 Housing the Family. . . . .	2
*271 Household Equipment. . . . .	2
*309 Home Furnishings. . . . .	3
*322 Family Financial Planning. . . . .	3
*410 Home Management Seminar. . . . .	3
382 Introduction to Management. . . . .	3
363 Retailing. . . . .	3
235 Textiles for Consumers. . . . .	3
211 Advanced Foods. . . . .	3

*\*\*Electives should be chosen to satisfy the requirements of a minor chosen by the student.*

244 Personal Tax Accounting.....	2
306 General Insurance.....	3
308 Personal Finance.....	3
367 Consumer and Industrial Credit.....	3
B. Interior Design.....	25
*235 Textiles for Consumers.....	3
*269 Housing the Family.....	2
*271 Household Equipment.....	2
*309 Home Furnishings.....	3
*259 History of Furnishings and Decoration.....	3
*445 Interior Design I.....	3
*446 Interior Design II.....	3
122 Two-Dimensional Design.....	3
*128 Architectural Drawing.....	3
235 Textiles for Consumers.....	3
382 Introduction to Management.....	3
222 Expository Writing.....	3
332 Fundamentals of Television.....	2
350 Persuasive Speaking.....	3
C. Fashion Merchandising.....	25
*382 Introduction to Management.....	3
*222 Expository Writing.....	3
*345 Fashion Analysis.....	3
*392 Pattern Design.....	3
*302 Experimental Clothing.....	3
*235 Textiles for Consumers.....	3
332 Fundamentals of Television.....	2
350 Persuasive Speaking.....	3
363 Retailing.....	3
241 Principles of Accounting.....	3
269 Housing the Family.....	2
271 Household Equipment.....	2
309 Home Furnishings.....	3
D. Foods in Business.....	25
*105 Biological Science.....	4
*210 and 211 General Microbiology with lab.....	5
*201 Nutrition for the Family.....	3
*211 Advanced Foods.....	3
*391 Food Investigation.....	3
*435 Food and Nutrition Seminar.....	1
251 Meal Management.....	3
381 Quantity Food Production.....	3
221 General Botany.....	4
222 General Zoology.....	4
301 Genetics.....	3
382 Introduction to Management.....	3
240 Broadcasting and Film Performance.....	2
350 Persuasive Speaking.....	3
222 Expository Writing.....	3

students may apply for an internship approved by the American Dietetic Association. Career opportunities for the dietitian are available in hospitals, in administrative, therapeutic or clinical situations, in industrial food service programs, in college dormitories or in teaching or research.

Group I—Drama, Language, Literature and Speech.....	
121 English Composition (or foreign language option if student qualifies).....	3
124 Fundamentals of Speech.....	3

Group II—Science.....	
101 General Psychology.....	3
105 Biological Science.....	4
331 General Microbiology.....	3
270 Human Physiology.....	3
131 General Chemistry I.....	4
180 Chemistry Laboratory Techniques.....	2
219 Elementary Organic Chemistry.....	4
220 Elementary Organic Chemistry Laboratory.....	1
351 Introductory Biochemistry.....	3
352 Basic Biochemical Analysis.....	1

Group III—Social Science.....	
Either 101 or 102 History of Civilization.....	3
Either the remaining 101 or 102 History of Civilization or a <i>two course sequence</i> in sociology or economics.....	3-6
Either 112 American Government or 202 State and Local Government.....	3
Humanities Area Requirements.....	
A course in philosophy or religion.....	3
105 Integrated Arts.....	3
Either 101 and 102 Reading of Literature or 221 and 222 Intermediate Foreign Language.....	6

Group IV—Education.....	
302 Educational Psychology.....	3

Group VI—Practical Arts.....	
106 Orientation to Home Economics.....	1
116 Food for the Family.....	4
201 Nutrition for the Family.....	3
211 Advanced Foods.....	3
251 Meal Management.....	1
380 Equipment and Layout for Quantity Food Services.....	2
381 Quantity Food Production.....	3
391 Food Investigation.....	3
402 Nutrient Metabolism.....	3
406 Seminar in Home Economics.....	1
412 Nutrition of the Life Cycle.....	3
415 Diet and Disease.....	3
435 Foods and Nutrition Seminar.....	1
201 Principles of Economics I.....	3
240 Principles of Accounting.....	3
382 Introduction to Management.....	3
384 Personnel Administration.....	3

Group VII—Physical Education Activity Courses (eight activity hours).....	
Electives.....	
Total.....	

## CURRICULUM FOR DIETETICS

### Bachelor of Science Degree\*\*

Adviser Chairman, **N. Annette Peel**

The dietetics curriculum provides the specialized educational program for students desiring to qualify for membership in the American Dietetic Association. Upon completion of the Bachelor of Science degree in dietetics,

**\*\*Group IV Education is recommended as possible alternate professional field, whereupon a Secondary Provisional Certificate will be earned.**

**MINOR IN GENERAL HOME ECONOMICS**

Required courses:.....	20-24*
106 Orientation to Home Economics.....	1
114 Clothing for Consumers.....	3
116 Food for the Family.....	4
117 Clothing Principles Lecture.....	1
204 Home Management and Family Economics.....	4
206 Contemporary Family Relations.....	4
208 Aesthetics of the Home and Family.....	3

**CHILD CARE AND GUIDANCE SERVICES MINOR**

Course Sequence:.....	24
207 Living with Young Children.....	3
308 Infant Care and Guidance.....	3
251 Education of Exceptional Children.....	2
412 Nutrition of Life Cycle.....	3
Course in Family Life.....	3
361 Issues in Family Life	
414 Experiences with Families	
372 Methods and Resources in Child Care... ..	3
413 Experiences with Children.....	4
422 Seminar in Child Development.....	1
Elective.....	2

This minor qualifies the prospective home economics teacher for the Occupational Certificate in Child Care services.

An additional summer of supervised on-the-job training experience is required for students earning the Occupational Certificate.

**CURRICULUM FOR FAMILY LIFE EDUCATION**

Adviser Chairman. **Betty L. Barber**

This major in family life education has been developed with the objective of providing interdisciplinary academic experiences and supervised direct experiences with families. It draws upon course offerings of various departments in the University. Courses are designed to provide field experiences necessary for meaningful and productive educational work with families, children, and youth; they will also provide academic backgrounds in areas of understanding children in the family setting, and variations in family patterns and life styles.

There is a marked need for professionally trained people in the field of family life education. Some will be needed in direct education programs, as in the public schools; teachers of family life education and consultants for classroom teachers are needed, as are persons skilled in mobilizing school-community action programs for family life education. Some agencies and organizations with a traditional casework orientation have expanded their services to include parent education and family life education. There is a growing emphasis in programs such

*Students who wish to declare a teaching minor also take 371 Methods and Materials in Homemaking Education and 406 Seminar in Home Economics to fulfill North Carolina Association Requirements (24 for teaching at junior and senior high level.)*

as those sponsored by the Cooperative Extension Service, a broad concern with the totality of family relationships. As pre-school education becomes an integral part of more public school programs, professional persons who are skilled in working with parents, young children and families will be needed.

**Semester Hours**

Required Courses:

Group I—Drama, Language, Literature and Speech.....	5-8
121 or 124 Fundamentals of Speech.....	2-3
Either 121 English Composition (see page 68) or a foreign language course (121 through 222).....	3-5
Group II—Science.....	10-12
101 or 102 General Psychology.....	3-4
Alternate 1:	
One laboratory-science course in biology, chemistry, earth science, physics or psychology (102, 301). One mathematics course. Electives in this area (including courses in any of the above-listed courses, or courses in psychology) to total the required minimum hours.	
Alternate 2:	
Two laboratory-science courses in biology, chemistry, earth science, physics or psychology (both of which may be taken in the same department). Electives in this area to total the required minimum hours.	
Group III—Social Science.....	12
101 or 102 History of Civilization.....	3
105 Introductory Sociology and 214 Racial and Cultural Minorities... ..	6
112 American Government or 202 State and Local Government.....	3
Humanities.....	12
A course in philosophy or religion.....	3
105 Integrated Arts.....	3
101, 102 Reading of Literature or 221, 222 Intermediate Foreign Language (or more advanced).....	6
Group IV—Education.....	25
(to be included for those desiring a Provisional Secondary Teaching Certificate)	
320 Human Growth and Development.....	4
326 School and Society.....	6
375 Methods of Teaching Family Life.....	3
405 Guidance Function of Secondary School Teaching.....	2
418 Seminar in Education.....	2
492 Student Teaching.....	8
Group VI—Practical Arts.....	36
Required Family Life Core.....	24
206 Contemporary Family Relations.....	4
207 Living with Children.....	3
216 Family Interaction.....	3
107 Food and Man.....	2
204 Home Management and Family Economics.....	4
361 Issues in Family Life.....	3
HPER 360 Concepts in School Sex Education	2



414 Experiences with Families. . . . .	3
Electives to Complete Group VI. . . . .	12
SOC 202 Social Problems. . . . .	3
213 Family Health Care. . . . .	1
269 Housing the Family. . . . .	2
SOC 306 The Urban Community. . . . .	3
308 Infant Care. . . . .	3
372 Methods and Resources in Child Care. . . . .	3
PSY 308 Social Psychology. . . . .	3
412 Nutrition of the Life Cycle. . . . .	3
413 Experiences with Children. . . . .	4
SOC 309 Culture and Personality. . . . .	3
322 Family Financial Planning. . . . .	3
PSY 322 Psychology of Adolescence. . . . .	3
500 The Disadvantaged Family. . . . .	2
504 Parent Education. . . . .	2
Group VII—Physical Education Activity	
Courses. . . . .	4
Electives. . . . .	20-15
Total. . . . .	124

**FAMILY LIFE MINOR**

	Semester Hours
Required courses. . . . .	20
206 Contemporary Family Relations. . . . .	4
107 Food for Man. . . . .	2
204 Home Management and Family Economics. . . . .	4
322 Psychology of Adolescence. . . . .	3
202 Social Problems. . . . .	3
207 Living with Young Children. . . . .	3

*If this is to be a teaching minor, students will take 375 Methods of Teaching Family Life, an additional three hours.*

Students enrolled in other home economics curriculums (i.e. general, education or business) will adapt the family life minor requirements as follows:

207 Living with Young Children. . . . .	3
322 Psychology of Adolescence. . . . .	3
202 Social Problems. . . . .	3
105 Introductory Sociology. . . . .	3
*101 General Psychology. . . . .	3
360 Concepts in Sex Education. . . . .	2
216 Family Interaction or	
361 Issues in Family Life. . . . .	3
Total. . . . .	21

*If this is to be a teaching minor, students will take 375 Methods of Teaching Family Life, an additional three hours.*

**GRADUATE STUDY**

The Home Economics Department offers graduate work leading to the master's degree in home economics. For descriptions of graduate courses and programs in the Home Economics Department, please consult the Graduate Catalog.

\*102 General Psychology may be substituted for this course.

**COURSES**

**101 Family Resources.** One sem hour  
Lectures on ways to solve problems of providing for a family on limited money, time and physical energy. Study of best values for investment of resources with major concern the satisfaction of family needs.

**102 Family Food Management.** One sem hour  
Study of the factors in the planning of nutritious, palatable and economical meals for all families.

**103 Family Clothing Problems.** One sem hour  
Lectures on family problems relating to selection and care in planning clothing for the family.

**104 Family Living.** One sem hour  
Lectures on family relationships which are basic to marriage success and to the welfare of the children. Study of pressures which result in family problems and ways to deal with them.

**105 Integrated Arts.** Three sem hours  
Provides an opportunity for students to become familiar with the basic humanitarian and design principles of industrial arts and home arts. Open only to students on secondary teacher curriculums (Industrial Education and Home Economics Departments). *Laboratory required.*

**106 Orientation to Home Economics.** One sem hour  
Home economics as a field of study: its development, scope and leadership, its contribution to education, home and family life, professional opportunities.

**107 Food for Man.** Two sem hours  
An interdisciplinary approach to the study of the relationships between food habits and social, psychological, religious and cultural factors.

**114 Clothing For Consumers.** Three sem hours  
The selection of appropriate clothing in relation to family needs and resources throughout the family life cycle.

**116 Food for the Family.** Four sem hours  
Basic study of food for the family including an introduction to food science and nutrition and to standards of food preparation. *Laboratory required.*

**117 Clothing Principles Lecture.** One sem hour  
The interpretation of clothing principles, standards and techniques in relation to fabric manipulation, fitting and construction.

**118 Clothing Principles Lab.** One sem hour  
Application of clothing principles, standards and techniques through construction of a garment. Required of students completing 117 Clothing Principles Lecture. *Prereq. or coreq: 117 Clothing Principles Lecture.*

**201 Nutrition for the Family.** Three sem hours  
Study of nutrients in foods and their functions in developing and maintaining normal growth and health in individuals. *Prereq. or coreq: 116 Food for the Family.*

**204 Home Management and Family Economics.** Four sem hours  
Management and relationships basic to satisfying family

and family life. Includes decision-making in the use of resources within the framework of family values and goals.

**206 Contemporary Family Relations. Four sem hours**  
Family relationships throughout the life cycle with concerns for changes in values and roles of family members and effective patterns for family adjustments. Recitation required.

**207 Living with Young Children. Three sem hours**  
Developmental patterns of children in various settings, physical, mental, social and emotional components of growth through the first five stages of the family life cycle, with emphasis on the child from two to five years. Impact of the family resources, attitudes and values on young children. Observation/participation at the Children's Center. *Formerly offered as 307 Preparation for Parenthood.*

**208 Aesthetics of the Home and Family. Three sem hours**  
Application of the principle of design to creative problems in home and dress. Development of good taste in effective use of resources and materials in home decoration and apparel for family members.  
*Prereq: 105 Integrated Arts.*

**210 Display Techniques. Two sem hours**  
The techniques, resources and evaluation of effective displays for use in educational, commercial and informational exhibits. Participation experiences provided in all phases of display work.  
*Prereq: 105 Integrated Arts.*

**211 Advanced Foods. Three sem hours**  
Nature and reactions of food explained in terms of chemical composition, microbiol flora and manipulative practices.  
*Prereq: 116 Food for the Family and 120 Fundamentals Chemistry.*

**213 Family Health Care. One sem hour**  
Survey of current health problems and community resources available to families.

**216 Family Interaction. Three sem hours**  
A study of the varieties of interpersonal relationships in families with emphasis on the shifting role requirements relationships with non-family members; designed to help students who will be dealing with families of many patterns and cultures.  
*Prereq: 206 Contemporary Family Relations.*

**222 Home Furnishing Techniques. Two sem hours**  
Professional techniques in construction, renovation and restoration of home furnishings. Emphasis on use of fabric and furniture in project experience.

**225 Textiles for Consumers. Three sem hours**  
Deals with the study and analysis of fabrics used for clothing and household purposes: their wearing qualities and laboratory required.

**231 Meal Management. Three sem hours**  
Study of the planning and the preparation of various types of meals for the family, with emphasis on management of time, energy and economic resources.  
*Prereq: 116 Food for the Family and 201 Nutrition for the Family.*

**259 History of Furnishings and Decoration. Three sem hours**  
Historical development of furniture styles and accessories through the centuries to present application.

**269 Housing the Family. Two sem hours**  
A study of housing as it relates to social and economic conditions for individuals and families in society.

**271 Household Equipment. Two sem hours**  
Study of appliances, basic principles of operation, performance, care and comparative values for consumer selection.  
*Prereq: 116 Food for the Family and 204 Home Management and Family Economics.*

**302 Experimental Clothing. Three sem hours**  
Experience in clothing construction with emphasis on processes and techniques relative to varied fabrics and designs.  
*Prereq: 117 Clothing Principles Lecture or 118 Clothing Principles Lab or waiver: 208 Aesthetics of the Home and Family and 235 Textiles for Consumers.*

**308 Infant Care and Guidance. Three sem hours**  
The home as a center for the nurture and development of infants and toddlers (birth to two years) with particular emphasis on the dynamics of the parent-child relationship. Observation/participation with infant-toddlers at the Children's Center.  
*Prereq: 207 Living with Young Children.*

**309 Home Furnishings. Three sem hours**  
Consideration of house furnishings as they are related to family needs, mode of living and income. Arrangement, planning and reconditioning of furnishings, development of consumer discrimination.  
*Prereq: 208 Aesthetics of the Home and Family.*

**322 Family Financial Management. Three sem hours**  
An analysis of economic problems of the family with study of a variety of incomes, expenditures, standards of living and means of security through planning.  
*Prereq: 204 Home Management and Family Economics.*

**345 Fashion Analysis. Three sem hours**  
The movement of fashion, major U.S. and European markets, the garment industry.  
*Prereq: 302 Experimental Clothing, 220 Elements of Economics.*

**361 Issues in Family Life. Three sem hours**  
Analysis of the impact of crisis situations which are significant in their effects on family members. Resources for resolving critical problems with emphasis on preservation of stability, security and constructive approaches.  
*Prereq: 206 Contemporary Family Relations and junior or senior standing.*

**371 Methods and Materials in Homemaking Education. Three sem hours**  
Responsibilities of homemaking teachers, group planning of curriculums, units of work, facility planning, interrelations of homemaking education and the total school and community. *Not open to graduate students for graduate credit.*  
*Prereq: 320 Human Growth and Development, 326 (or coreq.) School and Society and junior standing.*

**372 Methods and Resources in Child Care.****Three sem hours**

Responsibilities of home economics teachers/family life educators in occupational child care programs. Curriculum and program planning for guiding groups of young children; planning for the secondary pupil to work with preschool children.

*Prereq: 207 Living with Young Children and 308 Infant Care and Guidance.*

**375 Methods and Materials in Family Life Education.****Three sem hours**

Responsibilities of family life educators in school and community. Curriculum and program planning. Home-school-community relations. Planning facilities. Resources available from community through federal government levels.

*Prereq: 320 Human Growth and Development, 326 (or coreq.) School and Society.*

**380 Equipment and Layout for Quantity Food Services.****Two sem hours**

Study of basic principles of selection, operation, performance and care of equipment used in institutional food services with emphasis on efficient floor planning or layout.

*Prereq: 211 Advanced Foods.*

**381 Quantity Food Production.****Three sem hours**

Study of menu planning, food purchasing, food preparation techniques and sanitation principles in institutional food services. Supervised experience in work situations.

*Prereq: 251 Meal Management and 380 Equipment and Layout for Quantity Food Services.*

**390 Demonstration Methods.****Three sem hours**

Principles and procedures for demonstrations to be used in teaching and in the business areas. Actual experiences through laboratory participation (*open to graduate students for two semester graduate hours*).

**391 Food Investigation.****Three sem hours**

Application of experimental method to the study of food with emphasis given to research techniques in measuring quality and components of foods.

*Prereq: 211 Advanced Foods and 219 Elementary Organic Chemistry.*

**392 Pattern Design.****Three sem hours**

Principles of pattern making and special problems in clothing construction and design.

*Prereq: 302 Experimental Clothing.*

**402 Nutrient Metabolism.****Three sem hours**

Discussion of the biochemical functions of essential nutrients, and their relationship to health. Emphasis on methods of evaluating nutritional status.

*Prereq: 201 Nutrition for the Family and 351 Introductory Biochemistry.*

**406 Seminar in Home Economics.****One sem hour**

Interpretation and integration of progress in all areas of home economics. *Required of all seniors in general home economics and home economics education and for home economics education minors who are preparing for teaching.*

**410 Home Management Seminar.****Three sem hours**

Analysis of the homemaker's role in family decision-making, the effect of values, stages in the life cycle and

cultural environment on the use of family resources with opportunities for application in living situations.

*Prereq: 204 Home Management and Family Economics and 206 Contemporary Family Relations.*

**412 Nutrition of the Life Cycle.****Three sem hours**

Study of ways of meeting nutrient requirements for each of the physiological age groups during the life cycle.

*Prereq: 201 Nutrition for the Family or permission of the department.*

**413 Experiences with Children.****Four sem hours**

Supervised participation with young children in home and group settings. Selection, presentation and evaluation of learning experiences for young children. Emphasis on interpreting these experiences to secondary pupils.

*Prereq: 372 Methods and Resources in Child Care.*

**414 Experiences with Families.****Three sem hours**

Supervised experiences with families and their members through observation, participation, community service. Opportunities to work with families, parents, children, youth and the elderly. Emphasis on personal and professional competencies necessary, working with a variety of family settings and patterns. Resources available to families and other professional persons.

*Prereq: Permission of the department.*

**415 Diet and Disease.****Three sem hours**

Study of diet in the treatment of abnormal metabolic and disease states. Supervised field experience in one of the area hospitals.

*Prereq: 402 Nutrient Metabolism, 352 Introduction to Biochemistry, 270 Human Physiology.*

**422 Seminar in Child Development.****One sem hour**

Critical analysis of selected readings and research in development, with interpretations of possible implications in occupational child care services.

*Prereq: Permission of the department.*

**435 Foods and Nutrition Seminar.****One sem hour**

Critical evaluation of current topics in nutrition.

*Prereq: Seniors in dietetics or foods specialization.*

**445 Interior Design I.****Three sem hours**

Basic principles of interior design related to business fields. Experience in solving problems in interior design, and extended opportunities to use materials, resources and techniques.

*Prereq: 235 Textiles for Consumers and 309 Applied Furnishings.*

**446 Interior Design II.****Three sem hours**

Professional practicum with the interior design student. Methods and techniques applied in projects and experiences.

*Prereq: 445 Interior Design I.*

**490 Special Work (Honors Course).****One sem hour****491 Special Work (Honors Course).****Two sem hours**

Designed to provide additional experiences for seniors making a more detailed study of some phase of home economics. Work will be based on a personal research interest with written and/or oral report presentations regarding honors courses will be observed.

# INDUSTRIAL EDUCATION

**Department Head:** H. James Rokusek  
**Professors:** Gerald L. Jennings, Raymond A. LaBounty, Delmar Larsen, Norman Risk  
**Associate Professors:** Ralph F. Gilden, Gerald R. Griess, Clois Kicklighter, Carroll A. Osborn, John T. Wescott, John T. Wescott  
**Assistant Professors:** Robert Benden, Norman Delventhal, Lewis Kieft, Paul Kuwik, Gene Minton, Herbert Nelson, Harry PaDelford, Alfred A. Roth, John Weeks, Herbert Wilson  
**Instructor:** Harry Smith

The Department of Industrial Education offers courses and curriculums which:

1. Prepare students for certification in the teaching of industrial education subjects.
2. Lead to the Bachelor of Science degree in industrial technology.
3. Provide opportunities for two-year terminal studies for those who expect to enter technical drawing or design occupations, graphic arts, electricity-electronics, industrial materials processing or automotive occupations.
4. Lead to certification as teachers of vocational trade and industrial subjects under the Michigan State Plan for Vocational Education.

The industrial education program is designed as a curriculum with specialization in discrete areas built into the course sequence. Completion of the program as described (fills University requirements for a major and a minor. See page 29).

For required courses for a major in industrial education, see the curriculum for teachers of industrial education, page 1, and page 190 for curriculums for industrial technicians.

## INDUSTRIAL TECHNOLOGY CURRICULUM

### Bachelor of Science Degree

Adviser Chairman, **John Weeks**

This curriculum is designed to prepare students for employment in technologically oriented industrial occupations. A broad based foundation in the physical and natural sciences provides experiences for students that lead directly to technology. Typical occupations available to industrial technology graduates include such titles as industrial supervisors, managers, quality control or maintenance engineers, designers, research specialists, and materials and engineering technologists.

Group I—Drama, Language, Literature and Speech. . . . .	6-8
24 Fundamentals of Speech. . . . .	3
Either of the following: (see page 68) . . . . .	3-5
121 English Composition or A foreign language course (121 through 222) if the student qualifies.	
Group II—Science. . . . .	40
05 College Algebra. . . . .	3
07 Plane Trigonometry. . . . .	2

131 General Chemistry I. . . . .	4
241 Materials Science. . . . .	3
180 Chemistry Laboratory Techniques. . . . .	2
237 Introduction to Computer Programming	3
221 Mechanics. Sound and Heat. . . . .	4
222 Electricity and Light. . . . .	4
Electives . . . . .	15
Group III—Social Science. . . . .	12-14
101 or 102 History of Civilization. . . . .	3
Either of the following. . . . .	3
112 American Government or	
202 State and Local Government	
Either of the following. . . . .	6-8
201 Principles of Economics I, and	
202 Principles of Economics II, or	
200 The American Economy and approved two course sequence.	
Humanities Area Requirements. . . . .	11-12
In addition to the courses above, the selected courses below from Group I, III and V must be taken to complete the Basic Studies.	
A course in philosophy or religion. . . . .	3
A fine arts course in art, music or dramatic arts. . . . .	2-3
Either of the following. . . . .	6
101, 102 Reading of Literature or	
211, 222 Intermediate Foreign Language (or more advanced foreign language literature courses)	
Group VI—Practical Arts . . . . .	41
Basic Sequence. . . . .	26
116 Elements of Production. . . . .	3
121 Graphic Communication. . . . .	3
122 Technical Drawing. . . . .	3
123 Metal Processes. . . . .	3
200 Electricity and Electronics I. . . . .	3
202 Wood and Plastics Technology. . . . .	3
302 Business Communication. . . . .	3
317 Structure of Industry. . . . .	2
325 Industrial Production Fundamentals. . . . .	3

In addition to the above, the student will complete a 15-hour concentration in an area of his choice, determined in consultation with his program adviser. Areas for choice include the following: electronics technology, production technology or materials technology.

Area of Concentration. . . . .	15
Group VII—Physical Education and Health. . . . .	4
Physical education activity courses (eight activity hours). . . . .	4
Note: Two semester hours of military science may be applied toward this requirement.	

*\*The student may choose to complete the 40 semester hours of general requirements as listed, or a 30 semester hour grouping of courses which includes an approved 20 semester hour minor in science or mathematics. The sequence of courses given here assumes a high school preparation including three semesters of algebra, plane and solid geometry, a year of physics and a year of chemistry. A deficiency in any of these subjects with the exception of solid geometry, will necessitate a change of program in order to provide the necessary background as soon as possible.*

Electives. . . . .	10-5
Total. . . . .	124

Completion of the above requirements fulfills a major in industrial technology and a minor in science.

### INDUSTRIAL TECHNOLOGY MINOR

The 20-hour minor in industrial technology is designed to serve non-teaching majors in industrial or business related subjects. Employment opportunities for persons with majors in these subject areas are often enhanced with studies in technical courses such as those offered in this minor.

Approval for use of the industrial technology minor to satisfy graduation requirements must be obtained from the Department of Industrial Education. Elective courses in this minor will be selected to relate to the student's major subject area. Academic advising to determine elective course choices will be provided by this department.

	Semester Hours
Required Courses. . . . .	10
121 Graphic Communication. . . . .	3
200 Electricity and Electronics I. . . . .	3
217 Field Study in Industries. . . . .	2
317 Structure of Industry. . . . .	2
*Electives. . . . .	10
Total Semester Hours. . . . .	20

### TWO YEAR PROGRAMS

#### Industrial Technician Curriculum

These programs are designed specifically for students who plan to enter industry or related technical fields after two years of college preparation. Students completing the two year technician program with a grade point average of 2.00 "C" will receive a certificate. Students desiring to seek more specialized objectives within this program should discuss their needs with the adviser chairman.

Students must complete two semester hours (four activity hours) in physical education courses.

The two-year curriculum, as outlined below, assumes a high school preparation including two semesters of algebra and one semester of plane geometry.

### ELECTRONICS TECHNOLOGY

Adviser Chairman, **John Weeks**

#### First Year

	Semester Hours
<b>First Semester.</b> . . . . .	15-16
105 College Algebra. . . . .	3
121 English Composition. . . . .	3
121 Graphic Communication. . . . .	3
200 Electricity and Electronics I. . . . .	3
Electives. . . . .	3-4
<b>Second Semester.</b> . . . . .	15-16
107 Plane Trigonometry. . . . .	2
112 American Government. . . . .	3
116 Elements of Production. . . . .	3
118 Contemporary Materials. . . . .	3

*\*Elective choices to be made through consultation with the adviser chairman of the industrial technology curriculum.*

214 Electricity and Electronics II. . . . .	2
Electives. . . . .	2-3

#### Second Year

<b>Third Semester.</b> . . . . .	15-16
105 Introductory Sociology. . . . .	3
217 Field Study in Industries. . . . .	2
218 Energy Systems. . . . .	2
221 Mechanics. Sound and Heat. . . . .	2
314 Solid State Electronics. . . . .	2
Electives. . . . .	1-2
<b>Fourth Semester.</b> . . . . .	15-16
201 Principles of Economics I. . . . .	3
222 Electricity and Light. . . . .	4
315 Communication Circuitry. . . . .	2
317 Structure of Industry. . . . .	2
Electives. . . . .	4-5
Physical education activity (4). . . . .	4
Total semester hours. . . . .	62-64

### DRAFTING TECHNOLOGY

Adviser Chairman, **Lewis Kieft**

#### First Year

	Semester Hours
<b>First Semester.</b> . . . . .	15-16
116 Elements of Production. . . . .	3
121 English Composition. . . . .	3
122 Technical Drawing. . . . .	3
205 Photo-Technology. . . . .	2
Electives. . . . .	4-5
<b>Second Semester.</b> . . . . .	15-16
107 Plane Trigonometry. . . . .	2
112 American Government. . . . .	3
128 Architectural Drawing. . . . .	3
223 Descriptive Geometry. . . . .	3
Electives. . . . .	4-5

#### Second Year

<b>Third Semester.</b> . . . . .	15-16
123 Metal Processes. . . . .	3
206 Surveying. . . . .	3
229 Architectural Drawing. . . . .	3
324 Industrial Drawing. . . . .	3
Electives. . . . .	3-4
<b>Fourth Semester.</b> . . . . .	15-16
215 Manufacturing Processes. . . . .	3
202 Woods and Plastics Technology. . . . .	3
310 Graphics Arts Design. . . . .	3
331 Advanced Drafting. . . . .	3
Electives. . . . .	3-4
Physical education activity (4). . . . .	4
Total semester hours. . . . .	62-64

### GRAPHIC ARTS TECHNOLOGY

Adviser Chairman, **Lewis Kieft**

#### First Year

	Semester Hours
<b>First Semester.</b> . . . . .	15-16
105 College Algebra. . . . .	3
119 Fundamentals of Chemistry. . . . .	4
121 English Composition. . . . .	3

121 Graphic Communication.....	3
Electives.....	2-3
<b>Second Semester.....</b>	<b>15-16</b>
107 Plane Trigonometry.....	2
112 American Government.....	3
121 Fundamentals of Speech.....	2
122 Technical Drawing.....	3
205 Photo-Technology.....	2
Electives.....	3-4

**Second Year**

<b>Third Semester.....</b>	<b>15-16</b>
201 Principles of Economics I.....	3
207 Photographic Reproduction.....	2
221 Mechanics, Sound and Heat.....	4
308 Typography.....	2
Electives.....	4-5

<b>Fourth Semester.....</b>	<b>15-16</b>
200 Electricity and Electronics I.....	3
217 Field Study in Industries.....	2
309 Offset Presswork.....	3
310 Graphic Arts Design.....	3
317 Structure of Industry.....	2
Electives.....	2-3
Physical education activity (4).....	2
Total semester hours.....	62-66

**MATERIALS TECHNOLOGY**

Adviser Chairman, **Lewis Kieft**

**First Year**

	<b>Semester Hours</b>
<b>First Semester.....</b>	<b>15-16</b>
105 Introductory Sociology.....	3
116 Elements of Production.....	3
121 English Composition.....	3
122 Technical Drawing.....	3
Electives.....	3-4

<b>Second Semester.....</b>	<b>15-16</b>
112 American Government.....	3
118 Contemporary Materials.....	3
123 Metal Processes.....	3
202 Woods and Plastics Technology.....	3
Electives.....	3-4

**Second Year**

<b>Third Semester.....</b>	<b>15-16</b>
107 Plane Trigonometry.....	2
201 Principles of Economics I.....	3
215 Manufacturing Processes.....	3
217 Field Study in Industries.....	2
305 Forest Products.....	3
Electives.....	2-3

<b>Fourth Semester.....</b>	<b>15-16</b>
221 Mechanics, Sound and Heat.....	4
306 Plastics Processes.....	3
316 Modern Manufacturing Processes Materials.....	3
317 Structure of Industry.....	2
Electives.....	3-4
Physical education activity (4).....	2
Total semester hours.....	62-66

**PRODUCTION TECHNOLOGY**

Adviser Chairman, **John Weeks**

**First Year**

	<b>Semester Hours</b>
<b>First Semester.....</b>	<b>15-16</b>
100 Business Enterprise.....	3
116 Elements of Production.....	3
121 English Composition.....	3
122 Technical Drawing.....	3
Electives.....	3-4

<b>Second Semester.....</b>	<b>15-16</b>
118 Contemporary Materials.....	3
105 Introductory Sociology.....	3
123 Metal Processes.....	3
201 Principles of Economics I.....	3
Electives.....	3-4

**Second Year**

<b>Third Semester.....</b>	<b>15-16</b>
107 Plane Trigonometry.....	2
112 American Government.....	3
217 Field Study in Industries.....	2
215 Manufacturing Processes.....	3
317 Structure of Industry.....	2
Electives.....	3-4

<b>Fourth Semester.....</b>	<b>15-16</b>
221 Mechanics, Sound and Heat.....	4
218 Energy Systems.....	3
325 Industrial Production Fundamentals.....	3
Electives.....	5-6
Physical education activity (4).....	2
Total semester hours.....	62-66

**GRADUATE STUDY**

The Industrial Education Department offers graduate work leading to the master's degree in industrial education. For descriptions of graduate courses and programs in the Industrial Education Department, please consult the Graduate Catalog.

**COURSES**

**102 Woodwork. Three sem hours**  
Basic wood processing with hand and power tools. Includes learning situations in design, pattern development, project construction and finishing. Selection, use and care of hand and power tools. *Not open to majors in industrial education.* Lecture: two hours per week. Laboratory: four hours per week.

**104 Graphic Arts Processes. Three sem hours**  
History of printing, typography, layout and design, hand composition, printing methods, proofreading, basic press work, silk screen printing, duplicating, thermography, rubber stamps and basic photo-offset lithography. *Not open to majors in industrial education.* Lecture: two hours per week. Laboratory: four hours per week.

**105 Integrated Arts. Three sem hours**  
Provides an opportunity for students to become familiar with the basic humanitarian and design principles of industrial arts, fine arts and home arts. (Industrial Education and Home Economics Departments)



**116 Elements of Production. Three sem hours**

The theory and application of those industrial elements associated with the production of goods, including the coordination of material, process and human resources. Lecture: two hours per week. Laboratory: four hours per week.

**121 Graphic Communication. Three sem hours**

Preparation and design of graphic media. The theory and application of effective communications. Information collection, analysis and dissemination, survey of the graphic communication industry. Lecture: two hours per week. Laboratory: four hours per week.

**122 Technical Drawing. Three sem hours**

The study and application of technical sketching and mechanical drawing. Planned and organized especially for pre-engineering, industrial education and technical drawing majors. Lecture: two hours per week. Laboratory: four hours per week.

**123 Metal Processes. Three sem hours**

Survey and analysis of fundamental metal processes used in manufacturing. Emphasis upon theory and application in joining, forming, cutting, treating and the physical testing of metals. Lecture: two hours per week. Laboratory: four hours per week.

**128 Architectural Drawing I. Three sem hours**

A beginning course dealing with the basic skills and techniques used in architectural drawing, the basic principles of architectural construction drawings, their scope, content, and preparation, a survey of current building practices and use of materials. Identification of various sources of technical data regarding building materials and development of competence in using technical data for architectural problem solving. Lecture: two hours per week. Laboratory: four hours per week.

*Prereq: A course in instrument drawing.*

**152 Arts and Crafts. Three sem hours**

An exploratory course designed to provide experience in design and use of a wide variety of craft materials. Emphasis on an avocational and recreational use of craft media.

**170 Aviation Ground Instruction. Two sem hours**

Basic flight training ground instruction and practice in the following: aircraft theory, aerial navigation, civil air regulations, meteorology and radio. Instruction is directed toward preparation for the private pilot written examination.

**200 Electricity and Electronics I. Three sem hours**

A basic course in the application and manipulation of fundamental concepts of electricity and electronics. Topics include sources, rectifiers, phase relationships, magnetism, current flow and controls. The use of meters and test equipment is emphasized. Lecture: two hours per week. Laboratory: four hours per week.

**202 Wood and Plastics Technology. Three sem hours**

An analysis of the forest products and plastics industries; a study of material properties, identification, testing and processing techniques, and the application of design to product manufacture. Laboratory: three hours per week.

**205 Photo-Technology. Two sem hours**

A study of the applications of light sensitive materials used in industry to include photo-drafting, photofabri-

cation, and photoreproduction. Laboratory: two hours per week.

*Prereq: 121 Graphic Communication and one course in chemistry.*

**206 Surveying. Three sem hours**

Embraces the fundamental use of the transit and level. Exercises include linear measurement, angle measurements, extending straight lines, differential and leveling, a simple traverse survey and the keeping accurate notes. Lecture: two hours per week. Laboratory: four hours per week.

*Prereq: 107 Trigonometry.*

**207 Photographic Reproduction. Two sem hours**

Study and laboratory work in photomechanics, stripping and platemaking as applied to offset presswork. Includes the preparation of layout material for printing. Laboratory: two hours per week.

*Prereq: 121 Graphic Communication or 104 Graphic Arts Processes.*

**214 Electricity and Electronics II. Two sem hours**

A continuation of 200 Electricity and Electronics I. Additional topics include semiconductors, vacuum tubes, circuits, inductance, capacitance, LCR circuits, amplifiers, oscillators, transmission and reception. The laboratory provides experience with test equipment in functional and experimental forms. Laboratory: two hours per week.

*Prereq: 200 Electricity and Electronics I.*

**215 Manufacturing Processes. Three sem hours**

Study of the principles involved in manufacturing processes with emphasis on the use of basic equipment, metals processing and testing. Lecture: two hours per week. Laboratory: four hours per week.

**217 Field Study in Industries. Two sem hours**

Study of manufacturing processes in industry. Opportunity is provided for observation of the industrial complex through field trips to selected industries in the area. Laboratory: two hours per week.

**218 Energy Systems. Three sem hours**

An introduction to systems used to generate, transmit and utilize energy. Concern is directed at describing energy sources and uses, and the interrelationships of energy systems. Lecture: two hours per week. Laboratory: four hours per week.

**219 Automotive Technology. Two sem hours**

A basic course designed to provide students with a thorough understanding of the design, construction, operation and service of selected automotive components. Laboratory: two hours per week.

*Prereq: 218 Energy Systems.*

**223 Descriptive Geometry. Three sem hours**

A drawing course for those especially interested in technical and engineering work. The work involves geometrical constructions as related to distances, angles, intersections and the development of surfaces. Orthographic projections and geometrical theory is related to technical descriptions. Lecture: two hours per week. Laboratory: four hours per week.

*Prereq: 122 Technical Drawing or 107 Trigonometry.*

**229 Architectural Drawing II. Three sem hours**

This course is a continuation of 128 Architectural Drawing I. Emphasis is placed on the actual application of

through materials, techniques and principles. Field studies will form the basis for application of principles and practices learned. Lecture: two hours per week. Laboratory: four hours per week.  
 req: 128 Architectural Drawing I.

### Foundations of Industrial Education.

**Three sem hours**  
 Cultural forces in history which have tended to shape various types of programs in industrial education and philosophical viewpoints which have evolved from events.

**Materials Analysis and Testing. Three sem hours**  
 Study of the structure, characteristics and working quality of common industrial materials. Lecture: two hours per week. Laboratory: four hours per week.

### Industrial Technology and the Elementary Teacher.

**Three sem hours**  
 Studies evolve along an anthropological, contemporary and futuristic continuum in describing the impact of industry and technology on society. Laboratory experiences involve individual and group activities in industrial processes and problems.

**Art Metalwork. Two sem hours**  
 Copper, brass and silver are the basic materials. Jewelry and other art metal objects are designed and made by the student. Emphasis on design and the basic processes. Open to all students. Laboratory: two hours per week.

**Aviation Flight Training. Two sem hours**  
 Sixty hours of flight training preparation for the private pilot examination.

req: Completion or concurrent enrollment in 170 Aviation Ground Instruction or a passing score on the FAA private pilot written examination. Departmental permission.

**Forest Products. Three sem hours**  
 Study of products derived from the trees; analysis of wood structure, wood hydrolysis, destructive distillation processes, wood pulp, solid members and related materials; finishing, fabrication, testing and production. Lecture: two hours per week. Laboratory: four hours per week.  
 req: 202 Wood and Plastics Technology.

**Plastic Processing. Three sem hours**  
 Study of high polymers, basic resin types and their application to molding and fabricating processes. Analysis of chemical and physical properties, mold design and problems of production. Emphasis on experimentation and testing. Lecture: two hours per week. Laboratory: four hours per week.  
 req: 202 Wood and Plastics Technology.

**Typography. Two sem hours**  
 Includes the study of type design and mechanical and photographic composition with application in letterpress and offset printing. Laboratory: two hours per week.  
 req: 207 Photographic Reproduction.

**Offset Presswork. Three sem hours**  
 Operation and maintenance of small offset presses, stripping and layout, ink and water control, elementary plate making and camera work. Lecture: two hours per week. Laboratory: four hours per week.  
 req: 207 Photographic Reproduction.

**310 Graphic Arts Design. Three sem hours**  
 A study of design problems dealing with the media of the various reproduction fields of the graphic arts industry. Lecture: two hours per week. Laboratory: four hours per week.

Prereq: 207 Photographic Reproduction.

**314 Solid State Electronics. Two sem hours**  
 An introduction to semiconductor theory and principles associated with solid state devices. A study of PN junction, junction transistors, diodes, ACR's amplifier circuits and related semiconductor devices. Laboratory: two hours per week.

Prereq: 214 Electricity and Electronics II.

**315 Communications Circuitry. Two sem hours**  
 A study of commercial and amateur radio and television transmitters and receivers, theory, construction and use. Construction and trouble diagnosis are included in the laboratory experience. Laboratory: two hours per week.

Prereq: 214 Electricity and Electronics II.

**316 Modern Manufacturing Processes and Materials. Three sem hours**

Considers the application of fundamental principles to problems arising in modern manufacturing, analysis of forces and energy requirements in metal removal and forming, temperature effects, design specifications economically obtainable in terms of dimensional accuracy. Lecture: two hours per week. Laboratory: four hours per week.

Prereq: 116 Elements of Production, 123 Metal Processes and 215 Manufacturing Processes.

**317 Structure of Industry. Two sem hours**  
 A study of the structure of industry as the institution in our society responsible for the production of goods and services.

**318 Automotive Instrumentation. Three sem hours**  
 A study of the theoretical bases, both scientific and operational, and the application of sophisticated diagnostic equipment to the solution of complex automotive problems. Lecture: two hours per week. Laboratory: four hours per week.

Prereq: 219 Automotive Technology.

**324 Industrial Drawing. Three sem hours**  
 The intermediate aspects of drawing. Orthographic projection, auxiliary projection, sections, technical and structural drafting procedures, sheet metal layout and topographical drawing are included. Lecture: two hours per week. Laboratory: four hours per week.

Prereq: 223 Descriptive Geometry.

**325 Industrial Production Fundamentals. Three sem hours**  
 Particularly for students who are specializing in plant management and supervision. The course consists of the following areas: blueprint reading, sketching and reproduction and materials in manufacturing. Participation of industrial resource persons demonstrating products and related production methods will be utilized.

**331 Advanced Drafting. Three sem hours**  
 An advanced course for those specially interested in drafting and those preparing to teach mechanical drawing as a special subject. Lecture: two hours per week. Laboratory: four hours per week.

Prereq: 223 Descriptive Geometry.

**350 Curriculum in Industrial Education.**

**Three sem hours**

A study of curriculums and programs in industrial education for grades K-12. Includes consideration of the structure of the various programs with emphasis upon the selection, organization and validation of the content for them.

*Prereq: 250 Foundations of Industrial Education, junior standing.*

**354 Experiences in Technology for Children.**

**Two sem hours**

Laboratory experiences in the use of materials, tools, processes and products of industry as utilized in the elementary and middle school. Emphasis is on individual and group learning situations relevant to integrated curriculum activities.

*Prereq: 253 Industrial Technology and the Elementary Teacher.*

**424 Industrial Plant Facilities and Planning.**

**Three sem hours**

Designed to give the student a basic knowledge of planning procedures related to small plant and heavy industrial production. Included are the treatment of mass production layout methods, machine and production equipment arrangements, types of plant architecture and related facilities, transportation and handling facilities, lighting, sewerage, ventilation, water supply, electrical

power, personnel facilities. Visits to representative industrial plants are integrated with course work. *On demand.*

**460 Practicum in Industrial Education.**

**Two sem hours**

Direct involvement in solving problems related to classroom activities in industrial education programs. Emphasis upon the implementation of the methods employed in the classroom including the selection, organization and evaluation of the activities. Laboratory: two hours per week.

*Prereq: 461 The Teaching of Industrial Education concurrent with or following student teaching.*

**461 The Teaching of Industrial Education.**

**Two sem hours**

Examines the relationship between principles of effective learning and various methods of organization of industrial education content.

*Prereq: 350 Curriculum in Industrial Education.*

**497 Directed Study.**

**One sem hour**

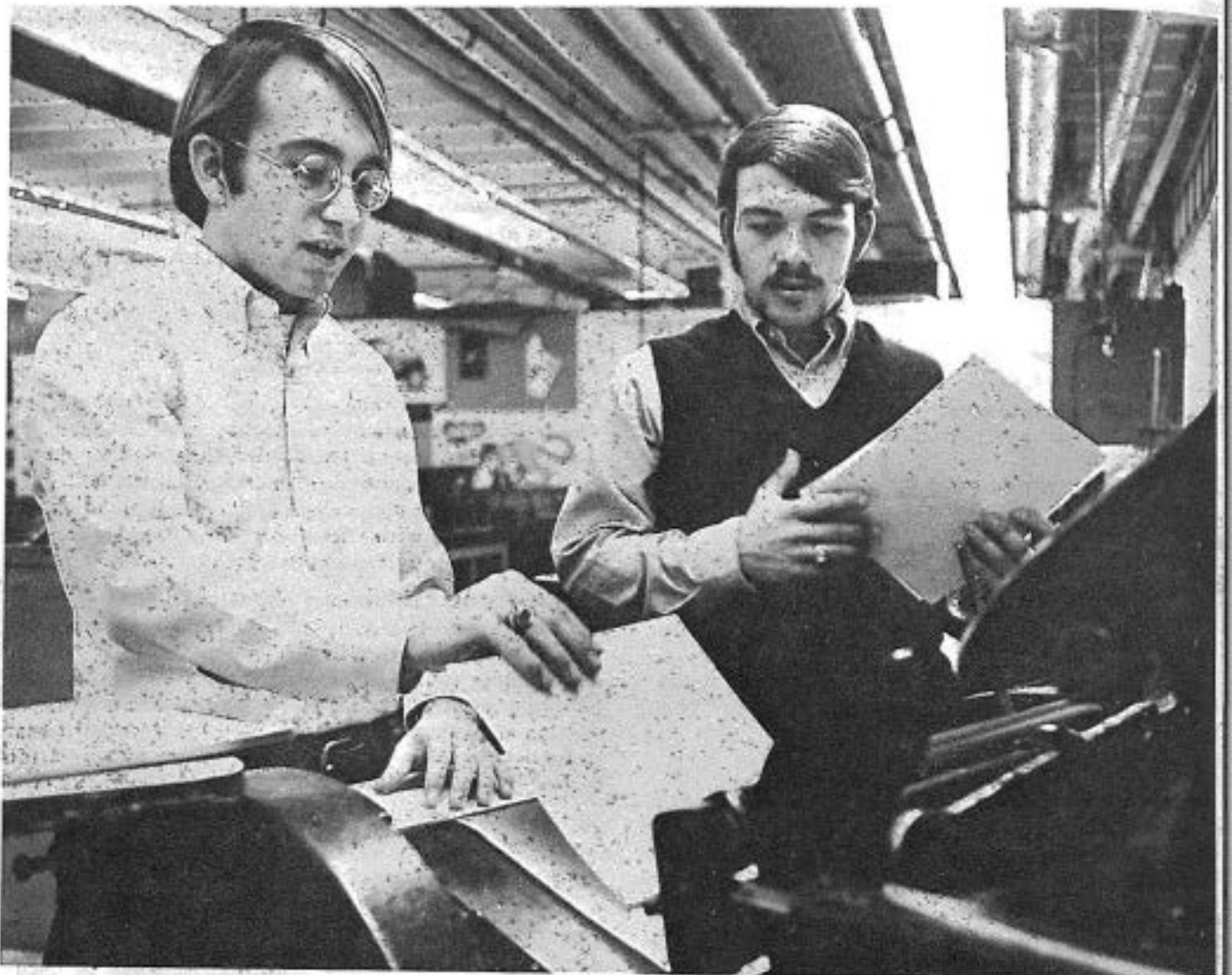
**498 Directed Study.**

**Two sem hours**

**499 Directed Study.**

**Three sem hours**

Available to selected students who have demonstrated ability to profit from a directed study project. Provides opportunity for intensive study of a problem appropriate to the student's area of concentration.



## MILITARY SCIENCE

Department Head: Colonel Ogden S. Jones, Jr.  
Associate Professor: LTC Michael L. Chirio, Jr.  
Assistant Professor: MAJ Lawrence W. Sullenger

The military science program is designed to provide "on-campus" education and training in a special curriculum which permits entry into the armed forces at the commissioned officer level. Emphasis is directed toward the role of an officer in organizing, motivating and leading others. Also included are practical exercises in the development of self-discipline, confidence, physical stamina and bearing.

The program is normally of four years duration and is conducted as a complement to the student's chosen field of academic endeavor. Its successful completion enables him to earn a commission as a career officer or member of the reserve components as he works towards a degree in his major field.

Special programs offered include flight training, distinguished military graduate program, the ROTC scholarship program and the transfer student two-year program.

### THE BASIC PROGRAM

The basic program is open to any male or female student on an elective basis. It requires normally two academic years for completion and is a prerequisite for entrance into the advanced program.

#### Prescribed Courses:

First Semester - MS 100 The United States Defense and National Security I. Two sem hours.

Second Semester - MS 101 The United States Defense and National Security II. Two sem hours.

MS 102 Leadership Laboratory must be taken in conjunction with the 101 level course.

Third Semester - MS 200 Topography, Terrain Appreciation and Small Unit Employment. Two sem hours.

Fourth Semester - MS 201 A History of American Military Development. Two sem hours.

MS 202 Leadership Laboratory must be taken in conjunction with both 200 level courses.

#### Credit Toward Graduation

A maximum of six semester hours may be awarded toward graduation for completion of the basic program. Two of the semester hours, at the student's option, may count toward satisfying the general requirement in physical education.

#### Uniforms, Texts, Special Equipment, Etc.

1. Uniforms for basic students are furnished by the Army. Students make a ten dollar deposit to the University for uniforms. This deposit is refunded when uniforms are returned.

2. Students will be required to wear the uniforms when participating in laboratories, ceremonies and other mandatory departmental activities.

3. All required texts and special equipment are furnished to the student on a loan basis.

#### The Two-Year Program

This is a special program which is designed for community college transfer students and other students who were unable to enroll in military science courses during their first two years in college. Applicants complete a six-

week summer field course in lieu of the basic on-campus program. Pay and travel allowances are authorized for participation in this program. Students completing the field course are eligible for up to six semester hours of credit upon recommendations of the Military Science Department and may apply for admission to the advanced program. Applications for the two-year program are accepted by the department from January through March of each year.

### THE ADVANCED PROGRAM

Admission to the advanced program is by permission of the Military Science Department. Normally a student should make application for admission two years before his planned date of graduation. Upon successful completion of the advanced program and satisfaction of the requirements of the University for a baccalaureate degree, an Army Commission is awarded. In addition to permission of the department, the applicant must be physically qualified and have completed:

1. The Army, Navy or Air Force basic military science program or
2. At least four months of active duty with one of the services of the armed forces or
3. The summer field course or
4. The equivalent of the above, as determined by the professor of military science.

#### Prescribed Courses:

First Semester - MS 300 Military Leadership and Management I. Three sem hours

Second Semester-MS 301 Fundamentals and Dynamics of the Military Team I. Three sem hours

MS 302 Leadership Laboratory must be taken in conjunction with both 300 level courses.

Summer - Advanced Summer Field Course - Students who successfully complete this field course are exempt from required physical education courses.

Third Semester - MS 400 Military Leadership and Management II. Three sem hours

Fourth Semester - MS 401 Fundamentals and Dynamics of the Military Team II. Three sem hours

MS 402 Leadership Laboratory must be taken in conjunction with both 400 level courses.

#### Credit Toward Graduation

The twelve semester hours credit provided by the advanced program may be used as free elective credit. However in some curriculums the ROTC students in the advanced program must take more than the minimum total of 124 hours for graduation. Students should consult their academic advisers on this matter when planning for graduation.

#### Uniforms, Texts, Allowances, Etc.

All uniforms and texts are provided to the student without cost. Additionally, participants receive \$100 subsistence allowance per school year month and approximately \$500 pay and travel allowance for the summer field course. Prior service veterans are entitled to these allowances, in addition to any other veterans benefits they are receiving.

#### Military Deferment

A student enrolled in the military science program may request a military deferment after completion of the first semester of the basic program. Students in the advanced



program are deferred automatically by virtue of their Reserve status. Additionally, students completing the advanced program may apply for further deferment in order to pursue graduate level studies.

**The Flight Program**

Students may apply to the Military Science Department, prior to their final school year, for admission to the flight program. This program is conducted on campus and qualifies the student to enter the Army aviation program at the time of his graduation. Texts, training and special flight equipment are furnished at no cost to the student.

**Distinguished Military Graduate Program**

In the final year of the advanced course, students graduating with outstanding academic and personal achievements are designated Distinguished Military Graduates. A Distinguished Military Graduate is eligible to apply for appointment as a career officer in the Regular Army.

**The ROTC Scholarship Program**

Upon completion of the first semester of the basic program, students may apply for ROTC scholarships of one, two or three years duration. Scholarships are awarded on a best qualified basis and include payment of all fees, texts and tuition costs related to the student's curriculum for the stated period, plus a monthly cash stipend of \$100.

**MINOR IN MILITARY SCIENCE**

	<b>Semester Hours</b>
Prescribed Courses:	
100 The United States Defense and National Security I.....	2
101 The United States Defense and National Security II.....	2
200 Topography and Terrain Appreciation.....	2
201 A History of American Military Development.....	2
300 Military Leadership and Management I.....	3
301 Fundamentals and Dynamics of the Military Team I.....	3
400 Military Leadership and Management II.....	3
401 Fundamentals and Dynamics of the Military Team II.....	3
Total.....	20

Note: Students electing a minor in military science may not use this minor to fulfill the state secondary certificate requirement of a teaching minor.

**COURSES**

**100 The United States Defense and National Security I, First year basic. Two sem hours**

A study of the various factors of national power and how these factors are meaningful today. The United States defense treaty system is reviewed as well as selected military programs which the United States has in the underdeveloped portions of the world. The course provides an introduction to the Department of Army organization, stressing the magnitude of management responsibilities and the relationships with other armed services. Included

are United States Army missions and functions, the organization and role of the Department of Defense, the missions and functions of the other armed services and the concept of operation of the various unified and specific commands. A survey is given to the definition, cause and nature of the spectrum of conflict.

**101 The United States Defense and National Security II, First year basic. Two sem hours**

The course presents an overview of the functional organization of the units in the Army from Department of the Army to the Infantry squad. A survey is given to functions of the various branches of the service and the responsibilities of the officers within each branch. The course also presents an introduction to leadership and problem solving. A laboratory complements this course by offering practical application of concepts developed within the classroom.

**102 Leadership Laboratory, First year basic.**

The laboratory provides demonstrations and practical problem solving for the beginning student, with the objective of developing poise, confidence, self-discipline and an understanding of military customs. Additionally group behavior situations are presented as a vehicle for experience in the development of teamwork and esprit de corps.

**200 Topography, Terrain Appreciation and Small Unit Employment, Second year basic.**

**Two sem hours**  
A study of aerial photographs, maps and mapping, with special attention to grids, grid systems, map symbols and their relationship to the actual terrain. Additionally, the influence of terrain in the planning and conduct of military operations is examined in detail. The study course is complemented by laboratory periods of applicable exercises.

**201 A History of American Military Development, Second year basic. Two sem hours**

A textual and case study approach is used to examine the history of the art of warfare. Emphasis is given to the tactical lessons and leadership techniques demonstrated in significant American campaigns and engagements. Relationships between tactical, logistical, technical, social and political developments are examined for their influence on military developments. The course is complemented by laboratory periods of applicable exercises.

**202 Leadership Laboratory, Second year basic.**

A laboratory to provide controlled leader experience in problem solving. Techniques learned from classroom experience are applied in the areas of basic unit tactics, weaponry and terrain analysis.

**300 Military Leadership and Management I, First year advanced. Three sem hours**

A study of basic techniques of leadership and management with special attention to the teaching and organizing role of the military leader. Consideration is given to the psychological, physiological and sociological factors affecting human behavior. Stress is placed on the problems inherent in the planning, preparation and presentation of learning experiences to others. Suggested techniques are applied by the student as he presents and evaluates instruction. Various concepts of group organization are examined with the objective of identifying effective

techniques of coordination, communication and delegation of authority by the decision maker. A survey is given to fundamental procedures of parliamentary, panel and conference procedures. A laboratory of applicable exercises complements this course.

**301 Fundamentals and Dynamics of the Military Team I, First year advanced. Three sem hours**

This course will emphasize to the student the leader's role in directing, planning and coordinating individual and team efforts in the execution of a variety of missions by organizations ranging in size from ten to eight hundred men. The course will cover the principles of command and executive control, leadership techniques and the communication and management systems used in the control of small organizations. The student will be familiarized with the roles and missions of the various branches of the Army. A section of this course will examine the principles and nature of Internal Defense/Development. A case history approach is used to identify insurgency and counter-insurgency methods and procedures in selected countries. A laboratory of applicable exercises complements this course.

**302 Leadership Laboratory, First year advanced.**

Leadership laboratory conducted for both semester of 300 level courses. Throughout a series of field type courses, the student plans, organizes, and conducts tactical exercises and instructional periods. Performance measurements are accomplished through critique and peer evaluations.

**400 Fundamentals and Dynamics of the Military Team II, Second year advanced. Three sem hours**

This course provides an understanding of command and staff evaluation, organization and functions using the division staff as a model. Processes for arriving at sound and timely decisions and the translation of decisions to plans

and orders are stressed. Military intelligence, procedures for obtaining it and its uses in the formulation of decisions are included. Special problems introduce long-range planning and the coordination of diverse groups and activities. Experience is provided in the problems of personnel evaluation and selection and in gaining and maintaining of morale and discipline within a group. A laboratory of practical exercises complements this course of study.

**401 Military Leadership and Management II, Second year advanced. Three sem hours**

A study of world change and military implications with special attention to their influence on management of forces. Suggested methods of measuring international relations are identified and applied in student analysis of United States relations with selected nations. Emphasis is directed toward the influence of armed forces within national power structures. The semi-diplomatic roles required of officers in foreign assignments is also examined. A section of this course is devoted to a study of basic concepts of effective administration and their application to the management of military forces. Included is a familiarization with the fundamentals of military law, including the procedures by which judicial and non-judicial disciplinary measures are conducted. A laboratory including practical exercise and student writings is conducted one hour per week as a complement to this course.

**402 Leadership Laboratory, Second year advanced.**

This is a two semester practicum conducted in conjunction with 400 level courses. The cadet brigade command and staff structure is utilized as a vehicle to provide practical experience in the planning, execution and evaluation of activities involving concepts and procedures developed in the classroom during the year. Long range projects provide experience in the management of diverse organizations, equipment and services.



## NURSING EDUCATION

**Department Head:** Gudrun S. Burtz  
**Assistant Professors:** Judith A. Floyd, Jean L. Paul

Graduates of the nursing program are eligible to qualify as a registered nurse through the Michigan State Board of Nursing licensure examination.

Students are eligible for selection into the nursing program upon completion of a minimum of 30 semester hours of university credit, including 120 Fundamentals of Chemistry, 102 General Psychology and 105 Structure of American Society.

The community centered nursing program will enable graduates to function in a variety of settings—clinics, physicians' offices, health maintenance organizations, hospitals, public health agencies and home care coordinating agencies.

The professional nursing program requires six semesters of sequential work, completed in two calendar years, on a trimester basis.

### CURRICULUM IN NURSING

#### Bachelor of Science Degree

Adviser Chairman, Gudrun S. Burtz

A minimum total of 40 semester hours in the Basic Studies areas—Groups I, II, III and the Humanities—is required of all students.

#### Semester Hours

Group I Drama, Language, Literature and Speech.....	5-8
121 or 124 Fundamentals of Speech.....	2-3
Either of the following:	
121 English Composition or	
A foreign language course (121 through	
222).....	3-5
Group II Science.....	15
201 Anatomy and Physiology.....	3
202 Anatomy and Physiology.....	3
101 General Psychology.....	3
120 Fundamentals of Chemistry.....	4
320 Pathology.....	2
Group III Social Science.....	9
101 or 102 History of Civilization.....	3
Either of the following:	
112 American Government or	
202 State and Local Government.....	3
105 Introductory Sociology.....	3
Group IV Education.....	4
320 Human Growth and Development.....	4
Additional Requirements in Group II and/or	
Group III.....	10-12
In addition to the above listed courses in Groups II and III, each student will plan a program in consultation with an adviser to:	
1. Complete basic studies requirements in Group III	
2. Complete a sequence of courses appropriate to his program objectives in Group II and/or Group III.	

Humanities Area Requirements.....	11-12
A course in philosophy or religion.....	3
A fine arts course in art, music or dramatic arts.....	2-3
Either of the following:	
101 and 102 Reading of Literature or	
221, 222 Intermediate Foreign Language	
(or more advanced foreign language	
literature courses).....	6
Group VI Practical Arts.....	4
204 Framework for Nursing.....	3
250 Nursing Science I.....	3
251 Nursing Science I Laboratory.....	3
304 Nursing Science II.....	3
305 Nursing Science II Laboratory.....	3
350 Nursing Science III.....	3
351 Nursing Science III Laboratory.....	4
370 Physical Assessment.....	3
404 Nursing Science IV.....	5
405 Nursing Science IV Laboratory.....	3
450 Nursing Science V.....	4
451 Nursing Science V Laboratory.....	3
201 Nutrition for the Family.....	3
Group VIII Physical Education and Health	
Physical Education Activity Courses (eight	
activity hours).....	
Note: Two semester hours of military science	
may be applied toward this requirement.	
Electives.....	2-4
Total.....	11

*The courses listed in Group VI Practical Arts and 201, 202 Anatomy and Physiology will satisfy University requirements for a 50-semester hour curriculum concentration.*

### COURSES

<b>204 Framework for Nursing.</b>	<b>Four sem hours</b>
A study of the concepts upon which professional nursing practice is based. Three major content areas are explored: the interrelatedness of man and his environment; the health-illness continuum; and the health care delivery system. Lecture: two hours per week. Recitation: two hours per week.	
<i>Prereq: 30 lower division credit hours and permission of the department.</i>	
<b>250 Nursing Science I.</b>	<b>Three sem hours</b>
Focus is on the family and the nurse's role in health promotion. The bio-psycho-social needs of family members and developmental patterns from conception through the child bearing years are studied. The nursing process is introduced and practice is provided in its use. Lecture: one hour per week. Recitation: two hours per week.	
<i>Prereq: 204 Framework for Nursing.</i>	
<b>251 Nursing Science I Laboratory.</b>	<b>Three sem hours</b>
Clinical nursing practice in physicians' offices and community clinics with emphasis on the promotion of family health. Provision is made for students to make home visits to selected families for health teaching purposes. Laboratory: six hours per week.	
<i>Prereq: 204 Framework for Nursing.</i>	
<b>304 Nursing Science II.</b>	<b>Three sem hours</b>
Emphasis is on the needs of the young family with a health	

problem. The meaning of illness and hospitalization for this age group is explored. Lecture: one hour per week. Recitation: two hours per week.

*Prereq:* 250 *Nursing Science I* and 251 *Nursing Science I Laboratory*.

**305 Nursing Science II Laboratory. Three sem hours**  
Clinical learning experiences are provided in doctors' offices and clinics. Students will make home visits to families with health problems. Laboratory: six hours per week.  
*Prereq:* 250 *Nursing Science I* and 251 *Nursing Science I Laboratory*.

**320 Pathology. Two sem hours**  
Designed to further student's ability to gather and assess data about patients by broadening their understanding of the dysfunctions created by major physical illnesses, theories of causation and the signs and symptoms of the more usual syndromes.  
*Prereq:* 250 *Nursing Science I* and 251 *Nursing Science I Laboratory*.

**350 Nursing Science III. Three sem hours**  
Deals with long-term illness and the bio-psycho-social needs of aging persons. Selected conditions and diseases are studied in order to illustrate the ways in which the nurse may assist these individuals. Lecture: one hour per week. Recitation: two hours per week.  
*Prereq:* 304 *Nursing Science II*, 305 *Nursing Science II Laboratory*, 320 *Pathology*.

**351 Nursing Science III Laboratory. Four sem hours**  
Clinical practice in nursing homes and extended care facilities. Emphasis is on the student acquiring the knowledge and skills necessary to meet the needs of the aged and chronically ill. Laboratory: eight hours per week.  
*Prereq:* 304 *Nursing Science II*, 305 *Nursing Science II Laboratory*, 320 *Pathology*.

**370 Physical Assessment. Three sem hours**  
Familiarizes students with normal physical examination findings. Laboratory sessions provide opportunities for

doing physical examinations under the guidance of the physician-instructor and nursing faculty. Lecture: two hours per week. Laboratory: two hours per week.

*Prereq:* 304 *Nursing Science II*, 305 *Nursing Science II Laboratory*, 320 *Pathology*.

**404 Nursing Science IV. Three sem hours**  
Exploration of the nurse's role in assisting hospitalized patients with serious health problems. Usual treatment modalities and concomitant nursing care responsibilities are studied. Lecture: one hour per week. Recitation: two hours per week.

*Prereq:* 350 *Nursing Science III*, 351 *Nursing Science III Laboratory* and 370 *Physical Assessment*.

**405 Nursing Science IV Laboratory. Five sem hours**  
Assignment to acute care facilities to provide nursing experiences with more seriously ill persons and to orient the students to large institutions whose major responsibility is treatment of illness. Laboratory: Ten hours per week.  
*Prereq:* 350 *Nursing Science III*, 351 *Nursing Science III Laboratory*, 370 *Physical Assessment*.

**450 Nursing Science V. Three sem hours**  
Introduction to the principles of managing a caseload of patients either in the hospital or community setting. Needs, roles and responsibilities of the professional nurse are explored and discussed. Lecture: one hour per week. Recitation: two hours per week.  
*Prereq:* 404 *Nursing Science IV* and 405 *Nursing Science IV Laboratory*.

**451 Nursing Science V Laboratory. Four sem hours**  
Students assume responsibility for managing the nursing care of a group of patients and do an in-depth case study in a setting of their choice—community or hospital. Laboratory: eight hours per week.

*Prereq:* 404 *Nursing Science IV* and 405 *Nursing Science IV Laboratory*.

# **BLACK STUDIES**

Director: Gerald McIntosh

## BLACK STUDIES AT EASTERN MICHIGAN UNIVERSITY

Eastern Michigan University's enrollment has almost doubled in the past five years. In 1965 there were 10,200 students enrolled; presently there are more than 19,000 persons registered. This expansion indicates that the University must serve the needs of a larger and more diversified population than in the past. The fact that this increased enrollment involves a greater number of black students requires curriculum development reflecting issues, problems, and events closely related to the unique aspects of their special environments.

Furthermore, Eastern Michigan University, as a leading teacher education institution, is dedicated to providing its students with the opportunity to develop a background in the culture, experiences, and problems in American society. The teacher who is ignorant of all facets of American society is not only unable to teach black children, but fails to provide non-black youngsters with necessary resources for living in a multi-cultural society.

### Goals of Black Studies at Eastern Michigan University

1) To provide information about the black experience (socio-economic, educational, historical and psychological aspects of being a black member of society).

2) To develop skills which will equip students to help members of groups living in impoverished urban and rural communities.

3) To promulgate ideas and attitudes which will promote understanding and better communication among individuals of differing racial origins.

### THE PROGRAM IN BLACK STUDIES

The program consists of two integral parts, a black studies minor and/or an individual concentration. Both parts are considered essential to a total program in black studies.

#### I. Black Studies Minor (24 hours) Semester Hours

Required courses (15 hours):

English	
260 Afro-American Literature.....	3
History	
315 History of Black Americans.....	3
Psychology	
340 Psychological Perspectives in Prejudice and Discrimination.....	3
Sociology	
214 Racial and Cultural Minorities.....	3
Seminar in Black Studies.....	3
(This course is yet to be designed. It will teach research skills necessary for examining and analyzing the black experience in America).	
Electives (Nine hours)	
Biology	
306 Physical Anthropology.....	2
Economics	
324 Labor Problems.....	2
Economics	
340 Black Workers and the Labor Market	3
Economics	
425 Labor and Government.....	3

Geography	
322 Geography of Africa.....	3
Geography	
332 Urban Geography.....	2
History	
365 The Old South.....	3
History	
377 History of Sub-Sahara Africa.....	3
History	
438 History of Islamic Lands to 1800.....	3
Marketing	
478 Practicum in Marketing.....	3
Political Science	
372 Government and Politics of Sub-Sahara Africa.....	3
Psychology	
330 Psychology of Contemporary Issues...	3
Sociology	
236 Peoples of Africa.....	3
Sociology	
306 The Urban Community.....	3

### The Individual Concentration Program

This program is designed for the student who wishes to pursue a more extensive course of study in the area of black studies or whose interests and goals are not presently satisfied by a traditional major. For example: problems of American Indians and similar specialized programs. See the Director of Academic Advising for aid in developing such a program.

### General Requirements

Any student selecting this program will be expected to meet the basic studies requirement of the University. With the assistance and approval of an individual concentration committee, the student will then develop an individual concentration program of at least 60 hours. Students completing the 60 hour program will have satisfied all major and minor requirements for graduation.

### Procedures

The student will provide the following information to the individual concentration committee:

- 1) Reasons that the program cannot be pursued within the framework of the traditional major,
- 2) The immediate goals of his proposed program,
- 3) The way in which the proposed program will operate to fulfill his educational and life objectives,
- 4) A detailed listing of courses which he wishes to elect.

### Certification

Students who elect the black studies program may satisfy certification requirements by using variations of the program to meet the Social Science Group major requirements for Early and Later Elementary Teachers. The black studies program, when used in this certification procedure, should consist of at least 12, but no more than 18 semester hours in one of the five social science areas, and at least three semester hours in each of the remaining areas.

The student who desires certification in secondary education may elect a social science major with a recommended minor in history. Since the courses in the minor field must be excluded from the social science major, the student could use the 12 hours thus released to elect courses from the black studies concentration in the other four social science areas.

# **THE CENTER FOR THE STUDY OF CONTEMPORARY ISSUES**

**Director: Monroe P. Friedman**



## THE CENTER FOR THE STUDY OF CONTEMPORARY ISSUES

This new University center was established in 1970 to study some of the major contemporary issues confronting society. The bulk of the center's efforts will be directed toward the development and execution of an issue-oriented instructional program. In addition, the center will explore various program possibilities in research and community service. With regard to the instructional program, a number of critical issues have been identified (see the titles of the 300-level seminar courses listed below), and courses to deal with these issues have been structured by faculty members from some fifteen academic departments at the University.

In each academic year, center courses dealing with three of these issues will be offered as electives to Eastern students. In each course, the issue will be defined, its historical roots identified, and various alternatives examined for resolving the issue in the future.

The instructional program of the center will be carried out by a staff consisting of a director, three center fellows, one or more scholars-in-residence and several graduate teaching assistants. In addition, a Center Advisory Board, consisting of a representative group of University students and faculty members, will recommend a set of issues to be studied by the center in each academic year.

A major responsibility for the center activities will lie with the three center fellows, who will be selected from the University faculty for one-year, full-time appointments. Each fellow will be knowledgeable about one of the contemporary issues recommended for inclusion in the center program by the Center Advisory Board. He will devote his year in center residence to instructional, research and service activities relating to this issue. In performing his instructional activities, the center fellow will call upon faculty members and outside practitioners for assistance, as guest lecturers and panel participants for his courses.

Three types of center courses are offered: (1) survey, (2) seminar and (3) independent study. Students who enroll in these courses will receive elective credit in the social sciences (Group III). The 200-level survey courses have as prerequisites nine hours of social science (Group III) courses. Course credit earned in economics, geography, history, philosophy, political science and sociology will count toward fulfilling the nine-hour prerequisite. Additional prerequisites are specified for the 300-level seminar courses and the 400-level independent study courses.

Since the set of three issues to be studied by the center will change from year to year, students should consult the latest class schedule for a current list of the issue-oriented courses which are being offered.

### COURSES

#### 201, 202, 203, 204, 205 Survey of Contemporary Issues.

Three sem hours

An overview of two or more contemporary issues selected from the 300-level seminar topics listed below. Several instructors from different academic departments participate in the teaching of the course. Since the subject matter changes from year to year, a student may take the

course more than once. Topics considered each year are listed in the class schedule. Lecture: two hours per week  
Recitation: one hour per week.

*Prereq: Nine hours of social science (Group III) courses.*

#### 301 The Role of the University in the Contemporary World.

Two sem hours

As the vital issues confronting a concerned citizenry have assumed an ever-greater complexity, the societal demands upon American universities have intensified. This course examines the nature of these demands and explores both proposed and actualized university models for coping with them.

*Prereq: Nine hours of social science (Group III) courses junior standing and permission of the department.*

#### 303 The Impact of Technology on Man.

Two sem hours

A study of the effects of the "technological revolution" on the quality of human life. Proposed mechanisms are examined for managing the new technology in ways which will serve the interests of man.

*Prereq: Nine hours of social science (Group III) courses junior standing and permission of the department.*

#### 305 Securing Environmental Quality: The Challenge for Man.

Two sem hours

A study of the forces which threaten environmental quality, such as air and water pollution, crowding and noise. The nature of these forces and proposals for dealing with them are examined from a cross-disciplinary perspective.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

#### 307 The Right of Privacy in an Open Society.

Two sem hours

An examination of physical, psychological and data surveillance techniques which have made it possible for personal information to be collected and disseminated without the knowledge or permission of the individuals involved. Also examined are attempts at reconciling the individual's desire for privacy with the desire of societal institutions and organizations for more information of a personal nature.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

#### 309 The Challenge of the Emerging Nations.

Two sem hours

A study of the efforts by the developing nations of Asia, Africa and Latin America to solve their economic and social problems. The role of the economically advanced nations in supporting these efforts is examined as well as the impact of these developments on the world order.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

#### 311 Poverty in America.

Two sem hours

A cross-disciplinary analysis of poverty in the United States. Existing socio-economic structures and institutions which affect poverty are examined, and proposals to improve the lot of the poverty-stricken are evaluated.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

#### 313 Violence in America.

Two sem hours

An examination of current patterns of violence in America, their historical and philosophical roots and the ef-

effectiveness of various programmatic efforts for reducing violence.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

**315 Censorship and the Free Society. Two sem hours**

An examination of efforts to prohibit or restrict types of expression believed to threaten the social, political or moral order. The implications of such censorship practices for a free society are explored for various communications media.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

**317 The Population Explosion. Two sem hours**

An exploration of the rapid growth of world population and its implications for the present and future quality of human life. Proposed mechanisms for controlling population are examined and evaluated.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

**319 Militarism in Contemporary America.**

**Two sem hours**

An examination of the concept of militarism and its role in contemporary American society. Particular emphasis is given to the manifestations of militarism in government, business, science, education and the communications media, and the implications of these influences for the future.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

**321 Drugs: Uses, Abuses and Controls. Two sem hours**

This course deals with medical, psychological, social and educational problems arising from drug uses and abuses. Proposed solutions to these problems are examined from various perspectives.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

**323 Private Enterprise and the Public Interest.**

**Two sem hours**

An examination of potential sources of conflict between private enterprise and the public interest. Attention is

given to current issues and efforts to resolve them, as well as the social, economic and political constraints involved in the resolution process.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

**325 Resolving Racial Conflict in America.**

**Two sem hours**

An examination of past, present, and likely future efforts to resolve racial conflict in America.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

**327 The World in the Year 2000. Two sem hours**

This course explores possible worlds of the future from both descriptive and prescriptive perspectives. Various forecasting techniques are examined and evaluated.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

**329 The Rights of Women in Contemporary America.**

**Two sem hours**

An examination of the issue of women's rights in the United States. The course explores various social, scientific and humanistic approaches to the issue in such areas as education, employment and politics.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

**497 Independent Study of Contemporary Issues.**

**One sem hour**

**498 Independent Study of Contemporary Issues.**

**Two sem hours**

**499 Independent Study of Contemporary Issues.**

**Three sem hours**

Independent study, under the supervision of the center staff, of one or more selected contemporary issues. Possible approaches include library research, field research and participant-observer experiences with government and community agencies.

*Prereq: Nine hours of social science (Group III) courses, junior standing and permission of the department.*

# **INTERNATIONAL STUDIES**

Director: Erma F. Muckenhirn

## OFFICE OF INTERNATIONAL STUDIES

Students at Eastern Michigan University have opportunities to study abroad for a semester or year earning credit toward graduation. Such opportunities occur principally at the junior year. The Office of International Studies maintains information relative to such opportunities and counsels with students on fitting these experiences into their programs.

In addition to the programs described below, many other opportunities to study abroad sponsored by institutions of higher education are available to Eastern Michigan University students. It is important for the student to make plans early in his college career if he wishes to study abroad.

### 1. Student-Faculty International Exchange Program Trimester in England for Juniors on Teaching Curriculums

A limited number of Eastern Michigan University juniors have the opportunity to exchange places during the fall or winter trimester with a comparable number of second-year students at two colleges of education in England. They are accompanied by an Eastern Michigan University faculty member.

Students pay fees for room, board and tuition directly to Eastern Michigan University. They receive approximately 15 semester hours and three activity hours of credit at EMU during the trimester abroad.

A program is planned for each individual student which takes into account his or her particular needs. Interviews, orientation meetings and individual conferences are held prior to departure.

Selection of students for the exchange program is based upon several factors, including an interview with representatives of the Student-Faculty International Exchange Committee.

The two English colleges which participate in the program are Berkshire College of Education, Reading, and Coventry College of Education, Coventry. Reading is located approximately 38 miles west of London, and Coventry is about 100 miles northwest of London, near Stratford and Birmingham. Each college has a student body of approximately 1,300, and all of the students are preparing to become teachers. Dormitory facilities, food, classrooms, social and recreational opportunities are comparable to those at Eastern Michigan University. In addition, there is the opportunity for living and learning within another culture, including the chance to travel, visit English schools and make new friends and acquaintances.

Students are expected to provide their own transportation costs. This is the only additional required expense of an exchange student beyond that which he would normally spend if he were in residence in Ypsilanti. However, if the student wishes to travel in Great Britain or on the Continent during holidays he may anticipate additional expenses.

### 2. Summer Programs Abroad

During the summer, several departments of Eastern Michigan University offer courses or programs abroad which are open to graduate and/or undergraduate students. These programs include:

**Workshop in British Education-**  
Social Foundations Division  
College of Education

**Workshop in East African Education-**  
Social Foundations Division  
College of Education

**Workshop in Education in India and the Philippines-**  
Social Foundations Division  
College of Education

**The Open Classroom-**  
Curriculum and Instruction Division  
College of Education

**European History Study Tour-**  
Department of History and Philosophy  
College of Arts and Sciences

**Workshop in Studio and Art History-**  
Art Department  
College of Arts and Sciences

Information about these programs may be obtained from the Office of International Studies or the appropriate department.

### 3. Trimester at Edinburgh University for Juniors on Teaching Curriculum

A limited number of Eastern Michigan University juniors have the opportunity to spend the fall or winter trimester at Edinburgh University, Edinburgh, Scotland.

Students pay their tuition at Eastern Michigan University. They arrange for their board and room in Edinburgh with the assistance of University officials.

Up to 15 semester hours credit in education may be earned. A program will be planned for each student which will take into account his or her particular needs.

Students are expected to provide their own transportation costs. This is the only additional required expense beyond that which would normally be spent by a student in residence in Ypsilanti. However, if the student wishes to travel in Great Britain or on the Continent during holidays he may anticipate additional expenses.

### 4. Programs Sponsored by the American Association of State Colleges and Universities

Eastern Michigan University is a member of the American Association of State Colleges and Universities. Through its Committee on International Programs, the Association develops study programs abroad. Each of these programs is primarily sponsored by one of the member institutions. However, they are available to students of all member institutions and therefore open to Eastern Michigan University students. At present three programs are in operation. They are:

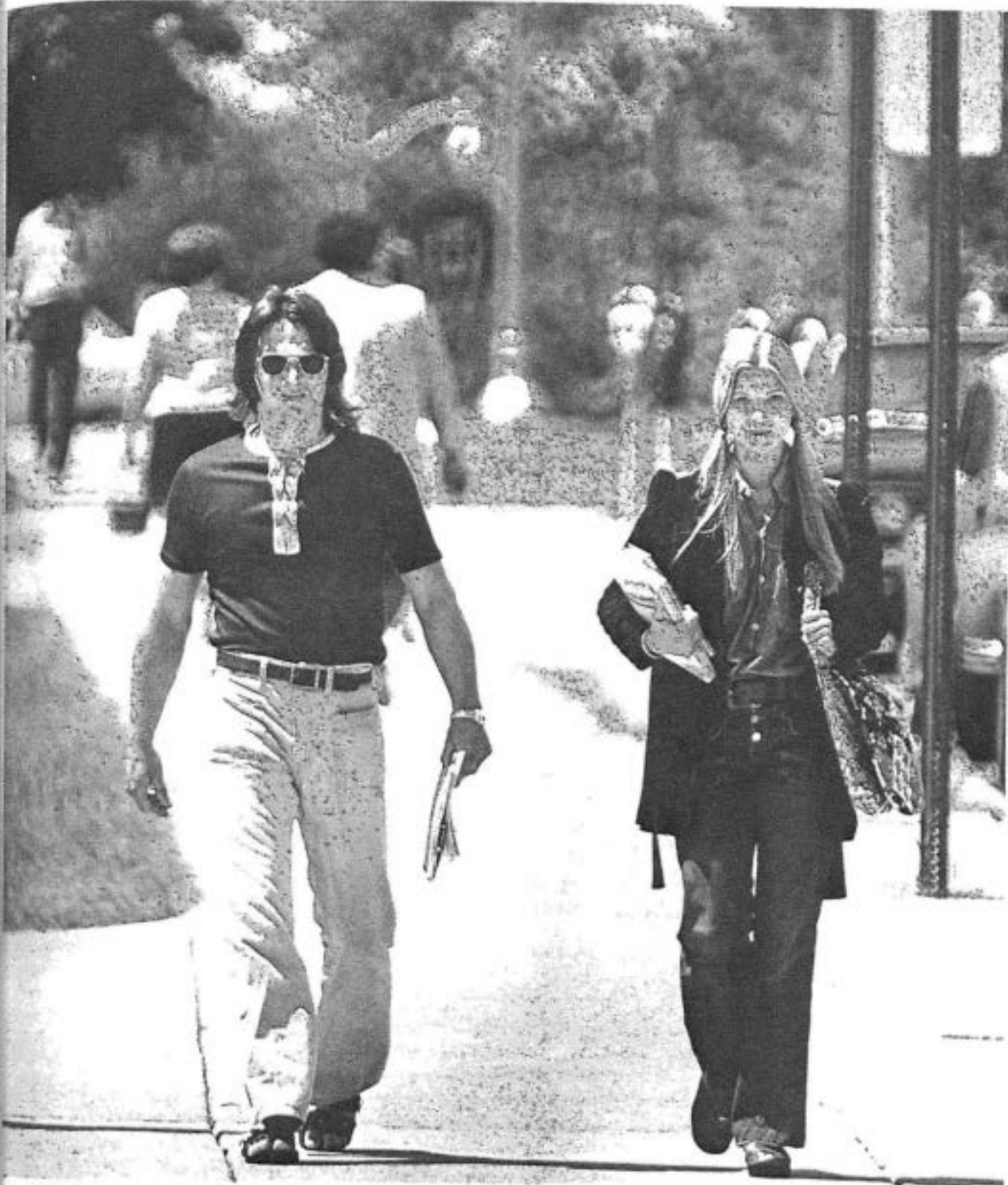
(a) **A Year's Study in Canada.** This program is sponsored by the State University of New York College at Plattsburg. It offers opportunity to study in the Montreal area at Loyola College, McGill University, Sir George Williams University or the University of Montreal. A wide range of courses is available and the instruction may be in English or French depending on the institution.

(b) **A Year or an Academic Quarter of Study in Mexico.** The program in Mexico is sponsored by Adams State College, Alamosa, Colorado, and offers the opportunity to study at the University of the Americas at Puebla, Mexico, a short distance from Mexico City. A broad spectrum of studies is available at the University of the Americas.

(c) **A Year's Study in Rome.** Louisiana Tech University at Ruston, Louisiana, has developed a study center in

Rome which is available to Eastern Michigan University students for an academic year. It offers opportunities for study in the humanities, social studies and languages.

Additional information and application forms for the programs above and information about other opportunities for study abroad may be obtained from the Office of International Studies.



# **GRADUATE SCHOOL**

**DEAN: Omer Robbins, Jr.**  
**Associate Dean: Clyde Le Tarte**  
**Assistant Dean: Neal F. Hoover**



## GRADUATE SCHOOL

This section of the Undergraduate Catalog provides some general information about the Graduate School. However, students who are interested in graduate education at Eastern Michigan University should contact the Graduate School Office, room 116 Pierce, 487-3400, to obtain additional information.

### ENROLLMENT IN GRADUATE COURSES BY SENIORS

A student of senior standing at Eastern Michigan University may register for 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 during the senior year is ten. Election of graduate courses is limited to the 500 series, *exclusive of independent study*. Seniors are not permitted to enroll in 600 series courses.

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

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

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

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

### ADMISSION REQUIREMENTS

Admission to the Graduate School of Eastern Michigan University is open to anyone who (1) holds a bachelor's degree from an accredited college or university, (2) has a minimum undergraduate grade point average of 2.0 (C) or above, (3) indicates promise of success in graduate study, (4) meets the additional requirements established by departments offering graduate programs in specialized areas. Additional requirements often include: high

grade point averages, admission tests, valid teaching certificates and/or personal interviews.

A student enrolling for graduate work for the first time at Eastern Michigan University must: (1) complete an application for admission form, (2) submit an official copy of transcripts of undergraduate and graduate credits earned at other institutions and (3) present official scores on any standardized test if required in a degree program. This information must be submitted to the Graduate School Office *no later than 30 days prior to the first class of the semester or term in which enrollment is contemplated.*

### Types of Admission

#### Teacher Certification

For applicants who seek to qualify for provisional or permanent certification only. Applicants seeking continuing certification are urged to seek admission to a degree program.

#### Non-Degree

For applicants who do not seek/do not qualify for degree admission but who wish to take graduate courses for self improvement.

#### Degree

For applicants who seek an advanced degree at Eastern Michigan University at the master's or specialist's degree level.

#### Special Requirements (Degree Admission)

Meet entrance requirements of the college/area of specialization selected.

College of Business: A.T.G.S.B. scores required.

College of Education: valid teaching certificate required, unless waived.

Department of Psychology: G.R.E. scores required.

Department of Educational Psychology: Miller Analogies Test scores required.

#### Guest Student

For students who currently hold graduate admission at another college or university who wish to earn credit at Eastern Michigan University to be transferred. Applicants must file an Eastern Michigan Guest application no later than 15 days prior to the beginning of the semester or session in which they seek to enroll.

### DESCRIPTION OF DEGREE PROGRAMS

Brief descriptions of each of the graduate degree programs offered by Eastern Michigan University may be found in the Graduate Catalog. For additional information, please contact the head of the department in the area of graduate specialization chosen for study.

### SCHOLARSHIPS, ASSISTANTSHIPS AND FELLOWSHIPS

Eastern Michigan University makes available a limited number of scholarships, assistantships and fellowships to students with outstanding academic records. Graduate students wishing to apply for such positions should write to the head of the department in the area of graduate specialization chosen for study.

Other Financial Aids

Contact Ralph Gilden, dean of admissions and financial aids.

GRADUATE CATALOG

Graduate School Catalogs are available without charge and may be obtained by coming to room 116, Pierce Hall, or by writing to the Graduate School Office. Students are responsible for the information and affected by the policies and regulations contained in the catalog.

DEGREE PROGRAMS

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

MASTER'S DEGREE

A. College of Arts and Sciences

- |                     |                          |
|---------------------|--------------------------|
| Art Education       | History                  |
| Biology             | Mathematics              |
| Chemistry           | Music                    |
| Chemistry Education | Physics                  |
| Economics           | Psychology               |
| English             | Social Studies           |
| Fine Arts (MFA)     | Sociology                |
| French              | Spanish                  |
| General Science     | Speech and Dramatic Arts |
| Geography           |                          |

B. College of Business

- Business Administration
- Business Education

C. College of Education

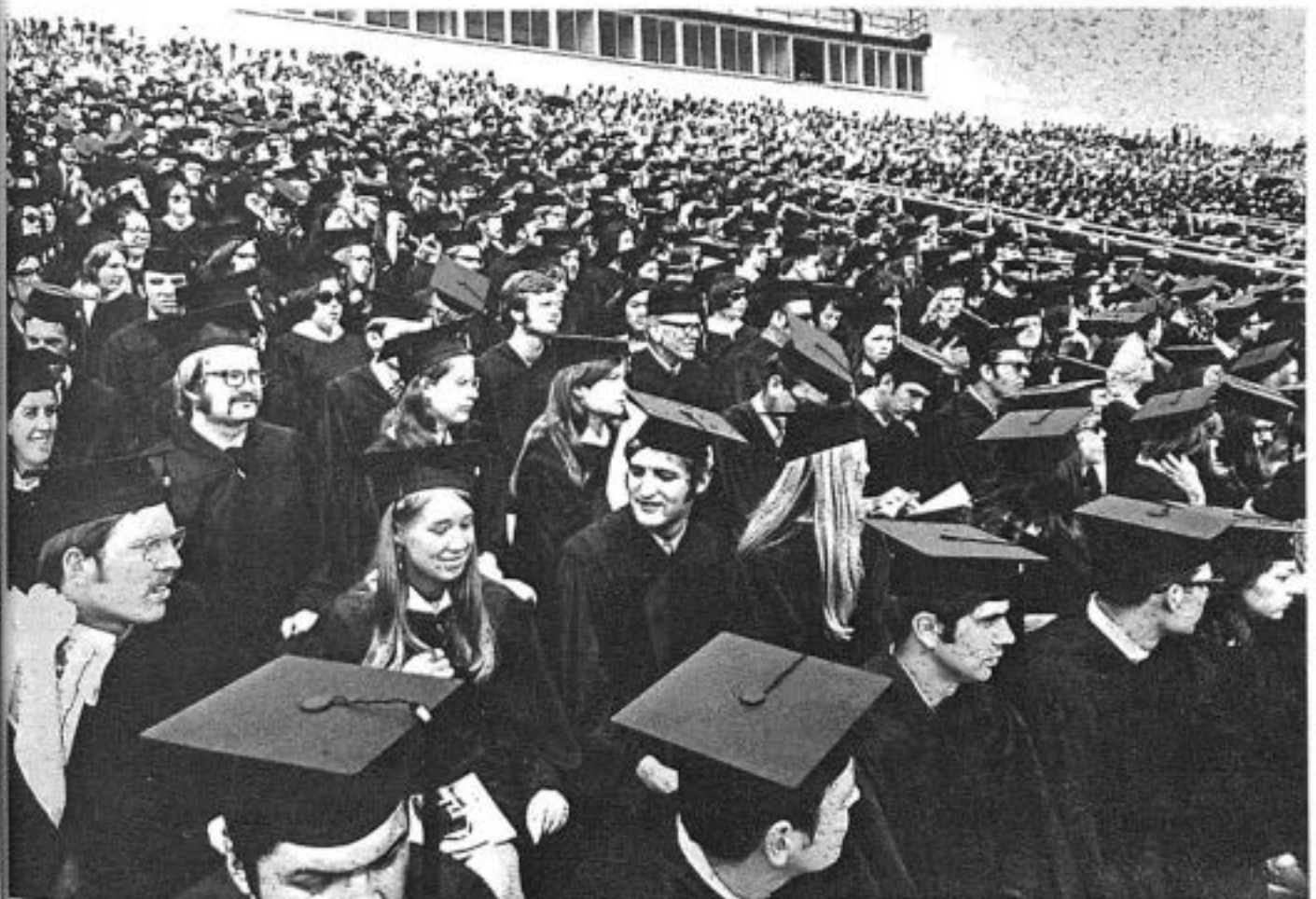
- |                              |                              |
|------------------------------|------------------------------|
| Curriculum (Secondary)       | Physical Education           |
| Educational Administration   | Reading Education            |
| Educational Psychology       | Senior High School Education |
| Elementary Education         | Social Foundations           |
| Guidance and Counseling      | Special Education            |
| Junior High School Education |                              |

D. Applied Science Departments

- Home Economics
- Industrial Education

II. SPECIALIST'S DEGREE

- Educational Administration
- Guidance and Counseling
- School Psychology
- Special Education



# DIVISION OF FIELD SERVICES

Director: Earl K. Studt  
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Today, more than ever before, Eastern Michigan University is realizing its responsibility to offer its services and facilities to the community at large. For many years, the Division of Field Services at Eastern Michigan University has maintained extensive correspondence and in-service programs for students unable to complete their education on Eastern's campus and for employed teachers desiring to further their education. In the last few years, the services provided by the Division of Field Services have taken on new dimensions. The in-service courses are now available at 17 centers in 14 counties in southeastern Michigan. 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. And trained personnel as well as faculty members are available for lectures and consultation services to clubs, organizations and school systems.

The Division of Field Services welcomes inquiries about its program as well as suggestions for other services it might offer. Interested persons should write to the director of the Division of Field Services, 113 Sherzer Hall, Eastern Michigan University, Ypsilanti, 48197.

## IN-SERVICE COURSES

The Division of Field Services offers credit courses in established centers throughout southeastern Michigan: Adrian, Brighton, Center Line, Cherry Hill, Flint, Jackson, Marlette, Monroe, Mt. Clemens, Plymouth, Port Huron, Sandusky, Southgate, Taylor, Trenton and Wayne. These classes are undergraduate and graduate courses conducted by regular instructors of Eastern Michigan University. Presently, the classes are in practically all counties connected with education. A list of the courses offered for fall and winter semesters, spring and summer sessions may be acquired from the director of the Division of Field Services. The following regulations apply to these

## GENERAL PROCEDURES AND REGULATIONS OF OPEN CENTER COURSES

Students who enroll in off-campus courses must meet the entrance requirements of Eastern Michigan University and must matriculate at Eastern in order to receive credit towards certificates and degrees. Application blanks and details of the admission procedure may be obtained by writing Eastern Michigan University, Admissions Office.

2. Students must make application for in-service courses to the director of the Division of Field Services, Eastern Michigan University, Ypsilanti, Michigan 48197.
3. Students are held to the same requirements concerning distribution of courses taken by students in residence. Students should consult outlines of curriculums as published in the University catalog, should make their selection of work and should consult the registrar.
4. No course will be offered for credit in in-service courses which is not a part of the regular curriculums of Eastern Michigan University.

## FEES

1. The undergraduate and graduate fee for in-service courses is \$32.00 per credit hour.
2. The Division of Field Services makes no provision for partial payment or delayed payment of fees.
3. Enrollment of off-campus courses is handled by mail and should be completed well in advance of the first meeting date of the course in order to insure a place in the class. Enrollments not completed prior to the first meeting date are subject to assessment of \$5.00 late enrollment fee.
4. A \$2.00 charge will be made for payment with a non-negotiable check.
5. A complete refund of fees will be made if requested prior to the date of the second class meeting.
6. Sixty percent will be refunded if requested prior to the date of the fifth class meeting.
7. No refund will be made after the third class meeting.
8. Requests for refunds must be made in writing directly to the Division of Field Services (not to the instructor).
9. The effective date of withdrawal is the date on which the request is received at the office of the Division of Field Services.
10. Overpayments will be refunded only when the amount exceeds the charge by \$1.01 or more, unless a request for refund is received from the remitter.
11. All veterans eligible for educational benefits under the new G.I. Bill must furnish the Veterans Affairs Office at the University with their Certificate of Eligibility prior to the first meeting of the classes. They must complete the necessary registration with the Division of Field Services and pay the full fees.

## CREDITS

1. To avoid possible loss of credit toward graduation requirements, an Eastern Michigan University student who wishes to take courses at another college or university should secure approval of the department concerned or dean of academic records and teacher certification.
2. Students regularly enrolled in other colleges or universities may be enrolled as guest matriculants.
3. Students must complete all work on time. Incompletes are awarded only when the student's work has been of acceptable quality, but the required amount has not been completed because of illness, necessary absence or other satisfactory reasons.

4. It is expected that students contemplating certification or degrees will acquaint themselves with the University regulations which are available from the dean of academic records and teacher certification.
5. Persons may audit a course without credit upon payment of the regular fees. Under no condition will academic credit be given once a person is enrolled as an auditor.

## CONTRACT COURSES

The Division of Field Services also offers courses on a contract basis. These credit courses are arranged between a school system and Eastern Michigan University. They are designed to investigate problems unique to the particular school system and they are usually held at one of the schools.

## UNIVERSITY CONFERENCES

Eastern Michigan University opens its campus to the public for conferences and workshops. The Division of Field Services is ready to assist any group in planning a workshop or conference on a credit or a non-credit basis. Trained staff will aid in arranging for meals, housing, suitable meeting facilities and recreation and in securing specialists in the field related to the conferences.

In recent years, groups have been encouraged to plan programs of a continuing nature. The following programs have become annual workshops:

**Modern Dance Workshop:** This workshop is planned to enrich knowledge and increase skill in modern dance through the development of sound technique and the understanding of dance as a performing art. Curriculum includes beginning and advanced technique, composition and repertory. Special sessions will include films, rehearsals, folk dance and experiences in other dance forms. Graduate seminar in dance offered concurrently with school workshop.

**Summer Workshop in Theatre:** The workshop in theatre is offered for high school students to work and learn in a collegiate atmosphere. There will be two sessions—one for beginning and one for advanced students. Every phase of play production will be explored in this intensive two-week workshop. Each participant will be actively involved in every phase of play production—acting, directing and technical theatre. A graduate seminar will be conducted in conjunction with the workshop.

**Huron Wrestling and Coaching Clinic:** The object of the clinic is to increase interest in this sport and improve standards of wrestling. Wrestlers divide into small groups for instruction by an outstanding staff.

**Baton Twirling Clinic:** A complete, concentrated five-day program presented by the finest professional instructors.

**Summer Workshop in Broadcasting and Film:** The purpose of the workshop is to give a thorough basic course in the techniques, theories and practices of radio and television performance, direction and programming. A graduate seminar will be conducted in conjunction with the workshop.

**Summer Session for High School Instrumental Musicians:** Provides attractive opportunity for young musicians to study and perform under the direction of Eastern Michigan University music faculty and visiting artists.

**Annual Choral Arts Workshop for High School Students:** An intensive two-week experience emphasizing both group solo performance skills. Class procedure provides daily private lessons in voice as well as classes in theory and music literature. Choral arts students will also study musical production, acting and stage movement. There will be recitals for individual performers, as well as large and small ensembles.

**"The University of Cheerleading:"** Collegiate staff instructors, affiliated with the International Cheerleading Foundation, Inc., teach high school squads every phase of cheerleading, pep and spirit.

As indicated by this list of annual workshops, Eastern Michigan University offers its facilities for an unlimited variety of conferences. Groups interested in arranging for conferences or workshops should contact the coordinator of University Conferences, Division of Field Services, Eastern Michigan University, Ypsilanti, Michigan.

## TRAVEL TOURS AND WORKSHOPS

Each summer, Eastern Michigan University, through the Division of Field Services, conducts a number of travel tours and workshops. Typical of these tours which occur regularly are:

**Early American Life in Colonial Williamsburg:** Through the cooperation of Colonial Williamsburg and the College of William and Mary, this very popular workshop is offered each year in August. The two-week workshop gives the student an excellent opportunity to study colonial American life in this famous restored capital of the Virginia colony.

**European History Tour:** This popular tour usually combines several days of travel in Spain, Italy, Greece, Germany, Switzerland and other central European countries with an extended study of German history and geography in Munich.

**Workshop in British Education:** Through the cooperation of the University of Reading, Reading, England, students are provided with the opportunity of living and studying in England and observing the British educational system in action.

**The Open Classroom:** Through the cooperation of Berkshire College of Education, Reading, England, students will have the opportunity to work as members of teaching teams which assist the staff and children of informal English schools. The facilities of the campus at Berkshire College of Education will be made available for the examination and construction of curriculum materials, teaching aids and resources.

**Summer Seminar in India:** Plans are to offer this workshop in 1974.

## VOCATIONAL EDUCATION CONSULTATION SERVICES

The Division of Field Services has a half-time consultant who is available for work in intermediate and local

...rics. Aid is available in establishing vocational programs, evaluation, research, applied data processing and feasibility studies. Fees are charged for this service commensurate with the type and extent of the service rendered.

## LECTURERS

Members of the Eastern Michigan University faculty are available for lectures at community meetings, women's clubs, parent-teacher associations and other organizations of an educational character. For information concerning speakers and subjects, write the director of the Division of Field Services.

## CONSULTATION SERVICES

Eastern Michigan University is ready to assist any school in Michigan in solving its problems. The Division of Field Services will aid in making school surveys, will advise on school organizations, equipment, courses of study, methods of instruction and will evaluate current programs. Consultants and trained personnel are furnished ordinarily on a fee basis to the public school or other agency requesting them.

## LIBRARY SERVICES

The Eastern Michigan University Library places its facilities at the disposal of all students taking classes through the Division of Field Services. While every effort is made to honor all requests, the library cannot guarantee to furnish all books at a specified time. It is advised that students requesting books through mail suggest dates.

Request forms are furnished by the library. Requests for materials should be addressed to the circulation librarian, Eastern Michigan University, Ypsilanti, Michigan. They should include full bibliographic information. Books and periodicals requested by mail will be loaned one month and may be renewed upon request for two weeks.

Those students borrowing materials from the library are subject to the same borrowing regulations as students in residence. They will be asked to present an identification card (identification cards will be sent to students enrolled in off-campus classes and independent study through correspondence courses upon request). Books borrowed directly are loaned for a two-week period with a two-week renewal privilege. Periodicals must be returned to the library.

Fines will be assessed at the rate of \$.10 per book per week (Fines are subject to revision following proper notification). Books returned by mail are overdue three days after the date stamped in the book.

## INDEPENDENT STUDY THROUGH CORRESPONDENCE

Independent study through correspondence courses has been designed to meet the educational needs of unadmitted students. Upon completing enrollment in an independent study through correspondence course, students receive a study guide that outlines, in detail, all work assignments. The students submit the required assignments by mail. Each assignment is reviewed

and evaluated by a member of the faculty who has been designated as the instructor for the course. When all assignments have been completed and evaluated, the students take a proctored final examination. Students may earn up to 15 semester hours of academic credit to be applied toward an undergraduate degree.

## GENERAL PROCEDURES AND REGULATIONS

1. Students make application for independent study through correspondence courses to: Independent Study Through Correspondence, Division of Field Services, 113 Sherzer Hall, Eastern Michigan University, Ypsilanti, Michigan 48197.
2. Course enrollment may be made at any time.
3. Students must be officially admitted to Eastern Michigan University before enrolling for independent study through correspondence coursework. Application blanks and details of the admission procedure may be obtained by writing to: Office of Admissions and Financial Aids, Eastern Michigan University, 212 Pierce Hall, Ypsilanti, Michigan 48197.
4. Students working toward a degree to be awarded by Eastern Michigan University are held to the same requirements concerning distribution of courses as those taken by students in residence. Students should consult outlines of curriculums published in the University catalog, make their selections of work and consult the dean of academic records and teacher certification regularly.
5. Students should plan for one or more meetings on campus with the assigned instructor.

## COURSE REQUIREMENTS

1. Independent study through correspondence courses should be completed within one calendar year from the date of enrollment. In special cases and upon written request from the students, a limited extension of time may be granted by the director of the Division of Field Services.
2. Independent study through correspondence courses are designed so that each assignment is equivalent to a week's work in an on-campus course. Students are encouraged to submit assignments by mail one at a time and to pace themselves at optimum work levels.

## CREDITS

1. Courses which are completed satisfactorily by independent study through correspondence carry the same amount of credit as those pursued in residence. The mark earned is entered on the permanent record. No grade points are recorded.
2. Up to 15 semester hours of credit earned through independent study through correspondence may be applied toward an undergraduate degree.
3. Students enrolled on campus may enroll in an independent study through correspondence course if their total academic loads, so augmented, will not exceed the maximum allowed in a given semester or session. Exceptions must be approved by the director of academic advising.



## FEES

1. A fee of \$32.00 per credit hour will be charged, payable at the time of enrollment.
2. Independent study through correspondence fees will be refunded only if requested within 60 days following enrollment, provided no lessons have been submitted to the instructor. In the event of a refund, a charge of \$5.00 will be made to cover office costs.
3. A prepaid fee may be transferred to some other course if the transfer is made before the completion of an assignment. The transfer privilege ceases, however, at the end of six months after date of enrollment. A charge of \$5.00 will be made to cover office costs.
4. Postage for written papers sent in must always be fully prepaid by the student at first class rates. Postage should always be fully paid on all books being returned to Eastern Michigan University Library.
5. Credits will be withheld until all obligations are met and all delinquent fees and charges are paid.

## LIST OF COURSES

The following courses are now available by independent study through correspondence. Other courses will be added to the lists from time to time. Inquiry is invited concerning courses that are not listed. Courses starred are temporarily unavailable.

## Biology

- 301 Genetics.** **Three sem hours**  
The basic principles of inheritance, with their application to plants and animals.  
*Prereq:* 221 *General Botany* or 222 *General Zoology* or equivalent.
- \*405 Organic Evolution.** **Two sem hours**  
The processes involved in the origin and evolution of life, and the implication for biology and our current world view.  
*Prereq:* 221 *Botany*, 222 *Zoology*, 301 *Genetics* (230 *Historical Geology* desirable).

## Economics

- 200 The American Economy.** **Three sem hours**  
(Formerly Econ 290)  
A one semester survey of the basic principles of economics for those students who seek a basic knowledge of the functioning of the present-day American economy but plan to take no other course in economics.  
*Not open to students with 201 or 202 Principles of Economics.*
- 201 Principles of Economics I.** **Three sem hours**  
(Formerly Econ 220)  
The first half of an introduction to basic principles of economics. Emphasis is on macroeconomic concepts of national income, fiscal and monetary policy and problems of unemployment, inflation and economic growth.
- 320 Labor Problems.** **Two sem hours**  
(Formerly Econ 324)  
A study of supply and demand factors in the labor market, collective bargaining, types and policies of labor organizations and employer organizations, recent legislation relating to labor.  
*Prereq:* 201 and 202 *Principles of Economics* or equivalent.

## 375 Economic History of the United States.

Three sem hours

(Formerly Econ 260)

A study of the economic development of the United States.

## Education

- 302 Educational Psychology.** **Three sem hours**  
Applies the general psychological principles to learning and to the development of personality.
- \*303 Principles of Teaching.** **Three sem hours**  
Application of the principles of psychology and teaching to the classroom. (Must be taken semester immediately preceding student teaching).
- \*321 Child Psychology.** **Three sem hours**  
The study of mental, physical, social and emotional aspects of child development from conception to adolescence. (Not open to students in early elementary or junior senior school curriculums).
- \*340 Evaluation of Pupils.** **Two sem hours**  
The study of kinds of administration of, scoring of, and interpreting results of tests used in elementary and secondary schools.  
*Prereq:* 326 *School and Society* or 303 *Principles of Teaching*.
- 252 (Women) Methods and Materials in Physical Education.** **Three sem hours**  
A study of the methods and the use of materials used in the teaching of indoor activities. Opportunity is given to do practice teaching and to receive constructive criticism. Observations and reports of the work carried on in the laboratory schools and required.
- 367 (Men) Methods and Materials in Physical Education.** **Three sem hours**  
A study of the techniques and aids used in teaching physical education activities in the elementary and secondary grades.

## English

- 101 The Reading of Literature.** **Three sem hours**  
Reading and discussion of narratives and essays from representative literature of the present as well as of the past; short stories, novels, narrative poems and essays from American and other literatures.
- 121 English Composition.** **Three sem hours**  
The fundamental skills of reading and writing, including a study of grammar, sentence structure, punctuation and organization of simple material; the reading and analysis of prose selections; frequent papers.
- 122 English Composition.** **Three sem hours**  
A study of the forms of discourse with emphasis upon the organization of long papers and with a culmination in a library research paper.  
*Prereq:* 121 *English Composition*.
- 207 Introduction to Children's Literature.** **Three sem hours**  
A concentrated reading course designed to impart the knowledge necessary for an appreciation and understanding of children's literature and its use in the schools, in addition to reading the classics and the critically acclaimed works of both fiction and non-fiction by modern writers.



ers, students will study poetry, folklore and mythology, and examine the relationship between illustration and text. Does not count toward major or minor in curriculum for teachers in junior and senior high school.  
Prereq: *Sophomore standing.*

**210 Shakespeare. Three sem hours**  
An intensive study of five of the principal tragedies with supplementary study of Shakespeare's handbook.

**215 Journalism. Three sem hours**  
Study of the elements of journalism with practice in the writing of news stories, feature articles and editorials.  
Prereq: *Sophomore standing.*

**222 Expository Writing. Three sem hours**  
Writing and analysis of several forms of exposition.  
Prereq: *Sophomore standing.*

**302 English Grammar. Three sem hours**  
Study of the forms and functions of words and word groups in modern English.

**05 Shakespeare: The Major Comedies and Histories. Three sem hours**  
Study of at least eight of the principal comedies and histories.  
Prereq: *Three literature courses.*

**319 English Literature, 1744-1798. Three sem hours**  
Study of poetry, essays, letters, novels, dramas of Fielding, Johnson, Goldsmith, Gray, Collins, Smollett, Sheridan, Cowper, Burns, Blake, etc.  
Prereq: *Three literature courses.*

**331 The Nineteenth Century Novel. Three sem hours**  
A critical reading of the English novel from Scott to Hardy.  
Prereq: *101 and 102 Reading of Literature.*

**401 Modern American and British Poetry. Three sem hours**  
A study of the chief poets of England and America since 1900.  
Prereq: *Three literature courses.*

**403 Modern Drama. Two sem hours**

**404 English Literature 1793-1832. Three sem hours**  
Study of English romantic writers: Wordsworth, Coleridge, Lamb, DeQuincey, Hazlitt, Byron, Shelley, Keats.  
Prereq: *Four courses in literature.*

**Victorian Prose. Three sem hours**

## Geography

**Earth Science. Four sem hours**  
Important aspects of the physical environment of the earth as a planet, landforms, weather and climate, water, soil, vegetation and mineral resources. *A requirement for both the major and minor in geography geology.*

**World Regions. Three sem hours**  
An attempt to develop a tolerant understanding of peoples through an appreciation of the cultural and natural environments in which they live. Background information selected world regions with emphasis on economic social geography. The present occupations and activities of the population in each region. *A requirement both the major and minor in geography.*

**\*211 Geography of the United States and Canada. Three sem hours**

**\*313 Geography of Michigan. Two sem hours**  
History and Philosophy  
World History

**101 History of Civilization. Three sem hours**  
The classical heritage and the civilization of the Middle Ages and the Renaissance in historical perspective. Cultural development and institutional growth are emphasized.

**102 History of Civilization. Three sem hours**  
A continuation of 101 History of Civilization. The study of cultural developments and the growth of institutions in the 17th and 18th centuries; social and economic changes in modern times.

**201 The Comparative Study of Religion. Three sem hours**  
An introduction to the systematic study of religious experience and expression, organized around representative motifs, phenomena and institutions and illustrated with relevant examples from the various historical religious traditions.

## American History

**123 Evolution of American Democracy. Three sem hours**  
A study of American democracy through the rise of our political institutions. The influence of the frontier, frontier individualism, sectionalism, the implication of disunion in the Civil War, the growth of industry, the labor movement, social reform programs and present world responsibility and leadership. *Not open to students who have taken either 223 or 224 American History.*

**223 American History to 1877. Three sem hours**  
A study of United States history from the period of exploration through the Reconstruction of the South following the Civil War. *Not open to students who have taken 123 Evolution of American Democracy.*

**224 American History, 1877 to the Present. Three sem hours**  
A study of United States history from the end of Reconstruction to the present.  
*Not open to students who have taken 123 Evolution of American Democracy.*

**313 Michigan History. Three sem hours**  
A survey of major economic, social and political developments in Michigan from prehistoric times to the present. Emphasis is placed on the period prior to the twentieth century.

**315 History of Black Americans. Three sem hours**  
A history of Americans of African ancestry from colonial times to the present. Special attention will be given to slavery, the post-Civil War South, northward migration and urban settlement and philosophies of racial progress.  
Prereq: *One course in American history.*

## Ancient and Medieval History

**323 Greek History. Three sem hours**  
Ancient Greece from the Bronze Age to the Roman conquest.

**324 Roman History.** **Three sem hours**  
Ancient Rome from prehistoric background through the age of Justinian.

European History

**331 Modern Europe, 1500-1815.** **Three sem hours**  
Emphasis rests on the commercial revolution and political development in European nations. The Renaissance and Protestant Reformation are studied in relation to the Puritan Revolution in England, the ideas of the Enlightenment, the French Revolution and the career of Napoleon Bonaparte.

**332 Modern Europe, 1815-1919.** **Three sem hours**  
A study of the development and conflicts of the national states of Europe from the Congress of Vienna to the Treaty of Versailles.

**333 Europe since 1919.** **Three sem hours**  
A history of Europe since Versailles with emphasis upon the Communist, Fascist and Nazi revolutions, their impact on the world; the origins and outbreak of the Second World War and the post 1945 era.  
*Prereq: Junior standing or permission of the department.*

Political Science

**113 Michigan Government.** **One sem hour**  
A brief study of Michigan's government and its contemporary changes.

Sociology

**105 Introductory Sociology.** **Three sem hours**  
A number of basic sociological concepts are used to analyze selected aspects of American society in intergroup relations, rural and urban communities, social classes and in family, educational, religious, governmental and economic institutions.

**\*202 Social Problems.** **Three sem hours**

**\*204 Marriage and Family.** **Three sem hours**  
Information pertinent to the position and significance of the family in our changing society.  
*Prereq: 105 Introductory Sociology or sophomore standing.*

**210 Rural Sociology.** **Two sem hours**  
Social situation in rural America today.

**\*240 Concepts of Sociology.** **Three sem hours**  
Scientific analysis of human behavior through variety of sociological studies.  
*Prereq: 105 Introductory Sociology.*

Home Economics

**\*113 Textiles for Consumers.** **Three sem hours**

**\*301 Economic Problems of Consumers.** **Two sem hours**

Mathematics

**\*104 Intermediate Algebra I.** **Three sem hours**  
Review of elementary algebra and a continuation into

the study of functions, graphs and quadratic equations.  
*Prereq: One year of high school algebra.*

**\*105 College Algebra II.** **Three sem hours**  
Review of elementary algebra and a continuation into the study of functions, graphs and quadratic equations.  
*Prereq: One year of high school algebra.*

**\*107 Plane Trigonometry.** **Two sem hours**

**\*222 Integral Calculus.** **Four sem hours**

**\*400 History of Mathematics.** **Three sem hours**

Health

**320 Health Education in the Elementary Grades.** **Two sem hours**  
For students preparing to teach primary and intermediate grades. Health observation of school children, survey of environmental conditions and other methods of determining the health needs of the child are taught. A study made of the application of educational principles in health instruction. Practice is given in evaluating the new courses in health education.

**430 Community Health Problems.** **Two sem hours**  
Exploration and study of community health programs and resources as they apply to the school health program.  
*Prereq: 320 Health Education in the Elementary Grades or 330 Health Work in Schools.*

Physical Education

**242 (Women) Organization and Administration of Physical Education.** **Three sem hours**  
The study of principles and objectives in physical education in the light of the needs, interests and characteristics of public school students. Principles of organization and administration of programs in departments, clubs, intramurals, athletics and leadership are studied. Functional construction of gymnasiums, swimming pools, athletic fields and various facilities are reviewed and discussed.

**441 (Men) Organization and Administration of Physical Education.** **Three sem hours**  
The study of principles and objectives in physical education in the light of the needs, interests and characteristics of public school students. Principles of organization and administration of programs in departments, clubs, intramurals, athletics and leadership are studied. Functional construction of gymnasiums, swimming pools, athletic fields and various facilities are reviewed and discussed.

Psychology

**101 General Psychology.** **Three sem hours**  
Scientific methods, principles and theories evolving in the analysis of the behavior of man and other animals.

# CO-CURRICULAR PROGRAM

The co-curricular program expands in depth and breadth the educational experiences available in the curriculum. In a sense, it acts as a laboratory. As such, it provides student-directed opportunities for growth in leadership, adherence to group goals, initiative, creativity and self-evaluation. Defined in these terms, the co-curricular program moves with the intellectual life and liveliness of the academic community, as well as with the socio-cultural dynamics in the communities outside of the University.

Several offices and departments contribute most to the co-curricular program of the University, i.e., Office of Student Life, Religious Affairs, Foreign Student Advising and Minority Affairs as well as the departments of Music, Art and Speech and Dramatic Arts.

## STUDENT GOVERNMENT

The voice of students in University affairs is the Student Senate. Members are elected to the senate within their living units, at large or represent major organizations.

## JUDICIAL SYSTEM

The major discipline hearing board at EMU is the University Judicial Board (UJB). A majority of its members are students. The appellate board of the UJB is the Disciplinary Review Board. Its membership includes equal numbers of faculty, students and administrative appointees.

## STUDENT ORGANIZATIONS

The activities and recognition of student organizations are guided by the Committee on Student Life. A majority of the committee's members are students with faculty and administrative members serving in the minority.

## ADVISORY AND COORDINATING

Commuter and Off-Campus Student Association  
 Faculty-Student Symposium of the English Department  
 Hospitality Committee  
 Kaleidoscope  
 Major Events Committee  
 Student Activities Board  
 Student Advisory Committee to the Educational Leadership Department  
 Student Advisory Council to the College of Arts and Sciences  
 Student Faculty Advisory Committee to the Industrial Education Department  
 Student Faculty Relations Committee to the Psychology Department  
 Student Sociological Caucus

## ASSOCIATIONS, CLUBS

Accounting Club  
 Anthropology Forum  
 Amateur Radio Club  
 American Indians Student Association  
 Art Education Association  
 Association of the U.S. Army, Wm. O. Darby Co.  
 Black Student Association  
 Cadet Wives Club  
 Campus Gold Girl Scouts

Campus Service Corps  
 Catalina Club  
 Cheerleaders  
 Chicano Student Association  
 Chinese Student Association  
 Chemistry Club  
 Chess Club  
 Debators-Forensics Union  
 E.M.U. Demolay Club  
 Flying Club  
 Geography and Geology Club  
 Huronettes  
 Huron Guard Drill Team  
 Jewish Students Association  
 Kappa Beaver Sigma  
 Le Cercle Francais  
 Music Educators National Conference  
 Occupational Therapy Club  
 Physics Club  
 Scabbard and Blade  
 Scuba Diving Club  
 Sailing Club  
 Society Against Violation of the Environment  
 Society of Motion Picture and Television Engineers  
 Student Council for Exceptional Children  
 Student Section of the American Home Economics Association  
 University Democrats  
 U.S. Army Cadet Brigade  
 Veterans Association  
 W.H.U.R. Radio Station—WEMU (FM)  
 Yoga Club

## FRATERNAL

### Honorary and Professional

Professional and Honorary Organizations Mainline is the coordinating body for professional and honorary organizations.

Alpha Kappa Psi (Men's Business)  
 Alpha Psi Omega  
 Delta Psi Kappa (Women's Physical Education)  
 Delta Sigma Pi (Men's Business)  
 Gamma Theta Upsilon (Geography)  
 Kappa Delta Pi (Education)  
 Kappa Kappa Psi (Men's Band)  
 Mortar Board (Senior Women)  
 Mu Phi Epsilon (Women's Music)  
 Phi Delta Kappa (Men's Education)  
 Phi Gamma Nu (Women's Business)  
 Phi Mu Alpha Sinfonia (Men's Music)  
 Pi Omega Pi (Business Education)  
 Pi Theta Epsilon (Occupational Therapy)  
 Scabbard and Blade (Military)  
 Sigma Alpha Eta  
 Sigma Pi Epsilon (Special Education)  
 Stoic Society (Honor Students)  
 Tau Beta Sigma (Women's Band)

### Sororities

Panhellenic Council is the governing and coordinating body for social sororities.  
 Alpha Kappa Alpha

Alpha Omicron Pi  
Alpha Sigma Tau  
Alpha Xi Delta  
Delta Sigma Theta  
Delta Zeta  
Sigma Gamma Rho  
Sigma Kappa  
Sigma Nu Phi  
Sigma Sigma Sigma  
Zeta Phi Beta  
Zeta Tau Alpha

**Fraternities**

Interfraternity Council is the governing and coordinating body for social fraternities.

Alpha Epsilon Pi  
Alpha Phi Alpha  
Alpha Sigma Phi  
Arm of Honor  
Delta Sigma Phi  
Kappa Alpha Psi  
Kappa Phi Alpha  
Omega Psi Phi  
Phi Sigma Epsilon  
Phi Sigma Kappa  
Sigma Pi  
Sigma Tau Gamma  
Tau Epsilon Phi  
Tau Kappa Epsilon  
Theta Chi

**Service**

Alpha Phi Omega (Men)  
Omega Phi Alpha (Women)

**Religious**

Bahai Club  
Baptist Student Union

Campus Crusade for Christ  
Campus Lutheran Association  
Christian Science Organization  
Eastern Christian Fellowship (IVCF)  
Eastern Orthodox Student Fellowship  
Episcopal  
Methodist  
Presbyterian  
Religious Affairs Council  
United Christian Students  
United Ministries in Higher Education  
Disciples of Christ  
United Church of Christ  
Wesley Foundation

**Residence Hall Councils**

Residence Hall Association is the governing body of residence hall councils (RHA).

Residential Hall Educational and Cultural Council (RHECC)

Best Hall  
Brown-Munson Hall  
Buell Hall  
Downing Hall  
Hill Hall  
Hoyt Hall  
Jones-Goddard Hall  
Phelps-Sellers Hall  
Pittman Hall  
Walton-Putnam Hall  
Wise Hall

**Student Publications**

*Aurora*  
*Eastern Echo*  
*Cellar Roots*



# FINANCIAL AIDS AND ENDOWMENT FUNDS

Four forms of financial aid available to Eastern Michigan University undergraduates—scholarships, grants, loans and part-time campus employment—are administered under a coordinated program of financial assistance, the purpose of which is to assist qualified students who have limited funds and resources. Financial aid applicants are considered for all types of financial aid for which they are eligible.

Scholarships and grants range from small awards up to and including amounts covering full tuition and living costs. Scholarships and grants for any school year are awarded in the spring preceding that year. Qualifications vary but, in general, scholarships and grants are awarded on the basis of academic record, personal qualifications and financial need.

All incoming students are eligible to apply for financial aid. Application forms and further information concerning financial aid may be obtained by writing to the dean of Admissions and Financial Aids, Eastern Michigan University, Ypsilanti, Michigan. Applications should be submitted to the University along with or immediately following the application for admission. Final consideration for financial assistance cannot be given until the applicant has paid his enrollment validation deposit. Although the normal due date for applications is March 1, emergency requests are considered at any time within the limit of available funds.

The University is a participant in the College Scholarship Service. Students should obtain the Parents' Confidential Statement form from their high school to be completed by parents and mailed to College Scholarship Service, Box 881, Evanston, Illinois, 60204, with instruction to send a copy to Eastern Michigan University.

## STUDENT AID BOARD OF DIRECTORS\*\*

	Term Expires
Haydn Morgan, President.....	Oct. 4, 1975
Atwood R. McAndrew, Jr., Vice President	Oct. 4, 1975
Bernard M. Treado, Secretary-Treasurer....	Oct. 4, 1975
Leslie Butler.....	Oct. 4, 1975
Augusta Harris.....	Oct. 4, 1976
Leonard Menzi.....	Oct. 4, 1977
John W. Sattler.....	Oct. 4, 1974

The Student Aid Board of Directors serves as a committee of the Board of Regents to make recommendations concerning loan and scholarship funds and to receive gifts and contributions to be deposited with the Board of Regents in accordance with the wishes of the donors.

Members of the Board of Directors are appointed for a five year term by the president of Eastern Michigan University.

The Board of Regents welcomes at all times additions to existing funds as well as the establishment of new loan and scholarship funds.

## SCHOLARSHIP FUNDS

Scholarship funds are available as indicated below. Only those scholarships specifically indicated are open to all students, other scholarships are awarded to members of particular societies or departmental majors as indicated. The status of the loan and scholarship funds are given as of the end of the fiscal year, June 30, 1971.

*\*\*Honored, June 4, 1965, by the Board of Regents for having "continually sought and diligently invested funds received by the University."*

Scholarship	Principal	Amount and Frequency	Awarded By
American Association of University Women	\$ 1,166.32	Annual*	American Association of University Women, Ypsilanti Branch
Fannie Beal	2,699.00	Annual \$90.	
Evelle Downing	2,699.00	Annual \$90.	
Susan B. Hill	2,746.92	Annual \$90.	
Lydia I. Jones	3,124.00	Annual \$90.	
Janice Lockwood	3,210.00	Annual \$90.	
Mary Winters	2,699.00	Annual \$90.	
Bess L. Hyde	556.94	Annual*	Brown Hall Residents
Adree P. Pearson	10,000.00	Annual*	Department of Art
Alvis M. Robinson	2,215.00	Annual*	Department of Business Education
Bert W. Peet	2,864.00	Annual*	Department of Chemistry

\*As income allows

Margaret M. Robinson	2,590.25	Annual*	Department of Education Library Science Faculty
R. Clyde Ford	1,210.64	Annual*	Department of Foreign Languages
Mark Jefferson	1,113.00	Annual*	Department of Geography
Fred Ericson	3,211.00	Annual*	Department of History
Susan M. Burson	1,152.00	Annual*	Department of Home Economics
Grace Fuller	1,000.00	Annual*	
Frances G. Sanderson	3,119.04	Annual*	
Industrial Arts		Emergency	Department of Industrial Education
George A. Willoughby	1,276.50	Annual*	Department of Mathematics
Hilton G. Falahee	2,013.79	Annual*	
Mabel Jarvis Leib	40,207.26	Annual*	Department of Music
Dorothy James	1,040.00	Annual*	
Carl Lindegren	1,311.00	Annual*	
Carl Lindegren Rotary	1,556.35	Annual*	
Joseph Remington	1,247.80	Annual*	
Mary A. Goddard	1,987.34	Annual*	
Ruth Boughner	1,657.70	Annual*	Department of Physical Education
Wilbur P. Bowen	1,500.00	Annual*	
Fannie C. Burton	1,545.00	Annual*	
Paul B. Samson	2,391.04	Annual*	
Chloe M. Todd	1,951.98	Annual*	Men's Division
L. W. Olds	9,227.84	Annual*	
Elton J. Rynearson	1,010.00	Annual*	Women's Division
Gussie Harris	4,245.25	Annual*	
Floyd Leib	36,990.26	Annual*	Department of Physics and Astronomy
Harry L. Smith	2,795.00	Annual*	Department of Speech and Dramatic Arts
Dramatic Arts and Speech	2,548.38	Annual*\$100	
Ann Thomson Hubbell	1,310.00	Annual*	Department of Special Education Downing Hall Residents Eastern Michigan Wives Organization
Charles Elliott	2,081.83	Annual*	
Verna M. Carson	5,850.00	Annual*	
Eastern Michigan University Wives	3,946.00	Annual	
Student Religious Organization	2,692.73	Annual*	Faculty Board for Religious Affairs University Scholarship Committee
Alpha Sigma Tau	1,000.00	Annual*	University Scholarship Committee
Cora Ann Ballou	1,000.00	Annual*	
Carl D. Basler	1,000.00	Annual*	
James M. Brown	2,664.00	Annual*	
Mary E. Campbell	1,000.00	Annual*	
Kenneth H. Cleeton	1,505.25	Annual*	
Eastern Michigan University	3,654.02	Annual*	
Eugene B. Elliott	2,459.50	Annual*	
Carl M. Erikson	1,000.00	Annual*	
Eudora Estabrook	1,200.00	Annual*	
Bernice L. Farley	1,020.00	Annual*	
Ralph Gerganoff	5,000.00	Annual*	
Millie Gorman	1,000.00	Annual*	
Clara Hosie	7,075.83	Annual*	
Adella R. Jackson	1,074.22	Annual*	

\*As income allows



John F. Kennedy	1,444.54	Annual*	
Arthur F. Lederle	25,000.00	Annual*	
George Marshall Track Fund	5,000.77	Annual	
Elizabeth McCrickett	1,000.00	Annual*	
Margory Cleary McKenny and Arthur McKenny	11,963.39	Annual*	
Robert A. Riddering	2,965.00	Annual*	
Mary Rohn	1,250.00	Annual*	
Edith Mary Selleck	1,612.47	Annual	
W.A. Tape	3,414.83	Annual*	
Mr. and Mrs. Horace Z. Wilber	2,923.50	Annual*	
Margaret E. Wise I	1,000.00	Annual*	
Margaret E. Wise II	2,038.00	Annual*	
Marjorie O. Isbell	2,245.04	Annual*	
Jones Hall	1,291.50	Annual \$75.	Institute of International Education Jones Hall Residents
Roger Arnett	1,015.00	Annual*	Kappa Delta Pi
Martha Best	1,030.00	Annual*	
Leeman Lindquist	36,756.51	Annual*	
Martha Rosentreter	1,000.00	Annual*	
King Hall	2,354.15	Annual \$70.	King Hall Residents
Sarah A. George	2,794.31	Annual \$150.	Ladies Literary Club of Ypsilanti
Marvin S. Pittman	5,542.76	Annual \$100.	Lincoln Alumni Association
Elizabeth R. Stewart		Annual (2) \$250.	Michigan Congress of Parents and Teachers for Juniors and Seniors in Teacher Education
Frederick B. McKay	2,033.01	Annual*	Pi Kappa Delta
Pontiac Senior High School	6,000.00	Annual \$300.	Pontiac Senior High School
Residential Hall Educational and Cultural Council	1,000.00	Annual	Residential Hall Educational and Cultural Council, Sub- Committee
Winora Beal	1,000.00	Annual*	Roosevelt High School Faculty and University Scholarship Committee
Jean MacKenzie Steele	1,000.00	Annual*	Sigma Sigma Sigma
Susanne Stinson	2,035.62	Annual \$50.	
American Legion Honor Award	6,725.26	Annual*	Special Committee
Edwin D. Cushman	1,000.00	Annual*	
Bessie Dillman	135,219.39	Annual	
Helen E. Dunning	4,954.05	Annual	
Gene Dunning	2,000.00	Annual*	
Kappa Phi Alpha	9,441.84	Annual	
Katherine Maher	1,500.00	Annual*	
Malcolm X and Martin L. King	1,442.16	Annual*	
John M. Munson	1,933.92	Annual*	
Sigma Nu Phi	2,190.91	Annual*	
Benjamin L. D'Ooge	1,800.00	Dependent	Stoic Society
Nathan A. Harvey	1,800.00	upon	
Milton J. Hover	1,800.00	earnings	
L.H. Jones	4,800.00		

\*As income allows

Julia Ann King	1,800.00		Stoic Society (Cont'd)
J. Stuart Lathers	1,820.00		
Lucy Osband	1,800.00		
Carl E. Pray	1,800.00		
Mary and Daniel Putnam	2,400.00		
Margaret Robinson	1,394.85		
Elizabeth Simpson	1,800.00	Dependent	
E.A. Strong	1,800.00	upon	
		earnings	
Rotary Memorial	2,755.13	Annual*	Ypsilanti Rotary Club
Best Hall	504.55	Not yet available	
David Brady	396.90		
Perry S. Brundage	524.27		
Olive L. Davis	744.96		
Goddard Hall	927.84		
Robert L. Hannon	900.36		
Carl Hood	431.46		
Lydia I. Jones II	513.93		
Joseph P. Kelly	425.97		
Quinn Tyler	663.36		
Daniel Allen Young	712.30		
TOTAL	538,845.79		

### LOAN FUNDS

	Principal		
Frederick Alexander	1,630.03	Bertha Goodison	306.63
Anonymous	1,673.30	Charles O. Hoyt	2,951.00
Associated Women Students	4,834.61	Kappa Psi Alumni—Mary E. Hatton	4,265.88
Estelle Bauch	337.03	Kellogg Foundation	3,633.98
Joseph M. Bertotti	3,616.28	Samuel B. Laird	3,963.62
Martha Best	2,497.56	John Jacob Lamb	829.64
Carrie B. Bockheim	3,301.33	Paul Mancell	511.13
Mildred A. Bolt	410.15	Joyce Roser McKibbin	837.82
James M. Brown	476.39	Allen L. Miserez	455.21
Elizabeth Carey	1,114.27	Oscar David Morrill	9,479.11
Chadsey Senior High School	684.75	Hilon E. Morrow	87.78
Glenn O. and Mary P. Chappell	651.09	Marshall O'Berg	1,484.84
Marinetta Goodell Coryell	3,795.94	Frederick Newton	984.74
Creole Petroleum Corporation	2,006.78	John D. Pierce	3,098.95
Ethan B. Cudney	4,364.76	Bessie Leach Priddy	1,042.68
Daughters of American Revolution	2,333.13	Estabrook Rankin	2,120.86
Rachel J. Davidson	2,785.24	Dimon H. Roberts	1,073.28
Effie Belle Dean	7,370.60	Grace E. Roberts	7,925.38
Detroit Panhellenic	585.36	Abigail Roe	3,455.57
Anna Dobbins	349.14	Roosevelt High School	290.30
English Club of Eastern Michigan University	175.26	Senior Classes	5,200.32
Forum Club of Ypsilanti	430.89	Glenadine C. Snow	175.22
General Students of Eastern Mich. Univ.	1,114.43	Florence Crane Sterner	2,635.38
May Olivia George	161.89	Mary Ilo Swift	581.06
Orlo M. Gill	609.16	Genevieve M. Walton	2,066.83
Mary A. Goddard	1,349.27	Ella M. Wilson	2,325.62
		Joseph Conrad Worzniak	2,601.07
		Ypsilanti Womens Study Club	3,908.21
		TOTAL	116,952.08

### Small Loan Fund

The Small Loan Fund provides small, short-term, interest free loans to meet the requirements of an emergency.

\*As income allows

### University Short Term Loans

Part-time and full-time students faced with emergency educational expenses and who (1) are currently enrolled at the University, (2) have earned previous academic credit at Eastern and (3) who qualify academically (minimum 2.0 "C" undergraduate, 5.0 "B" graduate) are eligible to receive funds under this program. Up to \$250 may be borrowed at an interest rate of four percent. The period of

repayment is as short as possible but in any case does not extend beyond August 1.

## GENERAL AND SPECIAL SCHOLARSHIPS

Scholarships offered by associations, clubs, agencies and corporations are available to Eastern Michigan University students. Some are offered to entering freshmen, some to students already in the University. Qualifications and eligibility for these scholarships vary considerably. Among such scholarships currently offered are Detroit Edison and General Motors scholarships. Further information about these and other scholarships is available from the Office of the Dean of Admissions and Financial Aids.

## BOARD OF REGENTS SCHOLARSHIPS

The Board of Regents has established a number of educational scholarships open to qualified full-time undergraduate students. These partial tuition awards are awarded to individuals producing evidence of financial need and superior scholarship. Scholarships are available to students enrolled in the teaching and non-teaching curriculums. Students should apply directly to the Office of the Dean of Admissions and Financial Aids.

## EDUCATIONAL OPPORTUNITY GRANTS

The purpose of this program is to assist students of exceptional financial need who for lack of financial means of their own or of their families would be unable to enter or remain in college without an Educational Opportunity Grant. All full-time undergraduate students admitted to the University are eligible for consideration, with approval and amount of each award determined by the student's need for funds. The maximum yearly grant is \$1,000.00. EOA Grants can be no more than one-half the student's total financial need and must be matched by other types of financial aid.

## NATIONAL DIRECT STUDENT LOANS

The National Direct Student Loan program makes available low interest, long term repayment funds up to \$1,000 each academic year (\$2,500 for graduate students) to full-time students at Eastern Michigan University. The amount of the loan award will vary with the student's financial need. Students should apply directly to the Office of the Dean of Admissions and Financial Aids.

## COLLEGE WORK-STUDY PROGRAM

The College Work-Study Program provides full-time students with funds through employment. The student maybe employed on-campus or at one of the participating off-campus agencies. Approved students may work a maximum of fifteen (15) hours per week when the University is in session and a maximum of forty (40) hours per week when the University is not in session. The hourly rate of

pay is determined by the skills required for the job. Approval for employment under College Work-Study Program is based on student need.

## STATE OF MICHIGAN COMPETITIVE SCHOLARSHIPS

The State of Michigan has established a State Competitive Scholarship Program. State scholarship awards shall not exceed the amount of tuition and fees for the full college year to a maximum of \$800.00. Only graduating Michigan high school seniors with no previous college experience are eligible for state scholarships. Interested students should obtain further information from their high schools. Annual renewals may be applied for providing the student maintains a satisfactory academic record in an accredited college or university in the state of Michigan.

## ACT 245 PUBLIC ACTS OF 1935

Act 245, Public Acts of 1935, was created to provide educational opportunities for children of certain soldiers, sailors, marines and nurses. Students applying for benefits, remission of tuition and registration fee under Act 245 must file an application with the Michigan Veterans Trust Fund, Board of Trustees. Those students who qualify under the terms of the legislation are eligible to submit a University application form. Students receive applications from and submit applications to the Office of the Dean of Admissions and Financial Aids.

## LAW ENFORCEMENT LOANS AND GRANTS

This federal program makes available loans and grants to students enrolled in undergraduate or graduate programs leading to degrees in areas directly related to or suitable for law enforcement careers. All applicants must intend to pursue, continue or resume full-time employment in a law enforcement agency unit of local government, the state or the federal government upon completion of his studies. The amount of the loan or grant will vary with the student's financial need.

Further information and applications are available in the Office of Admissions and Financial Aids.

## MICHIGAN VETERANS TRUST FUND

The Michigan Veterans Trust Fund is available to Michigan veterans as defined in Act No. 9 of the Public Acts of 1946 as amended, or his legal dependent or the child of a deceased veteran. The applicant must be enrolled as a fulltime student and have need for a loan. The loan may not exceed \$600 and is repayable, without interest, within six months. Additional information is available in the Office of Admissions and Financial Aids.

## MICHIGAN GUARANTEED STUDENT LOANS

Eastern Michigan University is cooperating with the Michigan Higher Education Assistance Authority and Michigan banks to make loans available to Eastern Michigan University students. Applications may be obtained from a participating bank, savings and loan association

or credit union or by writing to the Student Financial Assistance Services, Box 420, Lansing, Michigan, 48910.

### VETERANS

All veterans eligible for education benefits under the New G.I. Bill must furnish the Veteran's Affairs Office at the University with their Certificate of Eligibility (if available) at or prior to the start of classes.

They must complete the necessary registration with the University and pay the full tuition and fees.

### ARMY ROTC SCHOLARSHIP PROGRAMS

Two programs are designed to offer financial assistance to outstanding young men who are interested in com-

pleting the ROTC program and pursuing the Army as a career. Scholarships may be awarded for one, two, three or four-year periods to any male citizen of the United States who meets the criteria. The four-year program is open on a selective basis to high school seniors who apply and intend to pursue ROTC at a college or university. The one to three-year scholarships are reserved for those students who are enrolled in the ROTC program on campus. Nominations for two-year scholarships are made by a faculty board. All scholarships provide full tuition, textbooks and laboratory fees in addition to pay of \$100.00 per month for the period the scholarships are in effect. The scholarships are provided under the provisions of Public Law 88-647. For further information contact the Military Science Department.



# PHYSICAL PLANT

## THE UNIVERSITY CAMPUS

Eastern Michigan University is located on the northwestern side of Ypsilanti on high ground overlooking the city of Ypsilanti and the Huron River Valley. The central campus consists of approximately 217 acres and an additional 203 acres have been purchased to provide room for an expanding plant to meet the needs of a rapidly growing University. Rolling wooded grounds on campus provide many scenes of natural beauty.

## THE UNIVERSITY BUILDINGS AND PLANT

### Richard G. Boone Building

Built in 1914 as an administration building, the Boone Building now houses the College of Education Offices and classrooms.

### John D. Pierce Hall

Completed in 1948, this building replaced the original building of the University, which for a century honored the name of John D. Pierce, first superintendent of public instruction in the State of Michigan. The main administrative offices of the University are in this building.

### Frederic H. Pease Auditorium

This building, completed in 1914 and named for Frederic H. Pease, long time head of the Conservatory of Music, houses part of the Department of Music activities. The auditorium seats 1,700 and is the center for many University and civic activities. In the auditorium is the Frederick Alexander Memorial Organ.

### Frederick Alexander Music Hall

Immediately adjacent to Pease Auditorium, this building, completed in 1960, houses the Department of Music practice studios and large rehearsal halls.

### Adonijah S. Welch Hall

The first section of this building was erected in 1896 and was substantially enlarged in 1909. It is named for Adonijah S. Welch, first head of the University, and was originally used as the University laboratory school. It now houses University business offices.

In the University Business Office area are the Department of Personnel, Accounting, Payroll, Purchasing and Management Services.

### William H. Sherzer Hall

This building, erected in 1903, houses the Field Department and classrooms for industrial education and art.

### J.M. Hover Laboratory

The building, completed in 1941, houses laboratories of the Department of Biology, also a greenhouse and plant laboratory.

### Edwin A. Strong Physical Science Building

This building opened in the fall of 1957, houses the Departments of Physics and Geography. Now in operation are the laboratory and lecture hall units. Classroom and museum-planetarium wings are to be added. The building is named after Edwin A. Strong, head of the Physical Science Department between 1885-1916.

### Daniel L. Quirk, Jr. Dramatic Arts Building

Opened in 1959, this modern drama facility contains an instructional theater seating 381, a flexible laboratory theatre, scene and costume shops, radio facilities, an outdoor amphitheater and classrooms and offices housing dramatic and other speech activities of the Department of Speech and Dramatic Arts.

A classroom and office wing was added in the spring of 1966 along with studios and facilities for the University F.M. station.

### Walter O. Briggs Building

Originally constructed as a first unit of a field house, the Briggs building was first converted to classroom use and has recently been converted to house the Office of Registration and Collections operation for the payment of tuition and room and board.

### University Library

The University Library, which opened at the beginning of the spring semester, 1967, provides more than five times the floor space and double the book capacity of the old Mark Jefferson Library. The seating capacity is 1,800, and there are more than 480,000 items available for use, including books, bound periodicals, documents and microforms. Most materials are readily available for home or library use when not on reserve. The Audio-Visual Center complements the library collection with non-book materials and a listening center.

### Joseph E. Warner

### Physical Education Building

This facility, completed in 1964 and immediately adjacent to Bowen Field House, provides an athletic and physical education plant which contains the most modern and adequate facilities available. Housed in this building are gymnasiums, classrooms, offices, special-purpose rooms, a swimming pool and the Human Performance Laboratory.

### Wilbur P. Bowen Field House

The field house was completed in December, 1955, and was named for the founder and long-time head of the Department of Physical Education. It is one of the largest and most modern in the state. The complete field house floor has been hard surfaced and the eight-lap to mile track has been surfaced with Grasstex, providing one of the finest indoor tracks found anywhere. This facility also has a basketball court, three tennis courts, eight badminton and three volleyball courts in the infield. The present seating capacity for basketball is 4,350.

### Glenadine C. Snow Health Center

The Health Center, completed in 1959, houses the clinical services of the University health service as well as an infirmary for in-patient treatment. The Student Counseling Center is also located there.

### Charles McKenny Hall

Charles McKenny Hall, named after a former president of the University, is the student union and social center of the University.

This facility was completely remodeled in 1964-65 and a large addition added, doubling its original size. It now houses cafeteria and dining services, snack bar, University bookstore, bowling alley, billiard room, offices for student organizations, lounges, meeting rooms and a large ballroom.

### Mary Ann Starkweather Hall

This building, the gift of Mrs. Mary Starkweather, was erected in 1897 as the home of student religious activities at the University. Its operations are financed and directed jointly by the University and by the local community. It was remodeled and modernized in 1961.

### J.M.B. Sill Building

J.M.B. Sill Building houses classrooms and offices for the Departments of Fine Arts and Industrial Education, the University Bookstore Annex, art galleries and large lecture halls used for classes in English, history, biology and earth sciences.

### R. Clyde Ford Hall

The Mark Jefferson Library, renamed R. Clyde Ford Hall, has been remodeled to provide office and classroom space for the Educational Television and Foreign Languages and Literature departments. The building originally was opened in 1929 and remodeled in 1967.

### Pray-Harrold Classroom Building

The Pray-Harrold Classroom Building houses the Departments of English Language and Literature, History and Philosophy, Mathematics and the College of Business. Located north of the University Library, the building was completed in June, 1969.

### Mark Jefferson Hall

This building completed in the fall of 1970, houses the Departments of Chemistry, Biology and Psychology. The new building has completely equipped modern laboratories for each of the above departments and greatly enhances these departments in preparing the students in this field of study.

### King Hall

Renovated in 1971 to house the Music Department, head of the department, music practice rooms and faculty; also, the Nursing Education Program and additional offices for the Special Education Department.

### Goodison Hall

Renovated in 1971 to house the Counseling Center, Dean of Students, Student Government, Student Publications and the University Radio Station.

### Roosevelt Building

The former Roosevelt Laboratory School has been remodeled to house the departments of Home Economics and Military Science.

## STUDENT HOUSING

The University residence halls and student apartments are operated on a self-liquidating plan, i.e. construction is financed from revenue bonds and these plus the operational costs are paid from the rental revenue.

**Jones-Goddard Residence Halls** were constructed around a central court with a common kitchen and separate dining rooms for each hall. These residence halls contain 434 student areas.

**Downing-Buell-Wise-Best** is a four-unit complex with a central dining commons providing separate dining for each residence hall. These halls contain 1246 student areas.

**Phelps-Sellers-Walton-Putnam** is a four-unit complex with an attached central dining commons providing a single large dining room for all residence halls. These contain 1200 student areas.

The newest residence halls, **Hoyt-Pittman-Hill**, completed in the fall of 1969. These halls consist of eleven-story high residence halls and a one-story hall. All buildings are separate and not attached, centered around a landscaped court. These residence halls contain 1404 student areas.

## STUDENT APARTMENTS

**The Pine Grove Terrace** located on the north corner of the main campus contains 169 apartments. These units were built in 1955 and 1957 and are two-masonry units with exterior balconies. Each building contains laundry facilities. There are 140 one-bedroom and 29 two-bedroom units.

**The Cornell Courts Apartments**, located on the side of the north campus, were built in 1960 and 1966 include six buildings containing 90 apartments and two buildings containing 45 apartments. The units are two-story masonry units with exterior balconies and each building contains laundry facilities. There are 69 one-bedroom units and 66 two-bedroom units.

**The Westview Apartments**, located on the west campus about one mile west of the main campus, are different from the other housing projects. These apartments are in the townhouse style giving the occupant a front and back yard with the bedrooms generally located on the second story above the living area. There are seven buildings containing 45 apartments completed in 1968 and 15 additional units containing 100 apartments were ready in the fall of 1969. There is a total of 73 one-bedroom and 72 two-bedroom units.

## SINGLE-STUDENTS APARTMENTS

The former Brown and Munson Residence Halls have been converted and remodeled into approximately 100 apartments for lease to single students for periods of 10 or 12 months. Most of the units are for two persons although some apartments are for single occupancy and several others are for occupancy by four or six persons each. All apartments are basically furnished, carpeted and air-conditioned. All utilities, with the exception of telephone, are included in the monthly rent.

## OTHER FACILITIES

### Placement Center

Formerly the D'Ooge residence, this facility, located on the corner of Forest and Lowell, provides offices, reception and interview rooms for placing graduating seniors and former graduates seeking new employment.



### Richards House

Formerly the Home Management House, named for Ellen H. Richards, the founder of organized home economics, this facility provides offices and practice rooms for the Department of Music.

### Parking Structure

A structure to house 800 cars has been built west of Bowen Field House. The structure has direct access to Washtenaw off newly completed Oakwood Avenue. This also houses the University Safety Department.

### Lowell Street Buildings

Located on the north campus is the Aquatic Biology Department and the sculpture studio for the Art Department.

## FIELDS AND OUTDOOR FACILITIES

### West Campus

An area of 142 acres was purchased in 1965 and an additional 40 acres purchased in 1967 to allow expansion of the academic campus into the site of athletic areas on the main campus. The new site contains a baseball stadium, football stadium, all weather running track, six intramural fields, two practice football fields and room for future expansion and growth of similar facilities.

### Briggs Field

This new facility is a baseball field with a grandstand seating 2000 people under covered stands. The facility, first used in the spring of 1968, is the finest baseball facility in inter-collegiate competition.

### Rynearson Stadium

This new facility was ready for the 1969 fall football season and contains 12,500 permanent seats on the west side of the field allowing for temporary bleachers which expand the seating on the east side of the field to 17,000. Also included are complete press box and locker room facilities.

### Fish Lake Property

This property was purchased in 1965 as a Biological Research Field Laboratory and will be developed into a

Conference and Field Laboratory Complex as funds permit. It is located in Lapeer County, has a natural lake for aquatic biology and is surrounded on three sides by Michigan Conservation property and is 241 acres in area. Presently, classes are held on the site in a converted school house. Facilities to house and feed 24 on site students are available.

### Main Campus

Remaining on the main campus are 16 tennis courts, five large play fields suitable for field hockey, football, practice baseball diamonds and women's sports. Under construction is the equivalent of four softball diamonds or two football fields--all under lights for night-time use. They are used by the physical education classes, by the intramural program and for general recreational purposes. The main campus consists of 217 acres.

### Clarence M. Loesell Field Laboratory

Located west of the campus, this tract of about 21 acres was dedicated in 1958 to the memory of Clarence M. Loesell, long-time head of the Natural Science Department (present Biology Department). It includes a considerable variety of habitat and wildlife and is used in the teaching and research program of the department.

## LABORATORY SCHOOL

### Horace H. Rackham School of Special Education

This building houses both a laboratory school for handicapped children and the Department of Special Education. It contains a new speech and hearing clinic, a pool and other facilities for physical therapy. It was constructed in 1938.

## CLOSED-CIRCUIT TELEVISION

Many University buildings are linked by coaxial cable in a closed-circuit television system, which has been in operation since 1960. Closed circuit TV is used for direct instruction, observation and demonstration. Equipped television studios are located in the Ford Building. Equipment includes six vidicon cameras, audio and projection devices.

# UNIVERSITY PRESS

The Eastern Michigan University Press, founded in 1967, has as its purpose the publication of scholarly books. The press is currently administered by a director, and an editorial advisory board, comprised of deans and department heads ranked among the leading scholars on the University campus, has been established as a gov-

erning board responsible, with the director, for establishing directions for the press and for maintaining quality of publications. The press' first title was published in 1968. The press will consider publication of works by members of the Eastern Michigan University faculty and by scholars from other institutions.

## INFORMATION SERVICES

The Office of Information Services is responsible for the University news bureau, the publications office and sports information.

This office offers professional assistance and counsel to individuals, organizations, faculty and administrators planning to conduct and promote activities of benefit to the University.

The news bureau is the focal point for all contact with news media. Events and activities of the University are

publicized through this office and inquiries from newsmen are generally directed to the news bureau. The news editor also is responsible for Faculty-Staff News.

All University publications are produced by the publications office, and production of all printed materials of the University are coordinated by the publications editor.

The sports information director is responsible for all news and printed material relating to intercollegiate athletic activities.

## SPARD

The Special Projects and Research Development Office was organized for the purpose of stimulating, initiating and developing special projects and research. The SPARD office works cooperatively with faculty, administration and students who are interested in obtaining funds for independent research, demonstration programs, experi-

mental projects and other efforts directed at expanding the scope and quality of the University.

SPARD maintains an information resource center on funding agencies, serves as a liaison office for the funding agencies and assists in editing, reviewing and preparing proposals that are to be submitted to funding agencies.

## THE ALUMNI ASSOCIATION

Eastern Michigan University was founded in 1849. Since then, thousands of students have graduated from its various academic programs. These students are now engaged not only in the teaching profession but also in many fields of endeavor.

The Alumni Association, incorporated in 1926, serves as a bond between the University and its former students. Membership is available to graduates, former students, and members of the faculty.

The Association has been active. This has been evidenced by its accomplishments and contributions to the University. The Memorial Chimes and Pierce Hall clocks given in former years and in more recent years, gifts to the University Library, gifts to various established funds and scholarships, additional scholarships and aid to student organizations, have exemplified the willingness of alumni to invest in the University.

Meetings held throughout the year provide an opportunity for alumni in various cities and states to meet with representatives of the University and discuss mutual concerns. Each year, many alumni and friends return to the campus for Homecoming and the traditional Alumni Day held each spring.

The Board of Directors consists of twenty-three members who are appointed and chosen by a vote of the alumni at the annual meeting in May, two of whom are students selected and appointed by a student committee. The University president is an ex-officio member.

Charles McKenny Union, completed in 1931, was built through the efforts of alumni and the University and stands as a visible symbol to all that the association is proud to serve Eastern.

# EASTERN MICHIGAN UNIVERSITY ALUMNI ASSOCIATION

## OFFICERS

President . . . . .	C. Eugene Beatty ('34)
Vice President . . . . .	Robert K. Smiley ('48)
Secretary . . . . .	Lonny J. Head ('67)
Treasurer . . . . .	Abe Karam ('62)
Directors Emeritus . . . . .	Leslie A. Butler ('00) Lloyd W. Olds ('16)

## DIRECTORS

Spornberg, Harold E . . . . .	Ex-Officio
Beatty, C. Eugene ('34). . . . .	Term expires June, 1973
Bennetts, Frederic W. ('42). . . . .	Term expires June, 1975
Clapham, Marty. . . . .	Student Member
Cole, Edyth Bryant ('45). . . . .	Term expires June, 1973
Currie, Donald M. ('47). . . . .	Term expires June, 1974
Duvall, Elven E. ('47). . . . .	Term expires June, 1973

Ebersole, Clare E. ('50). . . . .	Term expires June, 1973
Elliott, Carl E. ('59). . . . .	Term expires June, 1975*
Gaiss, Alfred ('65). . . . .	Term expires June, 1974*
Hamilton, Vanzetti ('49). . . . .	Term expires June, 1974
Jones, Judity Bates ('57). . . . .	Term expires June, 1974
Karam, Abe ('62). . . . .	Term expires June, 1974*
Kerbawy, Richard. . . . .	Student Member
Moffett, Valerie Turner ('49). . . . .	Term expires June, 1973
Oestrike, Ronald ('54). . . . .	Term expires June, 1975*
Ohst, Carolyn ('69). . . . .	Term expires June, 1975
Rynearson, E. James ('52). . . . .	Term expires June, 1974
Shoemaker, Paul ('32). . . . .	Term expires June, 1974
Sims, Robert ('52). . . . .	Term expires June, 1973*
Smiley, Robert K. ('48). . . . .	Term expires June, 1975
Studt, Earl K. ('32). . . . .	Term expires June, 1975
Weiss, Barbara Warner ('50). . . . .	Term expires June, 1975
Wilkins, Charles A. ('68). . . . .	Term expires June, 1973*

# FACULTY AND STAFF

## A

**Abbott, Richard H.** (1966), *Professor, History and Philosophy.*

B.A., Grinnell College  
M.A., University of Missouri  
Ph.D., University of Wisconsin

**Abramson, Armand R.** (1967), *Associate Professor, Music.*

B.M., University of Louisville  
M.M., Eastman School of Music

**Adams, Georgia** (1967), *Nurse, Health Service.*

R.N., Englewood Hospital, Chicago

**Adams, John R.** (1960), *Professor, Health, Physical Education and Recreation.*

B.S., Eastern Illinois University  
M.S., University of Illinois  
Ph.D., University of Michigan

**Adams, Leah D.** (1969), *Assistant Professor, Curriculum and Instruction.*

B.S., Ohio State University  
M.A., Wayne State University  
Ph.D., Wayne State University

**Albritton, Thelma P.** (1961), *Assistant Professor, Special Education and Occupational Therapy.*

B.A., Greensboro College  
M.Ed., University of Oregon

**Aldridge, Henry B.** (1972), *Assistant Professor, Speech and Dramatic Arts.*

B.A., University of North Carolina  
M.A., University of North Carolina

**Allen, Irene A.** (1968), *Associate Professor, Curriculum and Instruction.*

B.S., Johnson Teachers College  
M.A., Ball State University  
Ed.D., Ball State University

**Allen, Thomas P.** (1966), *Assistant Professor, English Language and Literature.*

B.S., St. Vincent College  
M.A., University of Detroit  
Ph.D., Rice University

**Anderson, Charles T.** (1955), *Professor, Chemistry.*

B.A., Fairmont State College  
Ph.D., Ohio State University

**Anderson, Frederick M.** (1970), *Professor, History and Philosophy.*

B.A., Wesleyan University  
M.A., Cornell University  
Ph.D., Harvard University

**Anderson, Marvin C.** (1963), *Associate Professor, Art.*

B.F.A., Wayne State University  
M.F.A., Cranbrook Academy of Art

**Anderson, Normajean I.** (1948), *Associate Professor, Business Education.*

B.S., Eastern Michigan University  
B.C.S., Cleary College  
M.A., University of Michigan

**Anderson, Robert L.** (1957), *Professor, Psychology.*

B.A., Northern Michigan University  
M.A., Columbia University  
Ph.D., New York University

\*Appointed Members

- Anderson, Thomas C.** (1972), *Assistant Professor, Economics.*  
B.S., Utah State University  
M.S., Utah State University  
Ph.D., University of California
- Andrew, Ann** (1969), *Instructor, Library.*  
B.A., University of Michigan  
M.A.L.S., University of Michigan
- Andrews, Naomi** (1968), *Associate Professor, English Language and Literature.*  
B.A., Virginia State College  
M.Ed., Wayne State University
- Andrews, Robert A.** (1958), *Special Operations Analyst.*  
B.A., Michigan State University
- Angelocci, Angelo A.** (1965), *Professor, Special Education and Occupational Therapy.*  
B.S., Eastern Michigan University  
M.A., University of Michigan  
Ph.D., Wayne State University
- Angle, James B.** (1964), *Assistant Professor, English Language and Literature.*  
B.A., University of Michigan  
M.A., Kansas State University
- Antiochia, Sergio** (1968), *Assistant Professor, General Business.*  
Dr. Ing., University of Rome (Italy)  
M.B.A., Wayne State University
- Ashton, Charles R.** (1965), *Assistant Professor, Marketing.*  
B.A., University of Michigan  
M.B.A., University of Michigan
- Atabug, Alejandra C.** (1971), *Assistant Professor, Music.*  
B.M., University of Santo Tomas  
M.S., University of Illinois  
Ph.D., University of Michigan
- Avedon, Barry** (1966), *Associate Professor, Art.*  
B.F.A., Rochester Institute of Technology  
M.F.A., Rochester Institute of Technology
- Avner, Lillian L.** (1969), *Assistant Professor, Health, Physical Education and Recreation.*  
B.S., Texas Women's University  
M.A., Texas Women's University
- B**
- Badii, Larry L.** (1965), *Associate Professor, Mathematics.*  
B.A., San Jose State College  
M.A., San Jose State College  
Ph.D., Oregon State University
- Baird, Ronald J.** (1966), *Professor, Industrial Education.*  
B.S., Bowling Green State University  
M.Ed., University of Missouri  
Ed.D., Michigan State University
- Bajwa, Ranjit S.** (1963), *Professor, Education.*  
B.A., Punjab University  
B.T., Punjab University  
Ed.D., Wayne State University
- Ballard, ●. Blaine** (1960), *Associate Professor, Music.*  
B.S., Mansfield State College  
M.E., Mansfield State College  
M.M., Indiana University
- Banciu, Charles G.** (1971), *Administrative Assistant to the Vice-President for Instruction.*  
B.S., Wayne State University  
M.B.A., University of Michigan
- Banks, Gary C.** (1969), *Assistant Professor, Health, Physical Education and Recreation.*  
B.S., University of Detroit  
M.S., University of Wisconsin
- Barach, George J.** (1969), *Assistant Professor, Special Education and Occupational Therapy.*  
B.S., Wayne State University  
M.Ed., Boston College  
Ph.D., Wayne State University
- Barbee, W. Louise** (1967), *Assistant Professor, Mathematics.*  
B.A., Eastern Michigan University  
M.A., University of Michigan  
Ph.D., University of Michigan
- Barber, Betty Lou** (1969), *Assistant Professor, Home Economics.*  
B.S., Michigan State University  
M.A., Eastern Michigan University
- Barnes, Geraldine K.** (1964), *Assistant Professor, Health, Physical Education and Recreation.*  
B.A., Adrian College  
M.A., Michigan State University
- Barnes, James M.** (1955), *Department Head, Professor, Physics and Astronomy.*  
B.S., Eastern Michigan University  
M.S., Michigan State University  
Ph.D., Michigan State University
- Barnett, William D.** (1972), *Assistant Director, Student Life.*  
B.A., Eastern Michigan University
- Bartin, Norma G.** (1970), *Assistant Professor, Curriculum and Instruction.*  
B.A., State University of New York  
M.A., State University of New York  
Ed.D., State University of New York
- Bates, Leslie K.** (1972), *Counselor, Counseling Center.*  
B.S., Western Michigan University  
M.A., Western Michigan University
- Bates, Morton, M.D.** (1969), *Staff Physician, Health Services.*  
B.S., Hillsdale College  
B.M., Wayne State University  
M.D., Wayne State University
- Battle, James** (1972), *Assistant Professor, Psychology.*  
B.A., University of Southern Illinois  
M.Ed., University of Southern Illinois
- Beagen, Dennis M.** (1968), *Instructor, Speech and Dramatic Arts.*  
B.S., Eastern Michigan University  
M.A., University of Michigan

- Beal, Sarrel W.** (1970). *Instructor. Library.*  
B.A., Michigan State University  
M.A.L.S., Rosary College
- Beck, Mary C.** (1970). *Assistant Professor. Library.*  
B.A., University of Chicago  
M.A.L.S., University of Denver
- Beckley, William M.** (1972). *Assistant Art Director, Information Services.*  
B.F.A., University of Michigan
- Beecher, Michael D.** (1971). *Assistant Professor. Psychology.*  
B., A. Reed College  
A.M., Boston University  
Ph.D., Boston University
- Beeler, Kent D.** (1970). *Assistant Professor. Guidance and Counseling.*  
B.S., Ball State University  
M.A., Ball State University  
Ed.D., Indiana University
- Beginin, Igor** (1968). *Assistant Professor. Art.*  
B.A., Wayne State University  
M.A., Wayne State University
- Begres, Forrest M.** (1971). *Assistant Professor. Biology.*  
B.S., Eastern Michigan University  
M.S., Eastern Michigan University  
Ph.D., Iowa State University
- Belcher, Robert O.** (1946). *Professor. Biology.*  
B.A., Berea College  
M.S., University of Michigan  
Ph.D., University of Michigan
- Belcher, Ruby B.** (1957). *Nurse. Health Service.*  
B.A., Berea College  
R.N., Kahlen Methodist School of Nursing
- Bell, Margaret E.** (1968). *Instructor. Health. Physical Education and Recreation.*  
B.S., Eastern Michigan University
- Bell, Mary I.** (1949). *Associate Professor. Health. Physical Education and Recreation.*  
B.S., Eastern Michigan University  
M.A., University of Michigan
- Belskus, Albert W.** (1969). *Assistant Professor. Business Education.*  
B.S., Indiana State University  
M.S., Indiana State University
- Belt, Gordon A.** (1968). *Assistant Professor. Curriculum and Instruction.*  
B.S., Central Michigan University  
M.A., Michigan State University  
Ed.S., Wayne State University
- Beltsos, Nicholas J.** (1962). *Assistant Professor. Management.*  
B.S., Marquette University  
M.A., Michigan State University
- Bemish, Lawrence** (1972). *Instructor. Special Education and Occupational Therapy.*  
B.S., Eastern Michigan University  
M.A., University of Michigan
- Benden, Robert A.** (1953). *Assistant Professor. Industrial Education.*  
B.S., Eastern Michigan University  
M.A., Eastern Michigan University
- Benjamin, Dale** (1968). *Coordinator. Pupil Transportation Systems. Field Services.*
- Bennett, Normajean M.** (1956). *Assistant Professor. Special Education and Occupational Therapy.*  
B.S., Western Michigan University  
M.A., University of Michigan
- Bensen, Alice R.** (1947). *Professor. English Language and Literature.*  
B.A., Washington University  
M.A., Washington University  
Ph.D., University of Chicago
- Berry, Leona P.** (1957). *Associate Professor. Library.*  
B.A., York College  
M.S., Fort Hays Kansas State College  
M.A.L.S., University of Denver
- Bertram, Neil C.** (1966). *Publications Editor. Information Services.*  
B.A., University of Michigan  
M.A., University of Michigan
- Bidwell, Jean S.** (1962). *Associate Professor. Foreign Languages and Literature.*  
B.A., Brown University  
M.A., Eastern Michigan University  
M.A., University of Michigan  
Ph.D., University of Michigan
- Bilsky, Manuel** (1960). *Professor. History and Philosophy.*  
B.A., Wayne State University  
M.A., Wayne State University  
M.A., University of Michigan  
Ph.D., University of Michigan
- Bird, George P.** (1955). *Technical Director. Quirk Theatre: Professor. Speech and Dramatic Arts.*  
B.S., University of Wisconsin  
M.S., University of Wisconsin
- Birleson, Clifford** (1951). *Associate Professor. Curriculum and Instruction.*  
B.A., Western Michigan University  
M.A., University of Michigan
- Bishop, Nadean H.** (1966). *Assistant Professor. English Language and Literature.*  
B.A., Baylor University  
M.A., University of Louisville  
Ph.D., University of Wisconsin
- Blair, John R.** (1970). *Assistant Professor. Educational Psychology.*  
B.S., Indiana University  
M.S., Indiana University  
Ph.D., University of Michigan
- Bobinski, Casimir A.** (1967). *Instructor. History and Philosophy.*  
B.A., San Francisco State College  
M.A., Michigan State University
- Bock, Ralph A.** (1971). *Director. Auxiliary Services.*  
B.S., Central Michigan University  
M.A., Central Michigan University

- Boisture, Daniel P.** (1967), *Assistant Professor, Health, Physical Education and Recreation.*  
B.A., University of Detroit  
M.S., Michigan State University
- Booth, Howard D.**, (1967), *Assistant Professor, Biology.*  
B.S., Eastern Michigan University  
M.S., Eastern Michigan University
- Bornemeier, Betty L.** (1965), *Professor, Home Economics.*  
B.S., Texas Women's University  
M.A., Texas Women's University  
Ph.D., Texas Women's University
- Borroff, Edith** (1966), *Professor, Music.*  
B.M., American Conservatory of Music  
M.M., American Conservatory of Music  
Ph.D., University of Michigan
- Borusch, Barbara J.** (1950), *Professor, Curriculum and Instruction.*  
B.S., Eastern Michigan University  
M.A., University of Michigan  
Ph.D., University of Michigan
- Bowe, Joan** (1970), *Instructor, Special Education and Occupational Therapy.*  
B.S., University of Wisconsin
- Bowen, Harry W.** *Professor, Speech and Dramatic Arts.*  
B.A., Westminster College  
M.A., Ohio State University  
Ph.D., University of Pittsburgh
- Boyd, Donald C.**, (1965), *Assistant Director, Placement.*  
B.S., Hillsdale College  
M.A., Wayne State University
- Boyer, Lee R.** (1970), *Assistant Professor, History and Philosophy.*  
B.A., Mount Union College  
M.A., University of Notre Dame  
Ph.D., University of Notre Dame
- Braden, Joseph L.** (1970), *Assistant Professor, Marketing.*  
B.S.C.E., Purdue University  
M.B.A., Indiana University  
D.B.A., Indiana University
- Branstator, Robin A.** (1971), *Instructor, Library.*  
B.A., Lewis and Clark College  
M.L.S., University of Oregon
- Braun, Sandra A.** (1971), *Assistant Professor, Art.*  
B.A., Barnard College  
M.A., University of Michigan
- Brazell, Troy V.** (1969), *Instructor, Library.*  
B.A., University of New Mexico  
M.A., University of Michigan
- Brazil, David L.** (1971), *Assistant Coach, Health, Physical Education and Recreation.*  
B.S., University of Detroit  
M.A., Wayne State University
- Breedlove, Charles B.** (1964), *Coordinator, Science Education; Professor, Physics and Astronomy.*  
B.S., McMurry College  
M.S., Southern Methodist University  
Ed.D., Wayne State University
- Breitner, Glen A.** (1967), *Director of Accounting.*  
B.S., Eastern Michigan University
- Brenner, Anton** (1968), *Professor, Educational Psychology.*  
University of Munich  
Ph.D., University of Tuebingen
- Brewer, Stephen W.** (1969), *Associate Professor, Chemistry.*  
B.S., University of Florida  
Ph.D., University of Wisconsin
- Briggs, W. Donald**, (1965), *Assistant Professor, History and Philosophy.*  
B.A., University of California  
M.A., Sacramento State College
- Brower, George** (1954), *Professor, Educational Leadership.*  
B.S., Western Michigan University  
M.S., University of Michigan  
Ph.D., Cornell University
- Brown, Donald F.M.** (1956), *Professor, Biology.*  
B.A., University of Michigan  
M.S., University of Michigan  
Ph.D., University of Michigan
- Brown, Leland** (1964), *Professor, General Business.*  
B.A., Indiana State University  
M.A., Indiana State University
- Bruss, Paul S.** (1969), *Assistant Professor, English Language and Literature.*  
B.A., University of Wisconsin  
M.A., University of Rochester  
Ph.D. University of Rochester
- Bryan, William C.** (1960), *Associate Professor, Accounting and Finance.*  
B.S., Oklahoma State University  
M.B.A., University of Michigan
- Brylowski, Walter M.** (1965), *Professor, English Language and Literature.*  
B.A., Kalamazoo College  
M.A., University of Connecticut  
Ph.D., Michigan State University
- Buckeye, Donald A.** (1968), *Professor, Mathematics.*  
B.S., Ashland College  
A.M.T., Indiana University  
Ed.D., Indiana University
- Buckholts, Paul O.** (1961), *Professor, Geography and Geology.*  
B.A., Oklahoma University  
M.A., Oklahoma University  
Ph.D., Harvard University
- Bufford, Samuel L.** (1968), *Assistant Professor, History and Philosophy.*  
B.A., Wheaton College  
Ph.D., University of Texas
- Bumbulis, Valija M.** (1971), *Instructor, Music.*  
B.M., Chicago Conservatory  
M.M., Chicago Conservatory



- Burnham, Sharon R.** (1970), *Instructor, Special Education and Occupational Therapy.*  
B.S., University of Michigan  
M.A., Eastern Michigan University
- Burns, Joanne M.** (1967), *Counselor, Counseling Center.*  
B.S., St. Norbert College  
M.A., Michigan State University  
Ed.S., Michigan State University
- Burson, Ruth F.** (1962), *Assistant Director, Placement.*  
B.S., University of North Carolina
- Burtz, Gudrun S.** (1972), *Director and Professor of Nursing Education.*  
B.A., San Diego State College  
M.S., University of California  
M.P.H., University of Michigan  
Ph.D., University of Michigan
- Bush, Russell L.** (1957), *Assistant Professor, Health, Physical Education and Recreation.*  
B.A., State College of Iowa  
M.P.E., Purdue University
- Bushey, James T.** (1969), *Assistant Professor, Educational Psychology.*  
Ph.B., University of Detroit  
M.A., University of Detroit  
Ed.D., Wayne State University
- Butterfield, Mary J.** (1968), *Instructor, Library.*  
B.A., Arizona State University  
M.A.L.S., University of Michigan

## C

- Cabrera, Haydee M.** (1966), *Assistant Professor, Library.*  
B.S., Marywood College  
M.P.H., University of Michigan  
M.A.L.S., University of Michigan
- Cadwallader, William H. Jr.** (1972), *Foreign Student Adviser, Counseling Center.*  
B.A., University of Redlands
- Calkins, Kingsley M.** (1950), *Department Head, Professor, Art.*  
B.S., Eastern Michigan University  
M.A., University of Michigan
- Campbell, James B.** (1971), *Vice-President for Student Affairs.*  
B.S., Carroll College  
M.S., Indiana University  
Ed.D., Indiana University
- Canter, Francis M.** (1967), *Professor, Psychology.*  
B.A., Washington University  
Ph.D., Washington University
- Cantrell, Douglas D.** (1965), *Assistant Professor, Management.*  
B.S., University of North Carolina  
B.D., Emory University  
M.A., Emory University
- Caputo, George E.** (1965), *Assistant Professor, Special Education and Occupational Therapy.*  
B.S., Washington and Jefferson College  
M.Ed., University of Pittsburgh
- Carpenter, Arthur L.** (1964), *Assistant Professor, Education.*  
B.S., Eastern Michigan University  
M.S., Michigan State University
- Carr, Mildred W.** (1955), *Nurse, Health Service.*  
R.N., St. Vincent's Infirmary School of Nursing
- Carter, Giles F.** (1967), *Associate Professor, Chemistry.*  
B.S., Texas Technological College  
Ph.D., University of California
- Carter, Larry** (1971), *Instructor, Education.*  
B.S., Eastern Michigan University  
M.A., Eastern Michigan University
- Case, Franklin D.** (1962), *Associate Professor, English Language and Literature.*  
B.A., University of Connecticut  
M.A., University of Michigan
- Cassar, George H.** (1968), *Associate Professor, History and Philosophy.*  
B.A., University of New Brunswick  
M.A., University of New Brunswick  
Ph.D., McGill University
- Caswell, Herbert H., Jr.** (1955), *Professor, Biology.*  
B.S., Harvard University  
M.A., University of California  
Ph.D., Cornell University
- Cavanaugh, Patric L.** (1968), *Department Head, Professor, Health, Physical Education and Recreation.*  
B.A., Oberlin College  
M.S., University of Michigan  
Ph.D., University of Michigan
- Cawi, Edward C.** (1967), *Coordinator of Information Systems.*  
B.S., University of Notre Dame  
M.A., University of Detroit
- Chamberlain, Marjorie K.** (1967), *Assistant Professor, Special Education and Occupational Therapy.*  
B.S., Wayne State University  
M.A., Wayne State University
- Chapman, Gordon L.** (1973), *Assistant Professor, Accounting and Finance.*  
B.S., Eastern Montana College  
M.B.A., University of Denver
- Chapman, Ralph** (1967), *News Editor, Information Services.*
- Chlebek, Edward** (1972), *Instructor, Health, Physical Education and Recreation.*  
B.A., Western Michigan University
- Chew, Robert E.** (1969), *Assistant Professor, Art.*  
B.F.A., Maryland Institute  
M.F.A., University of Illinois
- Christian, Ursula** (1954), *Director, Registration.*  
B.A., Eastern Michigan University  
M.A., Eastern Michigan University  
Sp.A., Eastern Michigan University

**Chung, Young-lob** (1966). *Department Head, Professor, Economics.*

B.S., University of California  
M.A., Columbia University  
Ph.D., Columbia University

**Cichanski, Allen** (1965). *Assistant Professor, Geography and Geology.*

B.S., Ohio State University

**Cione, Jean S.** (1963). *Assistant Professor, Health, Physical Education and Recreation.*

B.S., Eastern Michigan University  
M.S., University of Illinois

**Cline, William J.** (1970). *Assistant Professor, Foreign Languages and Literature.*

B.A., University of California  
M.A., State University of New York  
Ph.D., State University of New York

**Cobb, Gilbert H.** (1965). *Manager, McKenny Union.*

B.S., Cornell University

**Cocco, Victor** (1964). *Assistant Professor, Curriculum and Instruction.*

B.A., Eastern Michigan University  
M.A., University of Michigan  
Ed.S., Wayne State University

**Cohen, Lynne G.** (1969). *Instructor, Art.*

B.S., University of Wisconsin  
M.A., Eastern Michigan University

**Cohen, Neal P.** (1970). *Assistant Professor, Economics.*

B.S., Georgetown University  
M.S., University of Wisconsin

**Collins, Linda** (1968). *Assistant Professor, Special Education and Occupational Therapy.*

B.A., University of Texas  
M.A., University of Colorado

**Collins, Ronald W.** (1965). *Professor, Chemistry.*

B.S., University of Dayton  
Ph.D., Indiana University

**Collins, W. Oscar** (1957). *Professor, General Business.*

B.S., Southwest Missouri State College  
M.Ed., University of Missouri  
Ed.D., Indiana University

**Compere, Edward L., Jr.** (1964). *Professor, Chemistry.*

B.S., Beloit College  
M.S., University of Chicago  
Ph.D., University of Maryland

**Compton, Gail W.** (1969). *Associate Professor, Speech and Dramatic Arts.*

B.A., University of Evansville  
M.S., University of Wisconsin  
Ph.D., University of Wisconsin

**Conley, James H.** (1969). *Associate Professor, General Business.*

B.A., Otterbein College  
B.D., United Theological Seminary  
Ph.D., Michigan State University

**Cook, Frances C.** (1960). *Assistant Professor, Education.*

B.A., University of Michigan  
M.A.L.S., University of Michigan

**Cooper, Virginia A.** (1946). *Assistant Professor, English Language and Literature.*

B.A., University of Michigan  
M.A., University of Michigan

**Cowan, Ralph H.** (1967). *Counselor, Admissions and Financial Aids.*

B.S., University of Maryland  
M.A., Eastern Michigan University

**Cowles, David E.** (1970). *Assistant Professor, Mathematics.*

B.A., Oberlin College  
M.A., University of Michigan  
Ph.D., University of Michigan

**Coyner, Joseph E.** (1971). *Assistant Professor, Special Education and Occupational Therapy.*

B.S., Eastern Michigan University  
M.S., Eastern Michigan University  
Ed.S., Eastern Michigan University

**Cross, B. Gilbert** (1966). *Assistant Professor, English Language and Literature.*

B.A., Manchester University (England)  
M.A., University of Louisville  
Ph.D., University of Michigan

## D

**Dahl, Nancy L.** (1971). *Assistant Dean, Academic Records and Teacher Certification.*

B.S., Eastern Michigan University  
M.A., Eastern Michigan University  
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 B.A., University of Michigan  
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 B.A., Franklin and Marshall College  
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 Ph.D., University of Delaware
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 B.A.L.S., University of Michigan  
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 B.A., Grinnel College  
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 B.A., Cornell College  
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 B.A., Coe College  
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 Ph.D., Michigan State University
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 B.S., California Institute of Technology  
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 Ph.D., Clark University
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 M.S., Ithaca College  
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 Ph.D., State University of Iowa
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B.S., Eastern Michigan University  
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B.S., Eastern Michigan University  
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B.A., Minot State Teachers College  
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B.A., Wheaton College  
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B.A., State College of Iowa  
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 B.A., University of Michigan  
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 B.S., University of Michigan  
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 B.A., Taylor University  
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 B.A., University of Toledo  
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 B.A., Brigham Young University  
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 B.A., Ohio State University  
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 B.S., Long Island University  
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 B.A., Hope College  
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 B.S., University of Oregon  
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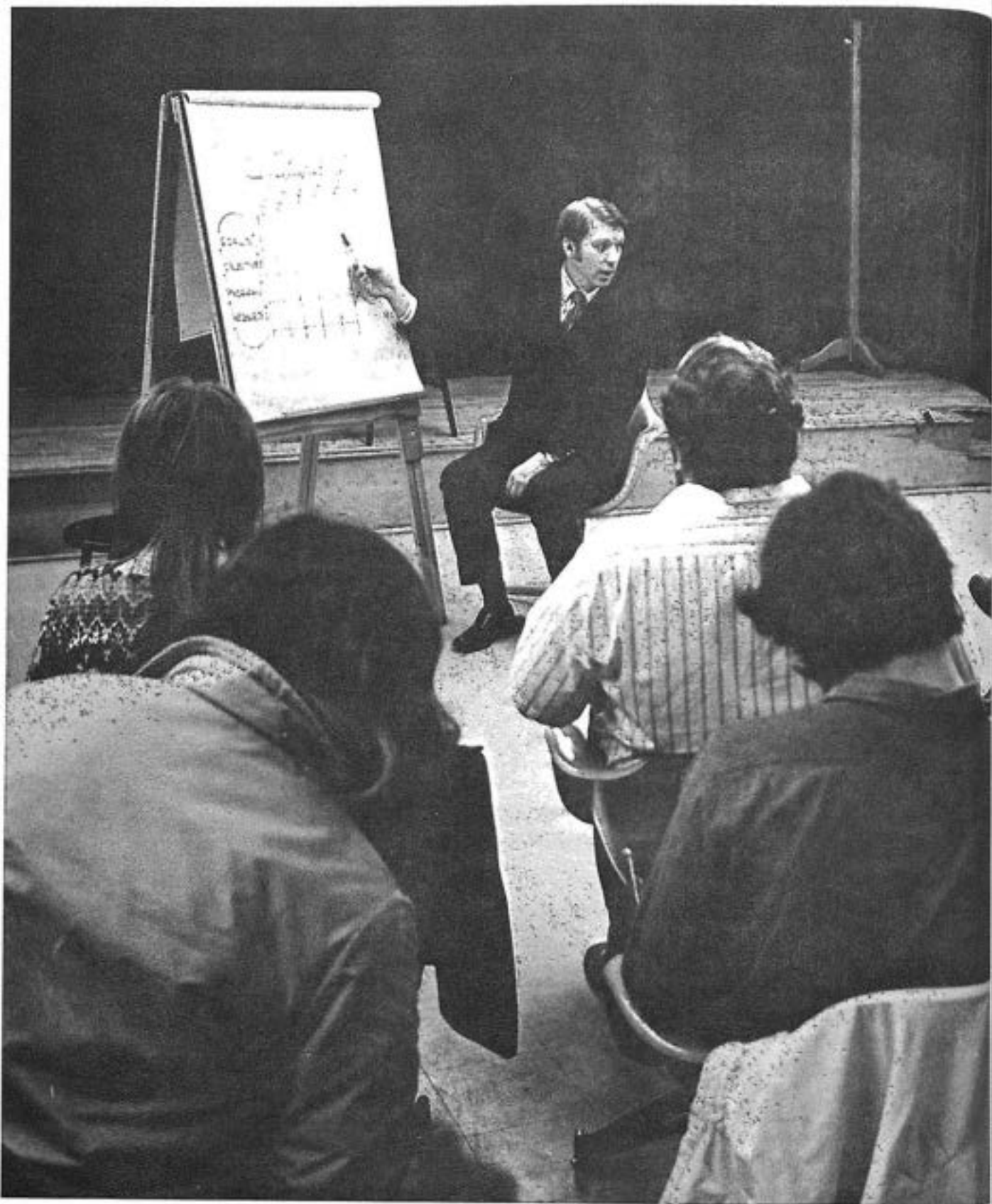
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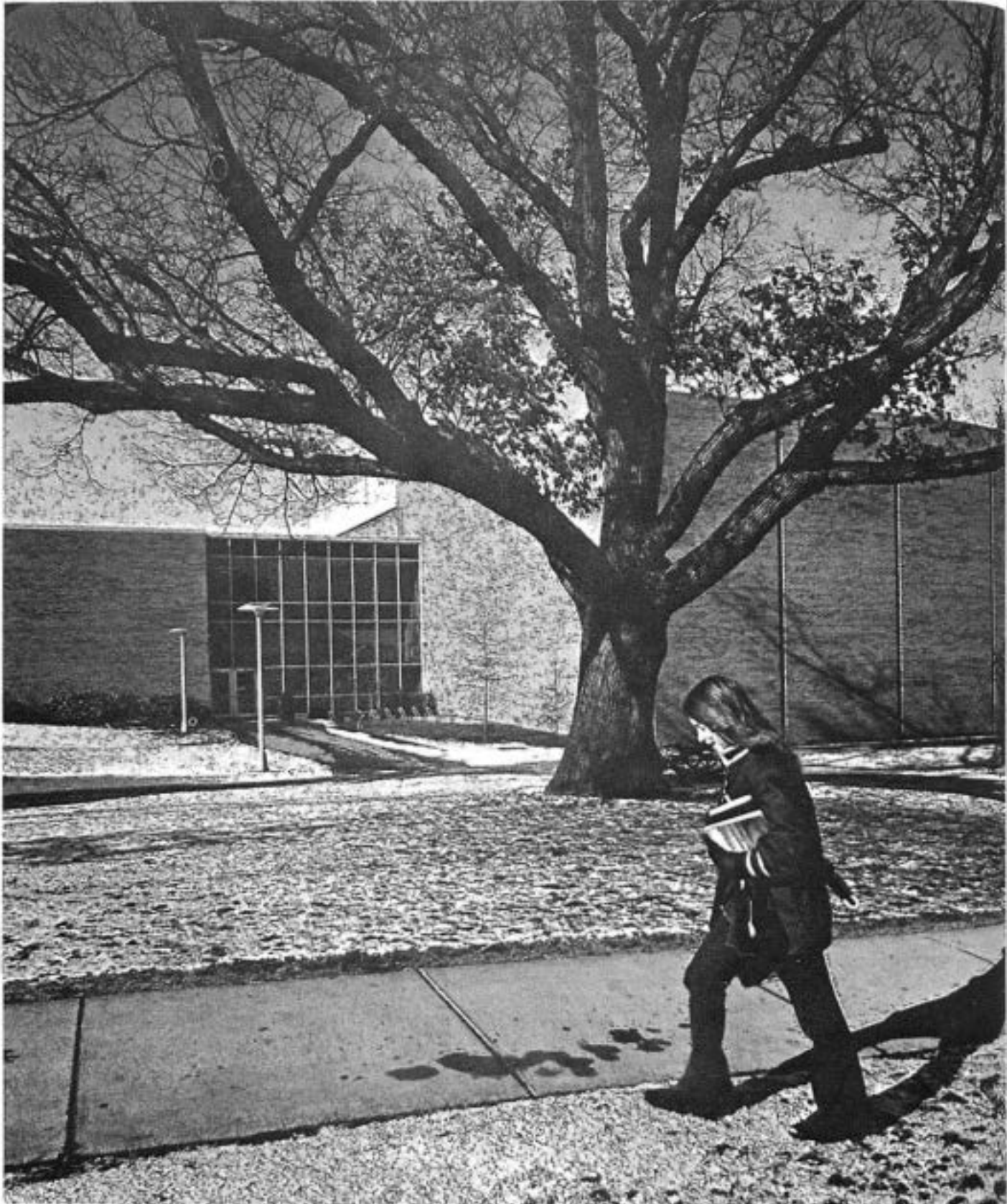
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LECTURER IN SPECIAL EDUCATION

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# STATISTICAL INFORMATION

DIPLOMAS AND CERTIFICATES GRANTED JULY 1, 1971 - JUNE 30, 1972

	Spec.	A.M.	M.S.	M. Bus		A.B.	B.S.	B.Art Ed	B.Bus Ed.	B.Mus Ed.	B.Bus Ad.	B.Fin Art	Provisional Certificates		Total
				Ed.	Ad.								Elem.	Sec.	
August 1971	22	506	51	5	10	32	350	10	2	1	66	5	198	166	1,424
October 1971	8	57	12	1	2	6	19	1	0	0	2	0	25	11	144
December 1972	28	232	26	0	16	57	573	21	16	9	131	16	240	305	1,670
April 1972	15	299	37	6	27	103	888	22	31	13	189	16	372	370	2,388
<b>TOTAL</b>	<b>73</b>	<b>1,094</b>	<b>126</b>	<b>12</b>	<b>55</b>	<b>198</b>	<b>1,830</b>	<b>54</b>	<b>49</b>	<b>23</b>	<b>388</b>	<b>37</b>	<b>835</b>	<b>852</b>	<b>5,626</b>

Deduct, counted twice. . . . .	1,471
Total number of students graduated. . . . .	4,155
Two-Year Business Technician Certificates (Non-Teaching). . . . .	20
Two-Year Industrial Arts Technician Certificates (Non-Teaching). . . . .	6
Total Specialist Degrees. . . . .	73
Total Master Degrees. . . . .	1,287
Total Bachelors Degrees. . . . .	2,579
Total Prov. Teaching Certificates. . . . .	1,687

## RECOMMENDATIONS FOR PERMANENT CERTIFICATES SUBMITTED TO THE STATE DEPARTMENT OF EDUCATION from JULY 1, 1971 to JUNE 30, 1972

	30 Semester Hours				
	Elementary Permanent	Secondary Permanent	Elementary Continuing	Secondary Continuing	Total
July 1971	101	52			153
August 1971	66	45			111
September 1971	60	37	2		99
October 1971	20	19			39
November 1971	28	23	1	3	55
December 1971	14	9	4	2	29
January 1972	15	13	11	4	43
February 1972	23	20	6	7	56
March 1972	30	21	5	13	61
April 1972	21	16	10	8	55
May 1972	38	28	11	10	87
June 1972	50	21	16	22	109
<b>TOTALS</b>	<b>466</b>	<b>304</b>	<b>66</b>	<b>69</b>	<b>905</b>

## ENROLLMENT

Residence Enrollment:	1972-73
Spring Session. . . . .	7,890
Summer Session. . . . .	6,962
Regular year:	
Fall. . . . .	19,107
Winter. . . . .	17,690
Extension Enrollment:	
Fall. . . . .	1,579
Winter. . . . .	1,698

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