

1974

GVSC Undergraduate and Graduate Catalog, 1974-1975

Grand Valley State University

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Grand Valley State Colleges 1974-75

WILLIAM
JAMES
COLLEGE

THOMAS
JEFFERSON
COLLEGE

COLLEGE IV

COLLEGE
OF ARTS &
SCIENCES

F. E.
SEIDMAN
GRADUATE
COLLEGE OF
BUSINESS

grand valley
gives you
a choice

Grand Valley State Colleges 1974-75

Allendale, Michigan 49401
Published May, 1974

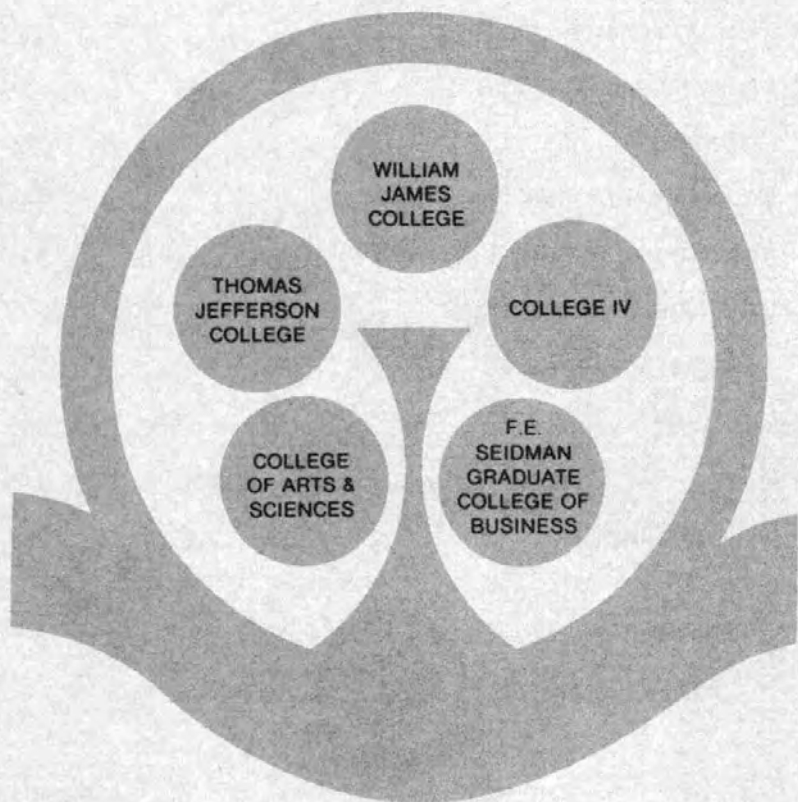


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General Information

The Grand Valley State Colleges was established in 1960 by the State of Michigan with a board of control appointed by the Governor. It is a state-supported, self-governing, coeducational cluster of colleges that awards bachelor of arts, bachelor of science, bachelor of philosophy and master of business administration degrees.

The first students entered Grand Valley in the fall of 1963 and the first class graduated in 1967. The number of students increased from 226 in the first year to 5,917 in the fall term of 1973 while the teaching faculty increased from 15 to 330 full- and part-time members.

Grand Valley has adopted the cluster college approach to education. This allows students the opportunity to study within small academic units or colleges. Currently there are five colleges - four undergraduate and one graduate - the College of Arts and Sciences, Thomas Jefferson College, William James College, College IV and the F.E. Seidman Graduate College of Business. Each college has its own educational philosophy, dean, faculty, grading system and admissions standards. Students of one college may choose courses in another college through cross-registration.

On January 10, 1973, Governor William Milliken signed into law a bill which changed the name of the institution from Grand Valley State College to Grand Valley State Colleges. The new name more accurately describes the character of the institution and its educational concept.

HOW TO USE THIS CATALOG

This catalog is color-coded to help you find information about the Grand Valley State Colleges quickly and easily. The color of the paper on which this paragraph is printed identifies information that is useful to all students. This includes the first three sections of *General Information*, *Admissions and Registration* and *Financial Information*; the sections describing the institutes, since they serve all the colleges; and the last three

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sections, the faculty and staff directories, *Index* and *Academic Calendar*. The four undergraduate colleges, identified by separate colors, are described in the middle sections. You are encouraged to read the first three sections before turning to the sections describing the colleges.

F.E. SEIDMAN GRADUATE COLLEGE OF BUSINESS

Information about the Seidman Graduate College is contained in a separate publication. Copies are available through the Admissions and Seidman Graduate College offices.

ACCREDITATION

In March, 1968, the Grand Valley State Colleges was granted full accreditation by the North Central Association of Colleges and Secondary Schools.

OBJECTIVES

Grand Valley's objectives are to graduate students who are responsible members of modern society; knowledgeable of our western heritage and appreciative of other cultures; conversant with science, concerned with social problems, and respectful of human values; skillful in the process of analysis, able to judge between competing claims and creative in their thinking; alert and fluent in defense of fundamental rights and courageous in their beliefs.

GOVERNMENT OF THE COLLEGE

The Constitution of the State of Michigan places the authority to govern the college in the Board of Control of Grand Valley State Colleges, a body corporate. The Board of Control consists of eight members who are appointed by the Governor with the advice and consent of the Senate. Officers of the board are its chairman, elected from the membership, and its secretary and treasurer, elected from the college staff. The president of the college is elected by the board to be the principal executive officer of the institution and an ex officio member of the board.

The college government system involves faculty, students and administrators in representative bodies which deliberate GVSC issues and recommend resolutions to them to the appropriate executive officers.

CALENDAR

Grand Valley operates year-round with equal 10-week fall,

winter, spring and summer academic quarters. Students may enter at any term and may select any term for their period of long vacation or of interim full-time employment. By continuing studies through all four terms each year, students can accelerate completion of their degree requirements.

Summer Term

The summer term offers the options of the regular 10-week term or two five-week terms. The special intensive courses, five weeks in length, may be of special interest to teachers working toward continuing certification, as well as other regular and visiting students.

COURSE SCHEDULES

Courses listed and described in this catalog are usually offered sometime during the academic year. A schedule of courses offered will be published about five weeks before the start of each term. The summer and fall term schedules are usually available earlier. The schedules will list courses offered, time, location, credits, faculty and, depending on the college, course descriptions. The schedules are available at the Records Office and the offices of the deans.

FACULTY AND STUDENT RELATIONSHIPS

Grand Valley aims always to maintain close scholarly relationships between students and faculty. A liberal education is meaningful not only as it imparts knowledge but as it brings a working familiarity with the most effective ways of gaining knowledge and of expressing ideas. Information can be taught to students by impersonal means, but development of a judicious and inquiring mind requires that faculty and students intimately share in scholarly experiences.

CREDIT LOAD AND CLASS STANDINGS

Class standings are based on the following credit hours completed:

Freshman	0-39
Sophomore	40-84
Junior	85-129
Senior	130 and above

GRADUATION WITH HONORS

Students with exceptional academic records may qualify for Graduation with Honors, which will be indicated on the

student's permanent academic record, on the diploma and in the commencement program. Please refer to the individual colleges for further information.

ELIGIBILITY REQUIREMENTS

Grand Valley is a member of the National Association of Intercollegiate Athletics and students participating in intercollegiate sports must qualify for eligibility on the basis of NAIA rules. Otherwise, students may participate in student organizations without meeting specific eligibility requirements.

DESCRIPTION OF THE CAMPUS

Grand Valley is located on an 876-acre campus 12 miles west of Grand Rapids on highway M-45 near the village of Allendale. The campus is bordered on the east by the Grand River, where the land rises high above the bank and divides into ravines separating the plateaus on which the college buildings are located. Buildings are air-conditioned to assure ideal study and work conditions for the year-round operation.

The first complex of buildings, the Great Lakes Group, consists of three academic buildings — Lake Michigan, Lake Superior and Lake Huron Halls — and a collegiate center, Seidman House.

The Alexander Calder Fine Arts Building is located southwest of Lake Superior Hall. It contains a 490-seat auditorium and a studio theatre in addition to classrooms and offices.

The James H. Zumberge Library, named for Grand Valley's first president, is located north of Lake Superior Hall. Grand Valley's executive offices are located on the lower level of the library.

Directly west of the library is the Campus Center, the focal point for campus activity. The center contains a cafeteria, lounges, activity and game rooms, bookstore, conference center, art galleries, theatre and Campus Activity and Continuing Education offices.

A second academic complex, the Islands Group, has two buildings — Mackinac and Manitou Halls — with classrooms, study areas and faculty offices. Located nearby is the Loutit Hall of Science. An adjoining climatron with a distinctive plexiglass dome provides a controlled environment for plant study.

Three residence halls — Kistler, Copeland and Robinson

Houses — accommodate 900 students and their resident advisers. Nearby is The Commons where resident students take their meals. Further north are the Ravine Apartments, a townhouse-style apartment complex which houses an additional 350 students.

The physical education building — the Field House — is a domed structure providing facilities for basketball, track, tennis, gymnastics and many other activities. Outdoor areas, provide intramural fields, a football stadium and practice fields, a baseball diamond and tennis courts. The winter sports area is located on the northeast section of the campus. Facilities there include a skating rink, toboggan runs, ski slopes with rope tow and an A-frame warming house.

Automobile traffic is routed along a main campus drive to parking lots at the edge of the academic areas. Within the areas of the buildings, travel is by foot along winding paths. The "Little Mac" bridge spans a 70-foot ravine which divides the north and south sections of the campus. Scenic trails follow the network of wooded ravines and reach to the river.

AUTOMOBILES

All persons, including faculty, staff and students, who operate a motor vehicle, including motor cycles or motor scooters, on the GVSC campus must conform to the regulations and requirements with respect to the parking of such motor vehicles on campus property.

Rules and regulations regarding the operation of motor vehicles on the campus are available to all students at registration. Staff and faculty receive the same rules and regulations at the beginning of their employment. Copies of these rules and regulations are available at the Housing and Security Office.

AUDIO-VIDEO MULTI-MEDIA SERVICES

The term "multi-media" aptly describes Grand Valley's varied services in audio-video. As a part of academic studies, students will find the benefits of numerous educational electronic aids available in study carrels, viewing rooms, classrooms, language laboratories, lecture halls and auditoriums.

The full A-V Center television studio facilities of Manitou Hall offer students direct experience as participants in class video taping sessions. Video tapes are also made of many lectures for review, and of students' course work in-the-field.

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Study carrels in the Manitou center provide individual audio tape machines and television sets for study and review of an extensive tape resource collection.

Cable FM and TV programming in the residence halls, public address systems, demonstrations and experience with a multiplicity of A-V equipment, color television via cassette and cable access and informal seminars for students in media and video tape techniques are examples of the constantly expanding A-V services at Grand Valley.

COMPUTER CENTER

The Computer Center at Grand Valley services both the instructional and administrative computing needs of the campus. The computer is used in a wide range of courses. It also serves as an important tool in independent study and research for both students and faculty. Time-sharing and batch modes of operation are available, with terminals spread throughout the campus.

The computer at Grand Valley is a Xerox Sigma 6 with card reader, printer, plotter, magnetic tape, disk drives and communications equipment. The system, installed in 1973, is designed to meet the growing computing needs at Grand Valley.

CONTINUING EDUCATION

The Continuing Education Office was established in August, 1973, to fulfill Grand Valley's commitment that education is a lifelong process available to all who can benefit regardless of age, circumstances of work or family responsibilities. The Continuing Education Office is directly involved in designing and coordinating the evening and off-campus course offerings of Grand Valley and in coordinating programs of the cluster colleges to serve community interests both on and off campus. The office also serves as a liaison with the public in all such programs.

A broad range of Grand Valley courses and programs are presented through the Continuing Education Office. These include:

1. Evening courses on the Allendale campus.
2. Off-campus courses at Muskegon Community College, Holland Public High School, the Grand Rapids Sheldon Complex and Grand Rapids Junior College.
3. The ACCESS Program: an opportunity for older students to participate in daytime courses through special admis-

- ✓ sion and registration procedures.
- 4. Courses via the media such as newspaper and television.
- 5. Community service activities such as special non-credit courses, conferences and institutes.

The office is also set up to provide evening and part-time students with an opportunity to earn a degree through one of the GVSC cluster colleges and to make access to all educational opportunities at Grand Valley as convenient as possible.

LIBRARY SERVICES

The James H. Zumberge Library houses the library collection and services, individual study spaces, group study rooms, typing rooms and special facilities for blind students, for a total of 800 stations.

The library collection consists of more than 185,000 volumes and 1,750 periodical subscriptions. This collection is broadly based, authoritative and up-to-date to support effectively the instructional programs of Grand Valley. The library is a United States Government Depository Library, receiving and providing service for a large number of federal documents. It is also a depository for State of Michigan documents. The library has more than 9,000 reels of microfilm as well as other microfacsimilies with special facilities for their use and reproduction.

All materials in the collection are easily accessible through direct selection from open shelves. For special needs, access is provided to the collections of other libraries. A curriculum materials library including non-print materials is available for the instruction of students preparing to be teachers.

Help and advice in the use of the library, its materials and services are available from professional librarians. Instruction in the use of the library is closely related to regular course work.

WGVC-TV

WGVC-TV, Channel 35 is the public television station serving the West Michigan area. The license for WGVC-TV is held by the GVSC Board of Control.

WGVC-TV focuses on the needs of learners of all ages — televised lessons for in-school students, telecourses for teachers and continuing education for adults. Channel 35 offers a full range of evening programs including drama, concerts, in-depth news of important national and international

issues, leisure-time programs covering a wide range of subjects, plus a variety of outstanding programs for children of all ages. In addition, WGVC-TV produces a number of programs created to meet the needs and interests expressed by the people within the coverage area. Through program exchange with PBS, the national non-commercial network service, the station brings to its audience topical and up-to-the-minute programming from around the nation and throughout the world.

Opportunities are provided for student employment and experience in the full-color broadcast facilities. The offices and studio are located in Manitou Hall.

STUDENT SERVICES

The services described below are in addition to the assistance described in parts of the catalog dealing with admissions, registration, financial aid, employment and housing.

Counseling

The Counseling Center offers a variety of comprehensive services and programs to all students, faculty and the college community. Located in The Commons, the center is a multi-level, multi-service operation in which a large variety of skills and programs are available to answer the changing needs of the college community. In addition to such frequently used services as educational, vocational and academic counseling, the professional staff is also available for psychological services such as personality testing and individual and group counseling. Counselors are also significantly involved in such student development activities as orientation, career development, student retention, testing, residence hall programming and staff training and student development seminars. A more complete listing of activities sponsored by the Counseling Center can be picked up in the office in The Commons.

Health

The Health Service provides primary health care for ambulatory students with acute or minor illnesses. Those students who require more prolonged medical management are referred either to their own physician or to a privately practicing physician in the West Michigan area.

Preventive services such as immunizations or allergy desen-

sitization injection, providing such are recommended by a student's own physician, are available at a nominal fee. Family planning and venereal disease control clinics are available through community agencies on campus.

Placement

The Placement Service assists students in the following four areas:

1. Career Planning - Assistance in the exploration and selection of career goals. Information and help are provided to aid students to grow and become aware of values, interests, abilities, training and how these relate to a career and the world of work.
2. Job Seeking Assistance - Includes reviewing all possible jobs within the student's chosen major field, consideration of alternatives jobs, providing information about the current job market and information concerning various employers and fields of work.
3. Placement (for seniors and alumni) - Includes arranging on-campus interviews with employers, soliciting job openings, employer contacts to "sell" our programs and graduates and personal interviews with candidates to assist with credentials, resumes, applications, etc.
4. Credential Service - Includes collecting a complete, appropriate set of credentials (including letters of recommendation) and dissemination of these to potential employers.
5. Graduate School Assistance - Includes assistance with selection of graduate schools and assistance with application for admission to these schools.

Any student may use these services. Seniors and alumni are asked to register with the service.

Volunteer Programs

The student volunteer program at Grand Valley provides a channel for concerned students who want to work with problems in nearby communities. Some of the programs involve tutoring and social activities with a classroom of inner-city youngsters. The One-to-One Tutoring volunteers work with children in several Grand Rapids schools once a week. Volunteers work with the specially handicapped through the activities of the Educational Studies Institute's GUISE Club. Vol-

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unteers also serve as big brothers and big sisters through programs instituted by community social agencies.

Campus Judiciaries

Standards of conduct are established in order to foster a climate in which the college community can function orderly, realizing that individual rights can be ensured only with the acceptance of group responsibilities.

Individuals attending Grand Valley automatically place themselves under the applicable rules and regulations of the Grand Valley State Colleges. Such regulations, in addition to the judicial procedures which are followed in dealing with alleged offenders, are published in the GVSC Student Handbook. The judicial system is based upon the principle that due process of law will be observed in each case.

STUDENT GOVERNMENT

The All-College Student Interim Governing Committee is a student group which makes policy recommendations for student affairs and community life on the Grand Valley campus. The establishment of an interim student governing committee this year was necessitated by the administrative reorganization of the Grand Valley State Colleges. Each college has one representative on the governing committee. The executive committee is composed of three officers elected from the dissolved Community Council. The primary concern of the interim student governing committee, in addition to making policy recommendations, will be to devise and implement a student governance model and constitution. The new model of governance will be composed of students with representatives coming from each of the academic units on campus. The proposed model combines a small executive committee and a larger student general assembly.

CAMPUS ACTIVITIES

Student Organizations

Registered student organizations are open to all interested students, regardless of race, creed, color or national origin. Details regarding existing organizations, registration procedures, operational policies and common benefits can be obtained from the Campus Activities Office.

Activities and Events

Campus activities programming offers tremendous oppor-

tunities for personal development. Involvement through production as well as participation in a program can contribute a great deal to personal growth.

Current programming includes concerts, lectures, video tapes, films, classical artists and coffee houses. The program also attempts to coordinate all activities on the Grand Valley campus.

Recreation and Intramurals

Recreational and intramural activities are open to all students, faculty and staff. Outdoor facilities include athletic fields, tennis courts, a ski hill with tow rope, toboggan hill and skating rinks. The Grand River and surrounding countryside offers opportunities for canoeing, hiking, cross country skiing and cycling. The Field House provides special areas for indoor track, basketball, tennis, wrestling, volleyball, weight lifting and gymnastics.

Intercollegiate Athletics

Grand Valley offers intercollegiate athletics for men and women. Membership is held in the Great Lakes Intercollegiate Athletic Conference (GLIAC), the National Association of Intercollegiate Athletics (NAIA), the Association of Intercollegiate Athletics for Women (AIAW) and the State of Michigan Association of Intercollegiate Athletics for Women (SMAIAW).

For men, intercollegiate competition is offered in 10 sports - baseball, basketball, crew, cross country, football, golf, indoor and outdoor track, tennis and wrestling. For women, the GLIAC provides intercollegiate competition in basketball, softball, tennis and volleyball.

STUDENT CENTERS

Grand Valley's new Campus Center provides services, facilities and programs to meet the recreational, social and educational needs of the members of the Grand Valley community. The center houses the bookstore, food service (snack bars and catering), the Campus Activities Office, the campus radio station (WGVS), meeting places, an experimental theatre, games room, crafts center, music listening and browsing lounge and TV lounges. The Commons and Seidman House also serve as student centers for relaxation, study and interaction. All three centers serve as focal points for campus life.

CAMPUS MINISTRY

The Campus Ministry Council is Grand Valley's recognized agency for religious work on campus and is open to all denominations. Cooperatively and individually several denominational representatives offer a ministry to the college community as opportunities arise throughout the year. In addition to conducting worship services for students on or near campus, the Council sponsors courses in religion, Bible study groups, speakers, retreats, rap sessions and personal counseling services. Several denominations also sponsor religious groups which engage in both social and religious-oriented activities.



Admissions and Registration

High school and community college students interested in attending the Grand Valley State Colleges are encouraged to become familiar with entrance requirements well in advance of admission. Information about Grand Valley can be obtained through high school and community college counseling offices or from the Admissions Office at Grand Valley.

The college welcomes visits by prospective students and their parents who are interested in learning about its educational programs and in seeing the facilities.

Since Grand Valley operates year-round with fall, winter, spring and summer terms, application may be made for entering at the start of any of the four terms. College IV makes it possible for its students to begin on an individual basis at any time in the academic year.

ADMISSION CATEGORIES

Any person wishing to attend Grand Valley must enter one of the six categories below on their application.

1. College of Arts and Sciences
2. Thomas Jefferson College
3. William James College
4. College IV
5. General Academic Program
6. ACCESS is only an admissions category. It is designed for specific individuals who wish to pursue college level studies but who may not wish to choose a college at this time or who may be attending Grand Valley for only a short period. Persons enrolling under this category may choose courses in any of the above colleges. Guest and high school advanced placement applicants should apply for course work at Grand Valley on a separate application obtainable from Grand Valley's Admissions Office.

APPLICATION PROCEDURE

The four undergraduate colleges (College of Arts and Sciences, Thomas Jefferson College, William James College and College IV) and the two additional admission categories all require the common GVSC application form.

Every accepted applicant is required before registering to submit a report of a health examination by a physician, and the applicant may be disqualified for failure to do so or because of a disability or illness which would make attendance at the college harmful to the student or others.

FOR STUDENTS ENTERING DIRECTLY FROM HIGH SCHOOL (FRESHMEN)

High school students may obtain application forms for Grand Valley from their principals or counselors or from the GVSC Admissions Office. An applicant should complete and sign the applicable parts of the form and deliver it, with the application fee (unless application is to ACCESS) to the principal or counselor at his or her high school. An official of the high school will then complete the balance of the application and mail it with the applicant's remittance and high school transcript to the GVSC Admissions Office. A non-refundable \$15 application fee is required unless the application is to the ACCESS category. Application should be made in the student's senior year of high school.

Bases for Admission

Grand Valley's four colleges select for regular admission after high school graduation those applicants who are judged to have reasonable prospects of successfully completing their respective four-year academic programs.

All applicants for admission as freshmen, with the exception of those who have been out of high school for three years or more, will be required to submit the American College Test (ACT) scores prior to their enrollment. Also helpful is the recommendation of the applicant's high school principal or counselor.

Specifically the bases for admission to each college as a freshmen is as follows:

College of Arts and Sciences

Applicants are normally admitted to the College of Arts and Sciences if they have achieved a 2.5 grade point average in

their college preparatory course of studies. These studies must include three years of English, three years of social studies and a combination of three years of science and mathematics. Students meeting the above college preparatory studies but with a grade point average less than a 2.5 but more than a 2.1 may be required to submit standardized test scores, recommendations and, in some instances, to personal interviews prior to an admission decision. Students with a grade point average below 2.1 are not normally admitted. At the Admissions Office discretion or through the applicant's wishes his or her credentials can be submitted to the College of Arts and Sciences Admissions Committee where they will be reviewed and a decision rendered.

Thomas Jefferson College

Thomas Jefferson College seeks to admit students who exhibit such qualities as intellectual ambition, breadth of interest, personal initiative and the responsible use of freedom, a sense of creativity and curiosity, as well as basic academic capabilities.

All admissions decisions are made by the TJC Admissions Committee. The committee, while taking into consideration the applicant's grade point average and test scores, is vitally concerned with the criteria in the above paragraph. Applicants usually provide the committee with a personal essay as a part of their application for admission.

William James College

Students who are graduates from an accredited high school and who have maintained a "C" or 2.0 average in a college preparatory program consisting of three years of English, three years of social studies and a combination of three years of science and mathematics will normally be admitted.

William James College further encourages applications from individuals who have diverse backgrounds, have been out of high school for several years or have strong career interests. Applicants of this type may be admitted through the William James College Admissions Committee after having submitted a personal essay.

College IV

College IV seeks to offer appropriate educational experiences to persons with a wide range of interests. Therefore, the admission requirements have been kept to a minimum. The normal criterion for admission is graduation from an accredited

high school with average grades. However, other applicants may be considered on the basis of letters of recommendation, a personal statement of interest and intent, standardized tests, other supporting materials and a personal interview to determine the potential for achievement in college.

FOR STUDENTS ENTERING FROM OTHER COLLEGES (TRANSFERS)

Students from other colleges and universities may apply for admission to Grand Valley on the undergraduate application form. The completed form, along with all official transcripts of the applicant's collegiate records should be mailed to the Admissions Office. A non-refundable \$15 application fee is required unless the application is to ACCESS.

Application should be made well in advance of the applicant's intended term of entry.

Bases for Admission

The Grand Valley State Colleges considers for regular admission on the basis of the applicant's prior collegiate experience if:

1. The applicant is attending or has attended another collegiate institution that grants the bachelors degree or the associate degree and that is accredited or is otherwise recognized for acceptance of transfer credits by Grand Valley.
2. The applicant is eligible to re-enroll in the institution from which he or she is transferring.

Specifically the bases for admission to each college as a transfer is as follows:

College of Arts and Sciences

Applicants to the College of Arts and Sciences must have a 2.0 grade point average, a minimum of 30 semester hours or 45 term hours, be in good standing at their previous institution and be eligible to return. Applicants with less than the equivalent of 30 semester hours are required to submit their high school transcripts.

Students not meeting the above criteria may request that their credentials be forwarded to the College of Arts and Sciences Admissions Committee.

Thomas Jefferson College

Thomas Jefferson College seeks to admit students who exhibit

such qualities as intellectual ambition, breadth of interest, personal initiative and the responsible use of freedom, a sense of creativity and curiosity, as well as basic academic capabilities.

All admissions decisions are made by the TJC Admissions Committee. The committee, while taking into consideration the applicants grade point average and test scores, is vitally concerned with the criteria in the above paragraph. Applicants usually provide the committee with a personal essay as a part of their application for admission.

William James College

Students who have completed 30 semester hours or 45 term hours of credit at an accredited two-year or four-year institution and have maintained average or above average grades will normally be admitted to William James.

College IV

College IV seeks to offer appropriate educational experiences to persons with a wide range of interests. Therefore, the admission requirements have been kept to a minimum. The normal criterion for admission is to be in good standing at the institution last attended. However, other applicants may be considered on the basis of letters of recommendation, a personal statement of interest and intent, standardized tests, other supporting materials and a personal interview to determine the potential for achievement in college.

TRANSFER CREDIT

Transfer credit toward Grand Valley degree requirements will be granted for all courses consistent with such requirements that have been completed at another acceptable collegiate institution with a passing grade. "D" credits will transfer when the overall average of all prior work attempted as calculated by Grand Valley is "C" average or better.

Recognition for placement purposes will be given to the same courses insofar as they are substantially the equivalent of prerequisites to specific advanced courses.

Grand Valley also will accept up to 90 term hours of transfer credits earned through correspondence study in college-level courses offered by accredited colleges and universities, subject to the usual limitations affecting the acceptance of transfer credits.

Total acceptable course credits earned in another institution are recorded on the student's permanent academic record. These credits will apply toward Grand Valley degree requirements, but grades are not transferred. Only grades and grade points earned at Grand Valley appear on the academic record.

Regardless of the number of transfer credits allowed, the last 45 hours toward a degree must be earned at Grand Valley. In addition, students transferring from junior or community colleges should be aware that a minimum of 85 term hours applied toward a Grand Valley degree must be earned in a senior institution.

Requests for transfer of credit must be based on official transcripts of the student's records at previously attended colleges. Final assignment of credits and final determination of placement may be deferred for an evaluation period of a term or more in particular cases.

Students who have earned an associate of arts or associate of science degree from an accredited public junior or community college in Michigan may enter a Grand Valley cluster college with all freshmen and sophomore distribution (general education) requirements waived. This policy is only applicable to Grand Valley colleges where there are such requirements.

FOR FOREIGN STUDENTS

1. Applicants seeking admission to Grand Valley State Colleges should apply as early as possible in advance of the term they wish to attend, since time is needed to accurately evaluate the academic records and to issue the necessary student visa forms.
2. It is required that applicants submit original or certified true copies of all certificates and grade reports received upon completion of secondary and post-secondary work. These credentials must include a list of the subjects which were studied, the minimum passing grade and the maximum possible grade in each subject and the grade which was earned in each subject on each examination. If these credentials are not in English, they should be accompanied by English translations.
3. Proficiency in English is required. All applicants whose native language is not English should take the TOEFL examination (Test of English as a Foreign Language). If English training is required, applicants will be notified to

attend an English language center. After the applicants achieve the required score on TOEFL, or satisfactorily complete training at an English language center, they will be considered for admission. Successful class work at an accredited institution of higher education will satisfy the requirement to establish proficiency in English.

4. Before admission, applicants must arrange to have in United States dollars at least \$3,500 for each academic year to cover expenses. Applicants should not plan on employment in the United States for meeting educational expenses as the immigration laws governing foreign students in the United States generally prevent employment. Also, foreign students are required to carry a full schedule of courses which leaves little time for outside employment. There are some scholarships which well-qualified students may be awarded.
5. All foreign students are required to carry an approved medical insurance program to cover major medical expenses *before* they are permitted to register. Students who do not have insurance through a sponsor can obtain the required insurance before or just after they arrive at Grand Valley State Colleges.

CREDIT BY EXAMINATION

College Entrance Examination Board

Placement with college credit can be received through a score of three or higher in an examination offered under the College Entrance Examination Board Advanced Placement Program.

USAFI

Grand Valley will accept the credit recommendations of the American Council on Education with respect to the college-level USAFI courses and USAFI college subject matter examination. Credits earned in this manner may be applied toward Grand Valley degree requirements.

College Level Examination Program (CLEP)

The Grand Valley State Colleges will grant credit for appropriate subject examination (not general examinations) when the scores presented are at or above the level recommended by the Council on College-Level Examinations.

SOCIAL REVIEW BOARD

Rules for GVSC students are printed in the Student Handbook

available upon request from the Admissions Office; and past acts contrary to such rules or public laws which substantially threaten the rights of others, or college discipline, college functions or college order may require submission of materials and/or presence before a review board prior to a decision on admission.

RESIDENCY REQUIREMENT

Students expecting to receive a degree from the Grand Valley State Colleges must complete at least the final 45 term credit hours from Grand Valley.

REGISTRATION

New Students

Course selection and payment of tuition and fees is done at the orientation program. The schedule for the orientation program is mailed to all new students prior to their intended term of entry.

Returning Students

Returning students will receive registration notification during their current term of attendance.

Re-entering Students—All Terms

Re-entering students will be notified by mail of the period for course selection and payment of tuition.

Late Registration

Registration after the periods specified above will be allowed only with the payment of a late fee.*

ORIENTATION

Attendance at an orientation program is required of all entering students prior to their first term of attendance.* The purpose of the program is to welcome all new students, to acquaint them with the facilities, personnel and other students at the college, and to permit college personnel to come to know the student better. Important policies and procedures are reviewed and students are assisted through individual and group sessions in planning a program of studies for their first term.

Orientation dates are announced in advance of the beginning of each term.

*This regulation does not apply to College IV students.

Financial Information

Grand Valley is a Michigan public institution and annual State appropriations of public funds for its operation help substantially to reduce the costs borne by students. In addition, Grand Valley and the State of Michigan make financial aid available to assure that qualified students are not denied a college education because of inadequate financial means.

Tuition and fees include the Student Centers' Fee (\$1.20 per credit hour), for debt service, operations, remodeling or expansion; the Capital Outlay Reserve Fee (28 cents per credit hour), to finance present and future capital projects that benefit the college community; and the Student Activities Fee (21 cents per credit hour), to support programs designed to meet student interests and enhance the quality of campus life.

TUITION

Undergraduate tuition at Grand Valley for the 1974-75 academic year is \$13 per credit hour for Michigan residents and \$30.50 per credit hour for out-of-state residents.

As a Michigan resident, a student would pay \$195 for a term consisting of 15 credit hours and \$585 for an academic year consisting of three 15-credit-hour terms. For the same number of credit hours, an out-of-state student would pay \$457.50 per term and \$1,372.50 per academic year.

The tuition rate for the 1974-75 academic year in the F. E. Seidman Graduate College of Business is \$16 per credit hour for Michigan residents and \$38 per credit hour for out-of-state residents.

Tuition for Extension Courses

Tuition for extension courses is \$23 per credit hour and is assessed separately from any on-campus work that may be taken concurrently.

Tuition and Fees of Special Students

Students who enroll in courses other than for credits toward a degree at Grand Valley or who attend classes only as auditors are required to pay tuition and fees at the same rates as other

students. Rates for courses in special programs offered by the college not for credit and apart from its regular college curriculum are published with the announcements of such programs.

Late Registration Fee

Late registration in the first three days of classes of a term will be allowed only after payment of a \$20 late fee.

Transcript Fee

One copy of a student's transcript will be made available at graduation without charge. A fee of \$1 will be charged for other transcripts issued.

Other Fees

Additional fees in particular courses may be required to meet costs of field trips and of using non-college facilities or to meet costs of instructional supplies and materials furnished a student for course work. Fees may also be charged to cover special costs of orientation programs and of administering standardized tests.

Changes in Tuition and Fees

The stated rates of tuition and fees are those in effect at time of publication of this catalog. They are subject to adjustment at any time by the GVSC Board of Control.

Determination of Residence

1. Since normally students come to Grand Valley State Colleges for the primary or sole purpose of attending the Colleges rather than to establish a domicile in Michigan, those who enroll at Grand Valley as non-residents shall continue to be so classified throughout their attendance as students unless and until they demonstrate that their previous domicile has been abandoned and a Michigan domicile established.
2. No students shall be eligible for reclassification as residents unless they shall be domiciled in Michigan and have resided in Michigan continuously for not less than six months immediately preceding the first day of classes of the term for which reclassification is sought.
3. For purposes of these regulations, resident students are defined as students domiciled in the State of Michigan. Non-resident students are defined as those whose

domicile is elsewhere. Students shall not be considered domiciled in Michigan unless they are in continuous physical residence in this state and intend to make Michigan their permanent home, not only while in attendance at Grand Valley but indefinitely thereafter as well, and have no domicile or intent to be domiciled elsewhere.

4. Each individual case must be determined on its own particular facts. The following facts and circumstances, although not necessarily conclusive evidence of domicile, have probative value thereon in support of a claim for residence classification:
 - a. Continuous presence in Michigan during periods when not enrolled as a student.
 - b. Reliance upon Michigan sources for financial support.
 - c. Domicile in Michigan of family, guardian or other relatives or persons legally responsible for the student.
 - d. Former domicile in the state and maintenance of significant connections therein while absent.
 - e. Ownership of a home in Michigan.
 - f. Admission to a licensed practicing profession in Michigan.
 - g. Long term military commitments in Michigan.
 - h. Commitments to further education in Michigan indicating an intent to stay here permanently.
 - i. Acceptance of an offer of permanent employment in Michigan.

Other factors indicating an intent to make Michigan the student's domicile will be considered in classifying a student.

5. The following facts and circumstances, standing alone, shall not constitute sufficient evidence of domicile to effect classification of a student as a resident under these regulations:
 - a. Voting or registration for voting.
 - b. Employment in any position normally filled by a student.
 - c. The lease of living quarters.
 - d. A statement of intention to acquire a domicile in Michigan.
 - e. Domicile in Michigan of student's spouse.
 - f. Automobile registration.
 - g. Other public records (e.g., birth and marriage records).

6. Aliens who have been lawfully admitted for permanent residence in the United States shall not, by reason of that status alone, be disqualified from classification as residents provided, however, that aliens who are present in the United States on a temporary or student visa shall not be eligible for classification as residents.
7. Prior to a student's first registration, the regulations shall be administered by the Admissions Office. Thereafter, they shall be administered by the assistant registrar. The regulations shall be administered in accordance with the following residence review procedures:
 - a. It shall be the responsibility of the student to register under the proper residence classification, to advise the Admissions Office or assistant registrar (whichever is appropriate) of possible changes in residence and to furnish all requested information pertinent thereto.
 - b. Applications for reclassification shall be filed not later than 10 calendar days following the first day of classes of the term for which such reclassification is sought. Such application shall be filed with the appropriate office (see "g" below for address), and shall set forth in writing a complete statement of the facts upon which it is based, together with affidavits or other supporting documentary evidence. Failure to timely file such an application shall constitute a waiver of all claims to reclassification or rebates for such term.
 - c. Any student may appeal the decision of the Admissions Office or assistant registrar made pursuant to paragraph "b", above, by filing with the Registrar's Office a written notice of appeal within 10 calendar days after notices of such decision was given, either in person, by mail, or by posting same in a conspicuous place at the Registrar's Office on the second floor of Lake Huron Hall. Failure to timely comply with this paragraph "c" shall constitute a waiver of all claims to reclassification or rebates for the applicable term or terms.
 - d. Any student may appeal the decision of the Registrar's Office pursuant to paragraph "c", above, by filing with the Residency Appeal Board a written notice within 10 calendar days after notice of such decision was given, either in person, by mail or by posting as in paragraph "c" above. Failure to timely comply with this paragraph "d" shall constitute a waiver of all claims to reclassification or rebates for the applicable term or

terms. Membership on the Residency Appeal Board shall include one vice president of the Colleges.

- e. Reclassification, whether pursuant to paragraph "b", "c", or "d" above, shall be effective for the term in which the application therefore was timely filed in accordance with paragraph "b" and for each term thereafter so long as the circumstances upon which the reclassification was based shall remain unchanged. Appropriate refunds shall be made within a reasonable time following such reclassification.
- f. In each such reclassification application or appeal step, the student shall attend a personal conference with a representative of such office (or before such appeal board) after which a decision shall be made by such representative (or board), based on the evidence.
- g. Classification or reclassification based upon materially erroneous, false or misleading statements or omissions by or in support of the applicant shall be set aside retroactively upon the discovery of the erroneous nature of such statements.
- h. Inquiries and appeals should be addressed to (whichever is appropriate):

Admissions Office, Assistant Registrar,
Registrar, or Residency Appeal Board c/o Registrar

Grand Valley State Colleges
Allendale, Michigan 49401

Refund Policy—On-Campus Tuition

Students who change registration at the Records Office by withdrawing from Grand Valley or by withdrawing from a course, may qualify for a refund. The refund depends on the date of receipt of the withdrawal form in the Records Office. If action is taken:

1. Before the first day of classes of the term, the refund is 100 percent.
2. Within the first two calendar weeks of scheduled classes, the refund is 75 percent.
3. If action is later, no refund will be made.
4. If a course does not start within the first calendar week of the normal quarter, the dates for refund will be based upon the date of the first class meeting rather than the first day of classes of the term.

No financial aid awarded for tuition and fees will be refunded, and the percentage of refund applies only to the student's share of tuition and fees paid.

If a change in registration is due solely to cancellation by the college of a course for which a student registered or because of a determination by the college that the student was not entitled to register, the refund will be made in the full amount of the student's share.

Appeals because of extraordinary circumstances will be reviewed by the Tuition Appeals Committee.

Other Expenses

In addition to tuition and fees, students have the expenses of books and supplies; transportation; meals at the campus; room and board, if they are not living at home; membership fees to student organizations that students plan to join; admissions in some cases to college social and cultural events; medical needs; and, if desired, student health and accident insurance.

Books and Supplies

Books and supplies to be purchased by students for each of their courses, usually at time of registration, are sold in the college-operated bookstore on the campus. Average bookstore purchases for a full-time student are \$50 per quarter.

Transportation

Buses and private automobiles serve to bring commuting students to and from the campus each day of classes. Many students have their own automobiles for this purpose, and they often form car pools with other drivers or those without transportation. As commuting distances and riding plans vary, so will transportation expenses.

Health Insurance and Services

Health and accident insurance coverage is available to students at an annual premium of \$31 for single students and \$72 for married students (subject to change). Certain health services are provided by GVSC to students without charge, but students assume the costs not covered by insurance of prescription drugs, special dressings, physician's consultations, ambulance services and hospital care.

Summaries of Estimated Expenses for an Academic Year of Three Terms*

For a commuting student:

a.	Tuition and fees	\$ 585
b.	Books and supplies	150
c.	Transportation	500
d.	Meals on campus	165
e.	Health insurance and services	35
f.	Fees for organizations and events	30
	Total	1,465

For student in a residence hall:

a.	Tuition and fees	\$ 585
	(out-of-state)	1,372
b.	Books and supplies	150
c.	Travel	200
d.	Room and board	1,239
e.	Health insurance and services	35
f.	Fees for organizations and events	30
	Total	2,239
	(out-of-state)	3,026

The above figures do not include miscellaneous personal expenses, which will vary markedly from student to student.

WHERE STUDENTS LIVE

Commuters to the Campus

The college serves many commuting students whose homes are in nearby communities. It encourages these students to make each day on campus a full one by providing ample study areas with access to library and audio-video materials. Commuters may take food service at the college and make use of the collegiate centers and other recreational facilities. They can all become deeply involved in student life on campus.

College Residence Halls

Three residence halls on campus provide accommodation for 900 students. Food service for all meals is available at The Commons, located nearby.

The halls are built alongside a scenic wooded ravine, and they curve gracefully to follow the lines of the ravine edge. Two students only are assigned to a room.

*Tuition, fees and room and board charges are determined by the GVSC Board of Control.

A college staff member living in each residence hall and student assistants on each floor help to arrange educational, cultural, and recreational programs for the residents and to maintain conditions of pleasant living and good scholarship.

Grand Valley offers three room-and-board plans for students who reside in the residence halls.*

Plan 1: \$413 per term (\$1,239 per year) for 20 meals per week (breakfast, lunch and dinner six days per week; brunch and dinner on Sunday).

Plan 2: \$400 per term (\$1,200 per year) for 15 meals per week (breakfast, lunch and dinner Monday through Friday.)

Plan 3: \$388 per term (\$1,164 per year) for 10 meals per week (lunch and dinner Monday through Friday).

NOTE: Residence hall housing arrangements are to be made with the Housing Office following admission to Grand Valley. Admitted students are responsible for making their own housing arrangements. Admission to the GVSC does not guarantee housing.

College Apartments

The on-campus Ravine Apartments are designed for single upperclass students. The new apartment complex consists of 76 two-bedroom units designed for four students and 23 one-bedroom and efficiency units designed for two students.

The townhouse apartments are arranged into a village-style cluster of units around a community building and are built along a scenic campus ravine.

Rates for the 1974-75 academic year are:*

\$203 per person per term	Two-bedroom Apartment
\$266 per person per term	One-bedroom Apartment
\$234 per person per term or	Efficiency Apartment
\$351 per term for single occupancy	

Applications and leasing information may be obtained from the Housing Office. Students are responsible for making their own housing arrangements.

*These rates are subject to change by the GVSC Board of Control. Different rate schedules are available summer term for the residence halls and Ravine Apartments. Call or visit the Housing Office for current information.

HOUSING RESIDENCY REQUIREMENTS

First Year Students

First year students with no previous college experience, unmarried and not living with parents, guardians, or relatives are required to live in college residence halls.

- a. Freshmen who wish to obtain a waiver from the college housing residency requirements may apply for permission to live off campus by writing the Housing Office. All requests should be submitted 30 days prior to the first term of entry.
- b. Students under a housing contract may apply for a contract release to the director of residence life. Individual circumstances presented by the student will be considered; however, it is understood that few releases will be granted in the academic year.

Sophomore and Upperclass Students (Residence Halls)

After consultation with the Admissions Office, the director of residence life will set aside a projected number of spaces for freshmen. Remaining space in the residence halls will be available to sophomore and upperclass students who wish to continue on-campus residency. The method of selecting sophomore and upper-class students for the residence halls will be determined by the director of residence life after consultations with appropriate student all-college and residence hall governing groups.

OTHER HOUSING

Other living accommodations are available near the campus for rental to students who have completed the one year of required on-campus residency. In conjunction with local householders, the Housing Office has prepared lists of available off-campus housing. GVSC does not involve itself in negotiations, rental agreements, or contracts with the owners of these dwellings, nor will GVSC inspect or arrange off-campus accommodations. This listing is provided as a service to students and local householders. Accommodations listed vary widely; it is suggested that the owner be contacted directly if there are any questions.

FINANCIAL AID

At Grand Valley financial aid includes scholarships, grants, loans, and student employment. These aids are usually com-

bined in a "package" to offer students flexibility in meeting their educational costs. Most aid is granted to students who can demonstrate financial need. Students who wish to apply for financial assistance should review the following types of financial aid and follow the application procedures outlined below.

APPLICATION PROCEDURE

1. Applicants must apply and be acceptable for admission to Grand Valley State Colleges.
2. Applicants must complete a financial aid application which is contained with the admissions application.
3. Applicants must have their parents submit a Parents Confidential Statement (P.C.S.) to the College Scholarship Service or a Family Financial Statement (F.F.S.) to the American College Testing Program each year. These forms are available from high school counselors or by writing the Financial Aids Office. Single, self-supporting applicants 24 and older and married applicants can submit the student financial statement available from the Financial Aids Office in lieu of the P.C.S. or F.F.S.
4. Financial aid applicants should submit P.C.S. or F.F.S. forms to the appropriate agency before February 15 and the GVSC financial aid application to the Financial Aids Office before April 1. Application forms received after this date will be considered for aid depending on the availability of funds.



**College
of
Arts
and
Sciences**



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The College of Arts and Sciences (CAS) is an autonomous degree-granting college within Grand Valley State Colleges. It is committed to providing academic courses, curricula and programs which best serve the needs of its students, the college and the community. It awards the bachelor of arts (B.A.) and the bachelor of science (B.S.) degrees.

CAS is committed to excellence in teaching. Students are instructed by faculty members of academic rank who, by virtue of their ability, preparation and experience, determine content of courses, curricula and programs. Teaching excellence is the most important factor in retention and promotion of faculty.

The College of Arts and Sciences offers a wide range and variety of courses, curricula and programs that are academically sound as determined by the appropriate professional disciplines. The college is committed to a thorough and continuing review and improvement of its courses, curricula, programs, instructional methods and commitments so that it may maintain a consistent educational program of highest quality incorporating the best of new information and ideas and methods which have served well in the past.

CAS formulates policy through representative bodies composed, according to a prescribed formula for membership, of the administration, faculty and students. These representative bodies determine the general governing policy, establish degree requirements, evaluate the curriculum and propose new academic programs. CAS faculty and students are also represented on all-college councils.

CAS is committed to a curricular format characterized chiefly by courses offered in departments representing the principal branches or fields of learning; yet, where thought appropriate, interdisciplinary study is provided. CAS further includes the School of Business, the School of Health Sciences and the School of Public Service.

The college offers varied approaches to instruction. Lectures and discussions or laboratories are a part of most courses, tutorial sessions or independent study a part of many and internships or practicums a part of still others. Certain courses include study of special topics designed to suit a student's particular needs and interests.

Thorough and appropriate academic preparation is provided for the students. All students fulfill requirements in distribution courses. These courses introduce all students to several basic

disciplines and offer them an opportunity to further their general education. Students may pursue these areas by electing work outside their major field of interest.

Major programs provide students with a general knowledge of a whole field and with the basic skills necessary for further study in that field. Requirements in major programs are not so specialized or demanding that a student is prevented from obtaining a liberal and general education.

CAS seeks to develop in its students competence in reading and composition and the ability to think logically and communicate effectively. Course requirements and instruction in all departments require demonstration of these competencies and abilities.

Achievement in each course, curriculum or program is evaluated by faculty. Evaluations are made according to a five-point scale except where there is a pass-fail option. These evaluations are based on the quality of class work, examinations and outside-class assignments.

Students in the college are personally advised by faculty members. Individual academic advice is provided generally for beginning students and within each department or school for majors. All teaching faculty perform this service.

DEGREE OPPORTUNITIES

Students in the College of Arts and Sciences can decide to become candidates for the bachelor of arts (B.A.) degree or the bachelor of science (B.S.) degree.

Following are the major and minor programs available in the College of Arts and Sciences.

	Major Programs		Minor
	B.A. Degree	B.S. Degree	Program
Anthropology	x	x	x
Art	x	x	x
Behavioral Sciences	x	x	
Biology	x	x	x
Biopsychology		x	
Business Administration		x	
Chemistry	x	x	x
Combined Program in Engineering		x	
Community Affairs		x	x
Criminal Justice		x	x
Earth Science		x	x
Economics	x	x	x

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English Language and Literature	x		x
Environmental Sciences		x	x
Foreign Language and Literature			
French	x		x
German	x		x
Russian			x
Spanish	x		x
Geology		x	
Group Major in Social Studies	x	x	
Group Science	x	x	x
Health Sciences		x	x
History	x	x	x
History of Science			x
Latin American Studies	x		x
Mathematics	x	x	x
Medical Audiovisual Technology		x	
Music	x	x	x
Nursing		x	
Philosophy	x		x
Physical Education		x	x
Physics		x	x
Political Science	x	x	x
Preprofessional	x	x	
Psychology	x	x	x
Public Administration			x
Public Service		x	x
Recreation			x
Sociology	x	x	x
Theatre	x	x	x
Community Affairs		x	x
Women's Studies			x

ELIGIBILITY REQUIREMENTS FOR STUDENT ORGANIZATIONS

Students may participate in student organizations without meeting specific eligibility requirements. However, students on academic probation may not seek or hold office in any organization or take part in any co-curricular activity to which they have been appointed or elected as representative of the college.

It is expected that candidates, officers and advisers will clear a candidate's academic record with the student activities coordinator prior to nomination, election or appointment.

ACADEMIC POLICY INFORMATION

FOR FIRST-TIME STUDENTS IN CAS

Student who enroll in the College of Arts and Sciences as first-time students must complete all CAS degree requirements in the College of Arts and Sciences. This applies to all distribution and major requirements. This also applies to course requirements for those students who have elected a minor. Students may enroll in courses offered by other academic units at Grand Valley as electives; these courses may apply toward major or minor requirements only if the major or minor department has given prior approval or has determined that the course is an equivalent.

FOR STUDENTS TRANSFERRING TO CAS

Students who transfer into the College of Arts and Sciences from another GVSC college or from a college other than GVSC must earn a minimum of 45 term credit hours in the College of Arts and Sciences. Transfer credit toward CAS degree requirements will be granted for all courses deemed equivalent. Equivalency for distribution requirements will be evaluated by the appropriate departments; equivalency for major or minor requirements will be evaluated by major or minor departments.

General and professional distribution requirements will be considered as complete for those students who enter the College of Arts and Sciences with an associate of arts degree or an associate of science degree from any Michigan public junior or community college.

REQUIREMENTS FOR GRADUATION

In order to qualify for a B.A. or B.S. degree, a student in the College of Arts and Sciences must have earned a minimum of 180 hours of credit with an overall CAS grade point average of at least 2.00 and at least a 2.00 grade point average in courses included in the major program.

Only those courses designated by the department as fulfilling major/minor requirements will be counted toward the major or minor program.

Although every assistance will be offered by faculty advisers and members of the counseling staff, it is the student's own responsibility to ensure the completion of a program of studies that fulfills all the requirements for graduation.

Requirements for the B.A. Degree

In order to complete the requirements for graduation with the B.A. degree, the following minimum course requirements must be met:

	Hours	
	Structured Program	General Program
Distribution courses	70	55
Foreign language	20	20
Major program	45*	45*
Cognate studies & electives	45**	60**
Total	<u>180</u>	<u>180</u>

Requirements for the B.S. Degree

In order to complete the requirements for graduation with the B.S. degree, the following minimum course requirements must be met:

	Hours		
	Structured Program	General Program	Professional Program
Distribution courses	70	55	40
Major program	45*	45*	75***
Cognate Studies & electives	65**	80**	65
Total	<u>180</u>	<u>180</u>	<u>180</u>

Residency Requirements

Regardless of the number of transfer credits allowed, the last 45 hours toward a degree must be earned in CAS or in CAS programs and courses taught off-campus by CAS faculty leading to a CAS degree. In addition, students transferring from junior or community colleges should be aware that a minimum of 85 credits applied toward a CAS degree must be earned in senior institutions.

*In some cases the requirements for a major program may exceed 45 hours, and the number of hours of cognate and elective studies are correspondingly reduced.

**Candidates for teacher certification must complete the teacher preparation program requirements and ordinarily reduce their number of elective courses.

***The maximum number.

DISTRIBUTION PROGRAM REQUIREMENTS

The College of Arts and Sciences offers three distribution options to the student: structured, general and professional. The student should check the department listings to see which of these options is offered.

Each CAS distribution option requires that a student take a five-hour writing skills course as early as possible. These writing skills courses are: **English 100, 102, 104, and World Literature 101**. The writing skills course may not be counted towards the humanities distribution requirement.

The student must select distribution courses from the four academic groups:

Arts: art, foreign language skill courses, music, theatre and physical education.*

Humanities: history, history of science, literature (English, world literature and foreign literature courses) and philosophy.

Science and Mathematics: biology, chemistry, environmental sciences, geology, health sciences, mathematics and physics.

Social Science: business and economics, political science, sociology and anthropology, psychology, public service and Latin American studies.

The requirements for three distribution options are:

Professional Distribution Program (A total of 40 credit hours including):

Five hours in writing skills (**English 100, 102, 104, or World Literature 101**), five hours in the academic group of the major but outside the major unit and 10 hours in each of the other three academic groups.

Any CAS course may be applied to fulfill the requirements of the Professional Distribution Program.

General Distribution Program (A total of 55 credit hours including):

*A maximum of five hours of physical education may be applied to fulfill the Arts group requirement.

Five hours in writing skills (**English 100, 102, 104, or World Literature 101**), five hours in the academic group of the major but outside the major unit and 15 hours from at least two units in each of the other three academic groups.

The courses applicable to the General Distribution Program are:

Unit	Recommended Courses	Courses Allowed	Courses Prohibited
Anthropology and Sociology	201, 205, 280, 290	All Others	304, 306, 308, 393, 394, 395, 399 all 400-level
Art	101, 150	All Others	246, 260, 265, 280, 281, 285, 346, 356, 361, 366, 371, 376, 399, all 400-level
Biology	105, 200, 206 207, 225	190, 210, 442	All Others
School of Business	None	None	All Others
Chemistry	101, 102	111, 112 (formerly 105, 201)	All Others
Economics	210, 211, 480	None	All Others
English & World Literature	Eng. 102, 104, 212 W.L. 101, 202, 203, 204	All Others	Eng. 100, 308, 309, 399, 400-level
Environmental Sciences	150 (formerly 200)	220, 240, 280, 320	All Others
Foreign Languages	100- and 200-level courses depending upon placement exam	200- and 300-level courses depending upon placement exam (except 399)	131, 399, 400-level Spanish 302, 308, 310, 311, 322, 323
Geology	100, 101, 102 210, 220	300, 430	All Others
School of Health Sciences	100	202	All Others
History	105, 106, 205, 206	All Others	399, 490, 495, 499
History of Science	201, 202, 203, 204	400, 480	399
Latin American Studies	None	340	All Others
Mathematics	101, 103, 152	121, 125, 201, 202, 215, 216, 221, 222, 225, 230, 255	All Others
Music	100, 130	All Others	320, 321, 322 350, 355, 399, 499
Philosophy	101, 102, 201 202, 220 (formerly 320)	All Others	399, 490, 499
Physical Education (A maximum of Five Hours)	150	151-170	All Others
Physics	105, 206	Courses Below 300, except 200, 232	200, 232, courses 300 and above
Political Science	101, 102, 211, 221	All Others	399, all 400-level
Psychology	201, 302	251, 301, 303, 304, 307, 330, 333, 362, 420	All Others
School of Public Service	None	None	All Others
Theatre	101, 211, 221	All Others	399, all 400-level

New Students - CAS students who entered college for the first time in fall 1973 or after will be required to fulfill either the

Professional, General or Structured Distribution Program requirements for graduation according to the chart above.

Structured Distribution Program (14 courses, 70 hours)

- I. **Writing Skills.** (one course)
- II. **Aims of the Structured Program.** (one course)
An elaboration of the aims of the program and an explanation of the function of the categories/courses selected to achieve these aims. The course will include invited lecturers from the faculty who are interested in and teach courses for the program. For 1973-74:
Philosophy 102 - Introduction to Liberal Learning.
- III. **Western Heritage.** Six courses; two clusters of three courses each, one cluster from **A**, one from **B**:
A. Ancient or Medieval Civilization. (three courses)
B. Modern Civilization (Renaissance, Enlightenment or 19th Century). Three courses or five courses of a modern foreign language.
- IV. **Sciences.** Six courses, from three categories, five of which must be from categories **B** and **C**:
A. Logical Mathematical Sciences. (one course)
B. Personal-Social Sciences. (at least two courses)
C. Physical-Life Sciences. (at least two courses)

Structured Distribution Program (its rationale)

This program aims to provide the students who elect it with an intellectual foundation in the following basic components of a modern liberal education:

1. Basic skills in written composition. (one course)
2. An evaluative understanding of our Western heritage, both its intellectual and social history and its art and literature. (six courses)
3. A direct familiarity with and comprehensive view of the major forms of scientific inquiry: logical-mathematical science; empirical science—both the personal-social sciences and the physical-life sciences; normative-evaluative aspects of both the social and natural sciences; and the theory of the nature of science itself. (six courses)
4. An integrated approach to the aims of the Structured Program as a whole, including an elaboration, exploration and examination of its view of the liberally educated man in the 20th century. (one course)

Structured Distribution Program (its requirements)

Some general rules:

1. Those courses which are listed more than once, under different categories, may be taken to fulfill a requirement in one of those categories only.
2. Courses listed in the Structured Program which also meet department major requirements may meet both requirements at once only if permitted by the departments which offer those courses.
3. Unless otherwise noted, all courses listed in the Structured Program will serve also to meet the requirements of the General Program.

I. Writing Skills. One course from the following:

English 100-Composition
English 102-Modern Literature
English 104-English Language
World Literature 101-Greek Literature

II. Aims of the Structured Program. (one course)

For 1973-74: **Philosophy 102 - Introduction to Liberal Learning**

III. Western Heritage. Six courses: two clusters of three courses each, one cluster from **A**, one from **B**:

A. Ancient or Medieval Civilization. Three courses to be selected from either 1 or 2, and to be selected from both categories under it:

1. Ancient Civilization

a. Intellectual and Social History
History 105-Western Civilization to 1500 A.D.
History 345-The Classical World
Philosophy 301-History of Ancient Philosophy

b. Literature and Fine Arts
World Literature 101-Greek Literature
Art 215-Ancient and Classical Art*
Theatre 211-Early History
Philosophy 220-Philosophy of Art, Literature and Film

2. Medieval Civilization

a. Intellectual and Social History
History 105-Western Civilization to 1500 A.D.
History 288-Eastern European Civilization: Medieval Russia

*Indicates that the course has one prerequisite.

History 355-The Middle Ages
Philosophy-303 History of Medieval Philosophy

- b. Literature and Fine Arts
 - World Literature 202-
Early Continental Literature
 - World Literature 311-Masterpieces of
German Literature in Translation
from the Middle Ages through Classicism
 - Art 218-Medieval Art*
 - Music 301-Music History and Literature*
 - Theatre 211-Early History
 - Philosophy 220-Philosophy of Art, Literature
and Film

B. Modern Civilization. Three courses to be selected from either 1 or 2, and to be selected from both categories under it: (Or option 3 may be chosen instead.)

1. Renaissance and Enlightenment

- a. Intellectual and Social History
 - History of Science 201-The Scientific Revolution
 - History 310-Colonial and Revolutionary America
 - History 358-Renaissance and Reformation
 - History 365-Early Modern Europe
 - History 375-Eighteenth Century Europe
 - Philosophy 304-History of Modern Philosophy
- b. Literature and Fine Arts
 - World Literature 203-
Renaissance and Enlightenment
 - World Literature 322-Early Spanish Literature in
Translation
 - English 212-Shakespeare
 - Art 222-Art in Europe from 1500 to 1800*
 - Music 301-Music History and Literature*
 - Music 302-Music History and Literature*
 - Theatre 221-Modern History
 - Philosophy 220-Philosophy of
Art, Literature and Film

2. Nineteenth Century

- a. Intellectual and Social History
 - History of Science 202-
The Technological Revolution
 - History of Science 204-
The Darwinian Revolution
 - History 205-American History to 1877
 - History 206-American History 1877-Present
 - History 329-American Intellectual
and Cultural History
 - History 385-Nineteenth Century Europe
 - History 389-Imperial Russia

*Indicates that the course has one prerequisite.

Philosophy 306-Nineteenth Century Philosophy
 Philosophy 308-American Philosophy

- b. Literature and Fine Arts
 World Literature 204-Literary
 Masterpieces 1800-1914
 World Literature 301-French Drama and
 Poetry in Translation
 World Literature 302-The Modern French Novel
 in Translation
 World Literature 312-Modern German Literature
 in Translation
 World Literature 323-Modern Spanish Literature
 in Translation
 World Literature 331-Nineteenth Century Russian
 Literature in Translation
 English 331-British Poetry of the 19th Century
 English 332-Victorian Novel
 English 347-American Writers to 1860
 English 348-American Writers 1860-1925
 Art 225-Modern Art*
 Art 305-American Art*
 Music 302-Music History and Literature*
 Philosophy 220-Philosophy of Art, Literature
 and Film

3. Completion of five courses of a modern foreign language, at least two of which are at the 200-level or above. (Students may offer competence by examination for up to two of the five required courses if they select this option.)

IV. Sciences. Six courses from the following three categories, five of which must be from categories B and C:

A. Logical-Mathematical Science. One course from the following:

Mathematics 101-Introduction to
 College Mathematics
 Mathematics 215-Statistics I
 Mathematics 221-The Real Number System
 Mathematics 230-Mathematical Logic
 Philosophy 202-Logic

B. Personal-Social Sciences. At least two courses, one of which must be from 1 and 2:

1. Empirical Science

Psychology 201-Introductory Psychology
 Psychology 362-Environmental Psychology

*Indicates that the course has one prerequisite.

Sociology 201-Introduction to Sociology
Sociology 205-Introduction to Anthropology
Economics 210-Principles of Economics (Macro)
Economics 211-Principles of Economics (Micro)
Political Science 102-Introduction to
American Government
Political Science 211-Introduction to
International Relations

2. Value Implications of Science

Philosophy 101-Introduction to Philosophy
Philosophy 201-Ethics
Political Science 101-Idea of a Social Science
Political Science 231-Introduction to Political Theory
Sociology 280-Social Problems*
Economics 480-History of Economic Thought
Economics 370-Human Resources*
Psychology 333-Humanistic Psychology*
Psychology 405-History and Systems*

C. Physical-Life Sciences. At least two courses, one of which must be from 1 and 2:

1. Empirical Science

Biology 190-Fundamentals of Biology*
Chemistry 101-Introduction to the Physical Sciences
Chemistry 102-General Topics in Chemistry
Chemistry 111-Introduction to Chemistry
Physics 106-Physics of Atmosphere and Oceans
Geology 101-General Geology I

2. Value Implications of Science

Philosophy 101-Introduction to Philosophy
History of Science 203-The Atomic Revolution
History of Science 204-The Darwinian Revolution
Physics 208-Introduction to Systems
Philosophy 360-Philosophy of Science
Biology 105-Human Ecology
Environmental Sciences 200-
The Science of Environment
Geology 100-Environmental Geology
Physics 206-Science, Technology and Society

MAJOR AND MINOR PROGRAMS

Studies in a major subject may begin as soon as you have selected your field of specialization and have been assigned a faculty adviser to counsel you on the requirements of your major program.

Credit hour requirements for major programs vary from subject to subject, and programs in some subjects may involve

*Indicates that the course has one prerequisite.

completion of studies in cognate fields. Therefore, you should make a careful study of the requirements stated in the section of the catalog describing the courses offered in your major subject. You should also hold regular consultations with your adviser regarding your course selections.

You may be permitted to complete an approved group major program of at least 55 credit hours, provided that at least 30 credit hours are completed in a recognized major field and the course work selected meets the requirements as established by the department in which the emphasis is placed. Careful program planning by you and your faculty adviser is essential. Students who wish to have two majors should consult with both departments or units involved.

Minor Programs

Although a minor program is not a graduation requirement except for teacher certification candidates, a minor program of 30 credit hours may be completed in any of the subjects permitted for a major program (except behavioral science, biopsychology, business administration, environmental sciences, geology, medical audiovisual technology, medical technology, nursing and social studies) or in any of the following: English and world literature, history of science and Russian.

A group minor program of 36 or more credit hours may also be completed in sciences and mathematics with the prior approval of the faculty teaching the subjects involved.

CREDIT LOAD AND CLASS STANDING

Most courses in CAS carry five hours of credit, and a full-time program usually involves three courses in each term plus an additional course of one or two hours. Except in the special cases listed below, extended course loads may be elected if requests to carry such extended loads have been approved by the students' academic advisers.

1. First-term freshmen may not carry loads greater than 20 credit hours exclusive of credit carried in physical education activity courses and music groups.
2. Students on academic probation may not carry course loads greater than 20 credit hours inclusive of credit carried in physical education activity courses and music groups.

Class standings are based on the following credit hours completed:

Freshman	0-39
Sophomore	40-84
Junior	85-129
Senior	130 and above

GRADING SYSTEM

Scholarship is ranked as follows:

A - Excellent	4 points
B - Good	3 points
C - Average	2 points
D - Poor	1 point
F - Failed	0 points
Def - Deferred	
I - Incomplete	
P - Pass	
W - Withdrawal	
Au - Auditor	

Your grade for a course is determined by your instructor on the basis of class work, outside assignments and examination results.

Your term grade point average is computed by dividing the grade points earned by the credit hours carried during that term, and your cumulative grade point average is computed by dividing the total grade points earned by the total credit hours carried.

A student receiving an "F" earns no grade points or credit for the course. The "F" is included in the computation of the student's grade point average and will appear on the student's permanent record.

A student may repeat a course in which a failing or passing grade has been received. A Repeat Grade Form, with consent of the adviser, must be filed when a student repeats a course. Only the credit hours carried and the grade points awarded in the second instance are used to compute the cumulative grade point average.

In cases where a student is involved in course work that is planned to extend beyond a single academic term and where the instructor judges that it is not appropriate to award an ordinary letter grade until the entire planned work is completed, a deferred grade (Def) may be awarded. An ordinary

letter grade will subsequently be awarded when all phases of the courses have been completed.

PASS/FAIL OPTION

Students may elect certain course work on a pass/fail basis. Such courses cannot be offered to meet distribution requirements. A maximum of 15 hours of major, minor or cognate courses may be taken on a pass/fail basis only with the consent of the student's major department. A maximum of 25% of a student's hours of GVSC courses offered to fulfill graduation requirements may be taken on a pass/fail basis.

The student's decision to elect the pass/fail option must be made with the written approval of the faculty adviser at the time of course selection.

INCOMPLETE GRADES

A student who fails to complete all required work in any course will normally receive an "F." Under exceptional circumstances, the student may request an "I." While the granting of an "I" is at the discretion of the instructor, only such extenuating circumstances as serious illness, death in the family or an accident will ordinarily be considered as a sufficient cause for awarding an "I" grade.

It is the responsibility of the student in all cases to make arrangements to complete the necessary work.

GRADUATION WITH HONORS

Students with exceptional academic records may qualify for graduation with honors, which will be indicated on the student's permanent academic record, on the diploma and in the commencement program.

In the College of Arts and Sciences, honors designations are awarded based upon the cumulative CAS grade point average (excluding the term of graduation) as follows:

3.20-3.59	Honors
3.60-4.00	High Honors

FOREIGN LANGUAGE REQUIREMENT

Students seeking the B.A. degree are required to complete study in a foreign language of their choice. This requirement will, however, be waived in whole or in part in respect of entering students who can demonstrate proficiency in a foreign language equivalent to the competency expected of

students who have completed courses of study at the college. Such proficiency may be demonstrated through successful completion of appropriate examinations arranged by the college. Students granted a waiver of the language requirements may receive college credit toward graduation.

Transfer credits or advanced placement credit may be granted in respect of a student's demonstrated knowledge of a classical language. In cases where these credits total less than the requirement established for the B.A. degree, and where the classical language involved is not offered in CAS, students will be granted general college credit, but will still have a language requirement in CAS to meet requirements for the B.A. degree, unless they complete continuation courses at another college or university and eventually qualify for transfer credit covering the entire foreign language requirement.

Modern foreign languages not taught in CAS can be used to fulfill the requirement if the student transfers the appropriate number of college credits or meets the language requirement as a result of a placement exam.

The requirement may be waived for students whose native language is not English with no course credit granted. However, foreign students cannot take a placement exam for college credit in their native language. If they wish to major in their native language, they will not receive credit for beginning or intermediate courses in that language.

Students who demonstrate a fourth quarter proficiency on the placement examination will be certified to the Records Office as having fulfilled the college foreign language requirement.

Others will be placed in courses according to their degree of competence and will satisfy the requirement upon completion of the fourth quarter course.

No credit will be given to students who have had one year or more of a modern foreign language in high school unless they take the appropriate foreign language placement examination prior to enrolling in that foreign language.

There is no mandatory foreign language requirement for programs leading to the bachelor of science degree.

WITHDRAWAL FROM COURSES OR COLLEGE

A student who finds it necessary to withdraw from one or more courses or from the college is required to complete a with-

drawal form which may be obtained from the Records Office and returned there after appropriate signatures have been obtained. Approval for a tuition refund, if the student is entitled to one, will be issued only after the withdrawal form has been reviewed by the Records Office.

The amount of the refund will be determined by the date on which the completed withdrawal form is returned to the Records Office.

Voluntary

Upon official voluntary withdrawal from courses, grades are assigned according to the effective date of the withdrawals as follows:

If before the end of the first two weeks of classes, the withdrawal will be without record of grades.

From the third week through the last day of classes, "W" grades will be recorded for courses dropped.

After the last day of classes in the College of Arts and Sciences, a passing grade or the grade of "I" or "F" will be recorded, depending upon the instructor's judgment of the student's performance up to the time of withdrawal.

"I" Grade: A grade of "I" will be recorded if the instructor concludes that the student has been doing satisfactory work and should be permitted to make up the deficiency.

"F" Grade: A grade of "F" will be recorded if, in the opinion of the instructor, the student was doing failing work.

Involuntary

Selective Service: Students drafted into the Armed Forces during the term should present their orders to the dean of the college for appropriate action.

Emergency: Students who must withdraw suddenly because of medical or family emergency should arrange to notify the Records Office as soon as possible so that withdrawal procedures may be completed during their absence.

Unauthorized: A student who drops courses or leaves the college without following official withdrawal procedures will receive "F" in all courses not completed.

Disciplinary: If a student is dismissed for disciplinary reasons up to the last day of classes, a grade of "W" will be given if the student was doing passing work and a grade of "F" if the student was doing failing work.

ACADEMIC PROBATION, SUSPENSION AND DISMISSAL

The following system of evaluating academic progress has been developed so that CAS students can check earned credits against cumulative grade point average and readily determine academic standing. The system is based upon a minimum grade point average of 2.00 as a graduation requirement.

The following table lists credits earned and the minimum grade point average for good standing or probation and for suspension or dismissal.

The following criteria will be used:

1. Warning Letter

All students who earn a GPA lower than that required for good standing during their first term in CAS, will receive a warning letter which is meant to encourage improved achievement.

2. Academic Probation

Students who fall below the GPA required for good standing after their first term in CAS, will be placed on academic probation.

3. Academic Suspension

After their first term in CAS, students whose cumulative GPA falls below that required for continued enrollment for two consecutive terms of enrollment and whose current GPA is less than 2.01 will be suspended from the college for a minimum of one term.

4. Readmission Following Suspension

After a minimum of one term, a suspended student may apply for readmission. Such application must be submitted to the Records Office not less than 10 days before the beginning of the term. The application will be considered by the Committee on Academic Dismissals and Readmission. Taken into consideration will be the achievement of the applicant in any course work undertaken, or independent study pursued, as well as any other supportive information submitted in written form. All readmitted students will be allowed to enroll on a probationary basis, in jeopardy of dismissal as outlined in No. 5.

5. Dismissal

If, after readmission from suspension, the student continues to fall below the GPA required for continued enrollment and whose current GPA is less than 2.01, the student will be dismissed. While academic dismissal in this system does connote a certain finality, a dismissed student may, after a period of one calendar year, apply for readmission. Certainly, evidence of maturity and im-

proved attitudes toward college must support any such application. This application for readmission must be submitted to the Records Office not less than 30 days before the first day of registration. The application will be considered by the Admissions Committee.

6. Due Process Through Appeal

In the event that students so notified believe the action to be incorrect, they may submit a written appeal to the office of the dean of the college. It is in the student's interest to appeal immediately if the student intends to do so. All appeals will be considered by the Committee on Academic Dismissals and Readmissions appointed by the dean of the College of Arts and Sciences.

PROBATION POLICY STANDARDS

MINIMUMS FOR GOOD STANDING AND CRITERIA FOR SUSPENSION OR DISMISSAL

*Credits Earned	GPA for Suspension or Dismissal	GPA For Good Standing	*Credits Earned	GPA for Suspension or Dismissal	GPA For Good Standing
0-17	1.01	1.50	100	1.67	2.00
20	1.04	1.54	110	1.73	2.00
30	1.12	1.62	120	1.80	2.00
40	1.20	1.71	130	1.87	2.00
50	1.28	1.79	140	1.92	2.00
60	1.36	1.88	150	1.95	2.00
70	1.44	1.96	160	1.97	2.00
80	1.52	2.00	170	1.98	2.00
90	1.60	2.00	180	1.99	2.99

LIBERAL ARTS AND THE VOCATIONS

Leaders in education, the professions and business agree on the value of the liberal arts as preparation for satisfying and effective service in the various professions and vocations. Learning how to live as well as to make a living is the special province of the liberal arts college. In the words of John Stuart Mill, it is the purpose of the liberal arts to "make capable and cultured human beings. . . it really is of importance, not only what men do but also what manner of men they are that do it." The liberal arts aim to give a rich cultural background and to awaken the intellectual and spiritual powers of the individual so that he may bring to his life intelligence, resourcefulness, judgment, character and sympathetic understanding of human problems.

*To include transfer credit hours.

The curriculum of the College of Arts and Sciences offers opportunities for concentration in the student's field of interest and specialized preparation in various areas through majors. A number of these are preprofessional such as preparation for medical or law schools. Others prepare the student directly for professions such as teaching, which may be entered immediately following graduation. The statements which follow do not exhaust the possibilities, but they indicate how the liberal arts can fulfill both the general and specialized objectives of students. Teachers and advisers are prepared to assist students in working out programs to meet their objectives.

LAW

Students should consult the entrance requirements of the law school they intend to enter. Pre-legal training should be broad. Among the subjects recommended are English, philosophy, speech, the social sciences and foreign languages. Broad intellectual interests and the capacity for analytical, logical thought are indispensable to the lawyer. There are pre-law faculty advisers in the School of Public Service and the Political Science Department.

LIBRARIANSHIP

For those who want to make librarianship a career, a master of library science degree is essential. Accredited library science schools agree that a bachelor's degree with a strong liberal arts program is the best preparation for those who apply to such schools. The major may be in any subject area.

MATHEMATICS AND THE SCIENCES

Many career opportunities await today's graduates adequately trained in mathematics, biology, chemistry and physics. Our society needs large numbers of them in many fields.

Medicine, dentistry, nursing, medical technology, engineering and teaching on both the high school and college level are among the professions open to people prepared in mathematics and science.

Biology majors can use their training in such fields as conservation, public health, medical technology, physical therapy, veterinary medicine, museum work, industry, medical research, agriculture and forestry. The biology major has the basic training necessary to enter graduate training and re-

search in the zoological, botanical and basic medical science areas.

A college graduate who has majored in chemistry is prepared for a variety of positions in medicine, industry and civil service. The graduate who wishes further training and experience as a research scientist goes on to additional study for an advanced degree, concentrating in one of the areas of chemistry. Undergraduate training in chemistry is also basic to such fields as medicine, biochemistry, microbiology, metallurgy and ecology.

Physics majors are encouraged to obtain a broadly based interdisciplinary background to prepare for fields such as environmental sciences, electronics, computer science, medical physics, physics teaching and business. The physics major has the basic training to enter graduate training and research in physics, astronomy, earth and space sciences, health physics, nuclear engineering, electrical engineering, optics and computer science.

A wide range of vocational possibilities is open to the well-trained mathematics major. There is an increasing demand for mathematicians and statisticians in industry and business, in actuary work with insurance companies and state agencies, in various types of civil service positions, in research foundations and in the mathematical areas of such fields as psychology, education, economics and sociology.

Many of the opportunities mentioned for mathematics and science majors require graduate training varying from a master's to a doctor's degree. Graduate scholarships, fellowships and assistantships are available to well-qualified students to help defray the expense of advanced study.

PREPROFESSIONAL STUDIES

This program consists of courses prescribed by professional schools (i.e. medical, dental, veterinary, etc.) as essential to the successful completion of the professional school curriculum, plus electives necessary to provide the educational breadth and maturity required by professional schools. Although the requirements of professional schools are basically the same, there are some differences in comparing one professional school with another. Since it is impossible to tailor a curriculum to meet simultaneously the requirements of every professional school, it is your responsibility, in consultation with your adviser, to see that the requirements are fulfilled for the

particular professional school(s) in which you are interested.

Most medical schools prefer that applicants complete a four-year undergraduate program. While this may be accomplished with concentration in any academic area, all medical schools require significant preparation in the natural sciences. As a result of this as well as natural inclination, most premedical students are found to be majors in one or another academic unit in the sciences. At Grand Valley these majors are principally in the School of Health Sciences Preprofessional Program, biology or chemistry. Students declaring a major in any one of these areas can be counseled with a view toward admission in a school of medicine. In addition, the Preprofessional Committee of the School of Health Sciences provides assistance to students who request it during the application process.

Basically, the curriculum that a pre-osteopathy student will follow is the same as that followed by a pre-medical student. The student is advised to consult that part of the catalog for information pertinent to that career direction. Should there arise differences in requirements of these two kinds of professional school, faculty counselors in the departments of biology, chemistry and the School of Health Sciences will keep you informed.

The individual who wishes to prepare for a career in dentistry is advised to major in the Preprofessional Program of the School of Health Sciences, biology or chemistry. While dental schools will accept candidates who have demonstrated academic excellence in any area of concentration, it should be recognized that many students will be accepted at the end of the junior year or, in rare instances, even the sophomore year. In order for students to meet the science requirements established by dental schools in an abbreviated undergraduate career, they should major in a natural science area.

SOCIAL WORK

Social work has become a highly skilled profession demanding a broad understanding of human behavior and of the social and economic forces which operate in our society. Fundamental in our present day is the task of understanding and dealing with problems of human relationships. The student planning to enter social work needs a broad background in liberal arts with concentration in social sciences and a personality sensitive to the feelings and needs of people in difficulties. A

bachelor's degree and two years of graduate study in an accredited professional school of social work qualify an individual to become a professional social worker. However, social workers without graduate degrees will still find employment opportunities with certain state and local government agencies.

TEACHING

The teaching profession today offers opportunities for an important contribution and for satisfying service. The College of Arts and Sciences and the Educational Studies Institute cooperate in granting provisional teacher certification. Students planning to teach in the elementary field complete an academic major, a structured elementary teaching minor, **Psychology 201** and **301**, teacher aiding (**Education 303**) and directed teaching (**Education 402**). Students planning to teach in middle schools and junior or senior high schools complete an academic major and minor, **Psychology 201** and **301**, teacher aiding (subject and **Education 305** or **307** and directed teaching (**Education 405** or **407**). The **305-307** accompanying academic seminars help the student develop subject matter competencies as they relate to the classroom, especially in relation to instructional objectives, materials, methods, evaluations and planning.

Teaching aiding for secondary teachers will be offered in the following subject areas and according to the following schedule:

Art - Winter and Spring 1975

English - Fall 1974 and Winter 1975

Foreign Languages - Winter 1975

Mathematics - Winter 1975

Music - Fall 1974 and Spring 1975

Physical Education - Fall 1974 and Winter and Spring 1975

Sciences - Fall 1974 and Spring 1975

Social Studies - Fall 1974 and Winter and Spring 1975

Teacher aiding must normally be completed before September of the academic year in which directed teaching is done. It is particularly important for transfer students to complete all required prerequisite courses, especially **Psychology 301**, before the spring term of the junior year. Admission to the teacher preparation program requires the approval of both the College of Arts and Sciences and the Educational Studies Institute.

ACADEMIC UNITS AND PROGRAMS AND COURSES OF INSTRUCTION

BEHAVIORAL SCIENCE PROGRAM

The Psychology and Anthropology-Sociology Departments jointly offer a behavioral science major. Majors must take 15 five-hour courses, 10 of these from the Psychology and Anthropology-Sociology Departments. As many as six or as few as four courses may be elected from each department. Students are required to take **Behavioral Science 300** (same as **Sociology 360**) and **422**. Three additional courses are expected to be elected from the following group: **Biology 200**, **Philosophy 202**, **Mathematics 215**, and advanced study in philosophy and political science.

GROUP MAJOR AND MINOR PROGRAMS IN SCIENCE

Group Major Programs in Science

A. General Science and Science

This program is recommended for students preparing to teach general science at the secondary level.

A student must complete a minimum of 30 credit hours in one of the following disciplines: biology, chemistry, geology, mathematics and physics.

In addition to the 30 hours, students must complete the courses specified below in those disciplines outside of their major concentration. Two of the courses taken must be at the 300- or 400-level, preferably in the area of the major concentration.

(10) **Biology 190 and 200**

(15) **Chemistry 111***, **112**, **113** and **114**; or **111**, **112** and **231** or **241**.

(10) **Geology 210** and **220**; or **101** and **102**.

(15) **Physics 220**, **221** and **222**; or **230**, **231** and **232**.

(5) **Mathematics 121** or **201**.

B. Elementary Sciences

This program is recommended for students preparing to teach science at the elementary level.

A student must complete 60 credit hours in science courses including: **Mathematics 221**, **Biology 105** and **Physical Science 101**. In addition, a student must take four courses from a single elementary science or

*If proficiency tests are satisfactorily completed, only two courses in chemistry are required.

Mathematics Department plus one course from each of the departments listed below:

Biology 190, 200, 206 or 207

Chemistry 111 or 112

Geology 101 or 210 or 220

Mathematics 222

Physics 105

Group Minor Program in Science

The group science minor offered consists of a minimum of 36 credit hours in science and mathematics subject to the following conditions:

1. **Biology 190; Chemistry 111, 112, 113 and 114; Geology 101 and 102 or 210 and 220; Mathematics 125, 121, 192 and 195; Physics 105;** and all courses of 200-level or above may be used to fulfill the minor requirements;
2. A group science minor may not be combined with a group science major;
3. No required courses in the major may be applied to the group science minor;
4. The group science minor must consist of at least two courses in each of three science departments other than that of the major.

GROUP MAJOR PROGRAM IN SOCIAL STUDIES

This program consists of 60 credit hours in the social studies fields* distributed in one of the following ways (the first way is considered especially appropriate for students seeking teacher certification):

- A. A concentration of six courses in each of two different social studies fields (departments). Two courses in each field must be at the 300- or 400-level.**
- B. A set of six courses in one social studies field, and a set of two courses at the 200-level or higher in each of three social studies fields other than the one in which the set of

*Business and economics, history, philosophy, political science, psychology and sociology and anthropology.

**Each department also may have certain required or recommended courses for its concentration of six. Students will select one department for "official" advising, but must seek advice also in the second.

six is selected.* Two courses in each set must be at the 300- or 400-level.

HISTORY OF SCIENCE PROGRAM

In today's technological society no person is truly educated unless that person has an understanding of the role of science in the world. The History of Science Program in CAS offers students the opportunity to go beyond the accumulation of scientific facts and to gain an understanding of the historical roots of science and technology as well as the interaction between scientific history and social, literary, economic and political history. The British novelist—scientist C.P. Snow maintains that there are two "cultures" in our intellectual society, the scientific and the humanistic, whose members cannot understand the other culture. The history of science provides a bridge to these cultures. Scientists can understand the history of their discipline as a part of the progress of human civilization. Non-scientists, on the other hand, can see that science is not a frightening series of facts and formulas that appeared from the chaos, fully developed, in the brain of an Einstein or a Newton.

In this regard, the history of science is no different from any other branch of intellectual history. However, since new scientific theories by their very nature render earlier theories obsolete and worthless (at least to practicing scientists), interest in scientific history has only been a relatively recent phenomenon.

The History of Science Program at CAS is the most comprehensive program in this discipline available in any college or university in Michigan. Currently, four introductory-level courses, advanced courses in the history of chemistry and the history of mathematics and opportunities for independent study are available.

REQUIREMENTS FOR MINOR PROGRAM

A student choosing history of science as a minor program must complete 30 hours of study in history of science, including courses **201, 202, 203** and **204**.

COURSES OF INSTRUCTION

Each course carries five hours credit and has no prerequisites

* The set of six courses determines the department which will provide advising for the student choosing this option.

unless otherwise noted. Courses in the 200-level series may be taken independently and in any order.

201 The Scientific Revolution

This course examines the revolutionary change in man's view of his world and of himself during the 16th and 17th centuries from an animated magical world to a clockwork universe inhabited by mechanical men. The works of Copernicus, Galileo and Newton are examined; their impact on society, religion, literature and morals is sketched. The course carries five hours credit and is recommended for distribution.

202 The Technological Revolution

This course investigates the historical roots of today's technological society. Although ancient and medieval technology will be briefly considered, emphasis is on the modern period; the transformation to a scientifically-oriented industrial society. The course carries five hours credit and is recommended for distribution.

203 The Atomic Revolution

This course investigates the historical roots of the atomic and molecular view of the universe. Although these roots will be traced back to their ancient origins, emphasis is on the recent discoveries of sub-atomic particles, radioactivity, isotopes, nuclear fission and fusion and the molecular approach to biology. The effects of these discoveries upon science and society will be examined. The course carries five hours credit and is recommended for distribution.

204 The Darwinian Revolution

This course examines the history of those scientific ideas that have led to the replacement of the concept of a static and unchanging natural world by the concept of a dynamic and constantly changing natural world. The course carries five hours credit and is recommended for distribution.

399 Readings in the History of Science

This course provides students the opportunity to explore a topic in the history of science in depth under the supervision of a staff member. The prerequisites are two history of science courses and permission of the instructor. One to five hours credit.

The 400-level courses will be offered in alternate years.

400 History of Chemistry

This course examines the development of chemistry as a modern, quantitative science. Emphasis is on 19th century development. The prerequisites are **Chemistry 105** or permission of instructor. Five hours credit.

435 History of Mathematics

This course deals with pre-classical, Arabic, Renaissance and modern mathematicians considered through their principal works and in relationship to the intellectual climates in which they lived. The prerequisite is permission of instructor. Five hours credit.

In addition to the history of science courses listed above, the

following courses are recommended for students interested in the history of science:

SHS 100 - Man and Disease

SHS 270 - History of Medicine

Philosophy 360 - Philosophy of Science

Psychology 405 - History and Systems

THE HONORS PROGRAM

GOALS

The Honors Program of the College of Arts and Sciences at Grand Valley seeks to recognize, respond to and develop the special talents and abilities of academically superior students.

The Honors Program affords each beginning student with superior ability—and the will to use it effectively—opportunities to explore the subject matter of various disciplines in greater depth and with a wider range than would otherwise be possible.

In addition, the Honors Program presumes that each developing student will undertake work in the student's chosen field that is clearly greater in depth and scope than that expected in the normal major program. This additional requirement shall take the form of supervised independent study, experimental investigation or creative activity as the student's major department shall declare suitable.

OPPORTUNITIES

During each term various freshman honors seminars, general honors seminars, honors sections of regular courses, etc., are offered. A list of current offerings, with course descriptions, is available at the Honors Office.

Available at the same place is the *Directory of Independent Study*. Therein CAS faculty briefly indicate the terms on which any student may enter an educational contract with a particular instructor.

Finally, the dean and faculty of CAS confer the privilege of early registration on all honors students. Each honors student is thereby assured access to that sequence of courses agreed upon by the student and honors adviser as most useful to the student's academic maturation.

STRUCTURE

An honors director and coordinator oversee the program, establish the various courses and consult with entering students.

Each student, usually during the freshman year, is assigned an honors adviser, a faculty member chosen from the student's preferred field, who will assist the student in planning an appropriate and challenging course of studies.

In addition to arranging courses of studies, the honors advisers are engaged in counseling their students in choices among vocations, in decisions about post-graduate study and in applications for fellowships and scholarships. All honors advisers commit themselves to spending the time and energy which are necessary to serve students for whose academic progress they have accepted a share of responsibility.

ADMISSION AND RETENTION

Any student accepted by CAS may apply for admission to the Honors Program. Students are selected who show intellectual interests, academic potential and capacity for original work.

The records of incoming freshmen and of transfer students are routinely screened by Honors Program personnel and students who meet preliminary criteria will be invited to apply. Interviews with honors personnel will be arranged during the first term of entering students.

On-campus students are accepted on the basis of their achievement in CAS and recommendation of faculty members.

Honors students who are admitted as freshmen ordinarily complete a quarter of their degree program in honors seminars, honors courses, independent study and advanced courses undertaken during the freshmen or sophomore years.

Continued good standing in the program is dependent on the annual evaluation conducted by the student and honors adviser.

PROGRAM IN RELIGIOUS STUDIES

Several CAS departments are interested in developing a Program in Religious Studies. A committee has been formed to consider proposing such a program some time during 1974—75. There are courses already being taught which have a bearing on religion. Students who would like help in identifying these, or who wish to express an interest in the establishment of such a program, are invited to visit one of the committee members: Professor Huisman (English), Professor Sorenson (history), Professor Hoitenga (philosophy), Professor Bijkerk (psychology) and Professor Kock (sociology).

WOMEN'S STUDIES PROGRAM

Differences exist in the experiences and perceptions of women and men, but most college courses are concerned mainly with those of men. Generally, these courses do not pay attention to the social and economic roles of women or the psychological relationship between men and women—both of which, influence the nature and values of society. A program in women's studies can give students an awareness of the genuine experiences and perceptions of women in past and present society. It can provide a means of overcoming traditional negative attitudes about the intellectual contributions of women to society. It can also allow an understanding of the cultural heritage of women.

This program is interdisciplinary. It includes courses from the humanities, arts, social sciences and natural sciences, as well as interdisciplinary courses taught together by instructors from several disciplines. It accepts for transfer relevant courses from Thomas Jefferson College, William James College and College IV. A minor in women's studies can be a useful adjunct to any major, professional or liberal. The courses all open to all students and may be chosen as electives, regardless of major or minor. Most courses have no prerequisites, unless they are set by a particular department.

REQUIREMENTS FOR A MINOR IN WOMEN'S STUDIES

Students must choose 30 credit hours from the following: **Women's Studies 201 and 380, History 280, Sociology 490, SPS 360, Philosophy 101, Theatre 230-242 and Physical Education 156.** In addition, students may choose from special topics courses in any CAS department or school relating to women's studies (to be specified each quarter by the coordinator), independent readings related to women's studies, and women's studies courses offered by Thomas Jefferson College, William James College and College IV (to be specified each quarter by the coordinator and limited to a maximum of 15 credit hours).

Special cognate courses: (maximum of five credit hours) **Sociology 372, SPS 256, Economics 370, Psychology 430 and Biology 225.**

COURSES OF INSTRUCTION

Each course carries five hours credit.

201 Introduction to Women's Studies

This course provides an introductory and interdisciplinary un-

derstanding of the scope and content of special studies related to women. The course provides an overview of the historical, socio-political, economic and humanistic contributions, perspectives and problems of women in American society within the female, psycho-biological context. Offered twice a year.

380 **Special Topics in Women's Studies**

This course provides an interdisciplinary opportunity for students to pursue advanced study in special topics related to women and women's roles. The seminar topics vary each term the course is offered and will be announced one term in advance. Offered once or twice a year.

LATIN AMERICAN STUDIES PROGRAM

The Latin American Studies Program is designed for students who are interested in an integrated program of studies concerning the Latin American states and our relations with them. In addition to studies in the College of Arts and Sciences, the program offers students the opportunity to broaden their knowledge of the area by studying abroad at a Latin American institution, although this is not required.

A major in Latin American studies leads to the B.A. degree. In addition to the required four courses in Spanish language and literature, the student must complete a minimum of 45 hours credit in the program which may be taken in the College of Arts and Sciences and a designated Latin American institution of higher learning. The courses in CAS must include: **History 250 and 251, Economics 210, Political Science 496 or Latin American Studies 498 or 499.**

A student choosing Latin American studies as a minor must complete at least 30 hours in the program.

Courses of instruction which can be applied to a Latin American studies major or minor include:

- Anthropology 331 - Peasants**
- Economics 450 - International Economics**
- Economics 460 - Development Economics**
- English and World Literature 321 - Spanish American Novel in Translation**
- History 250 - Latin America to Independence**
- History 251 - Latin America Since Independence**
- Latin American Studies 340 - The Chicano Experience**

This course is a study of the United States' second largest minority, the Chicano. In-depth study will be made through various lectures, discussions and readings of the Chicanos' past and present role in Latin and North American societies. There are no prerequisites or restrictions and this course is open to all interested students.

Latin American Studies 498 — Field Study

This is a 6-10 week living and working experience at the village level in Latin America. Specific projects include the building of schools, dispensaries and hospitals. Orientation is available in the United States and the Latin American country prior to arrival at the village. Course requirements include background readings and submission of a paper upon return.

Latin American Studies 499 — Independent Research

Individual research in an area of interest to the student which culminates in a written and oral report. Prerequisite: Extensive background in Latin American Studies and consent of the instructor supervising the research.

Political Science 315 - International Relations of Latin America

Political Science 322 - Governments and Politics of Latin America

Political Science 496 - Seminar in Latin American Politics

Sociology 380 - Population Problems

Spanish 310 - Spanish Civilization and Culture (in Spanish)

Spanish 311 - Latin American Civilization and Culture (in Spanish)

Spanish 322 - Spanish American Literature I (in Spanish)

Spanish 323 - Spanish American Literature II (in Spanish)

Spanish 410 - Twentieth Century Spanish American Novel (in Spanish)

Study abroad increases the variety of courses available to the student. An example is the Latin American Program at the University of the Americas in Puebla, Mexico. The following course offerings are typical of the curricula.

Indians of South America

Culture and Personality in Mexico

Latin American Business Law

Economic Problems of Latin America

Economic History of the Americas

The Art of Latin America

Mexican History: Revolution of 1910 to the Present

Geography of Latin America

History of Latin American Thought

ANTHROPOLOGY AND SOCIOLOGY

REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS

A student majoring in sociology is required to complete 45 hours in the department, including: **201, 205, 304** and **401**. No more than 10 hours of **399** and **499** combined may count toward the major. **Behavioral Science 330** and **422** can be credited toward a major in sociology and anthropology.

A student minoring in sociology is required to complete 30 hours in the department, including: **201, 205** and at least 10 hours at the 300- or 400-level. No more than 10 hours of **399** and **499** combined may count toward a minor.

A student majoring in anthropology is required to complete 45 hours in the department, including: **201, 205, 220, 230** and **405** (or a comparable 400-level course other than **499** approved by the student's adviser). No more than 10 hours of **399** and **499** combined may count toward the major.

A student minoring in anthropology is required to complete 30 hours in the department, including: **201, 205, 220, 230** and at least 10 hours at the 300- or 400-level. No more than 10 hours of **399** and **499** combined may count toward a minor.

REQUIREMENTS FOR A MAJOR IN BEHAVIORAL SCIENCE

The Anthropology-Sociology and Psychology Department cooperate to offer a major in behavioral science. Majors must take 10 courses from Anthropology-Sociology and the Psychology Departments. As many as six and as few as four courses may be elected from each department. Students are further required to take both **Behavioral Science 330** (equivalent to **Anthropology-Sociology 360** or **Psychology 330**) and **Behavioral Science 422** (equivalent to **Anthropology-Sociology 460** or **Psychology 422**). Three additional courses are expected to be elected from the following group: **Biology 200, Philosophy 202, Mathematics 215** and other advanced courses in philosophy and political science.

The student, with his adviser, should plan an integrated sequence of course which meets special needs within this framework.

SOCIAL WORK SEQUENCE

In addition to a major or minor in the department, students may elect to pursue course work in the area of social work. **Sociology 393, 394, 395** and **491** are an integrated sequence of

courses designed to help prepare students for careers in social work.

Any student planning a major in the department should consult with a faculty member of the department concerning the selection of courses in relation to his or her objectives.

COURSES OF INSTRUCTION

Each course, except where noted, carries five hours credit.

201 Introduction to Sociology

The study of human society in terms of its social institutions and their effect on human behavior.

205 Introduction to Anthropology

A consideration of human biological and cultural evolution and a brief treatment of contemporary preliterate peoples.

220 Introduction to Prehistoric Archaeology

Introduction to prehistoric archaeology including methodology and major prehistoric developments in world prehistory. Prerequisite: **205**.

230 Primitive Cultures of the World

Combines an ethnographic survey of world cultures with an intensive treatment of analytical and theoretical concepts of socio-cultural anthropology. Prerequisite: **201** or **205**.

280 Social Problems

An introduction to the sociological analysis of social problems and the application of this analysis to some of the major social problems confronting American society. Prerequisite: **201** or **205**.

290 Comparative Religion

A cross-cultural study of the development and function of religious beliefs and magical practices in primitive and contemporary society; sects, denominations and crisis cult movements.

304 Methods in Sociological Research

Examination of the basic methods of empirical research in sociology. Focus on techniques and theory of research design, formulating and testing hypotheses, sampling procedures and collection, analysis and interpretation of data. Prerequisites: Fifteen hours in sociology and consent of instructor.

306 Field Techniques in Anthropology

Training in the application of research methods under field conditions to problems in major areas of anthropology. Prerequisites: **205** and consent of instructor.

308 Laboratory Methods in Anthropology

A course offering supervised instruction in anthropological laboratory techniques including data collection and storage, analysis and interpretation. Prerequisite: Consent of instructor.

310 Introduction to Physical Anthropology

A survey of the evolution of man and his progenitors to the present, and the anthropological aspects of heredity and environmental factors in the biological variation of modern man. Prerequisite: **205**.

325 Archaeology of North America

A survey of prehistoric developments from Alaska to Central America, including the Mesoamerican civilizations. Prerequisite: 205.

330 Ethnology of Selected World Areas

Offered at least once a year with each offering devoted to the study of a particular area. Students may repeat the course provided each repeat is for a different area. Prerequisite: 205.

331 Peasants

An examination of the origins, types and problems of peasant societies over the world. Prerequisite: 205.

335 The American Indian

A study of the aboriginal inhabitants of America north of Mexico and the origin, early history and present disposition of American Indian populations.

345 Basic Anthropological Linguistics

Lectures, readings and practical exercises using sample languages are employed to familiarize the student with the basic principles of modern structural linguistics and the application of these principles to larger anthropological problems. Phonology, morphology and syntax through transformational grammar are surveyed. Prerequisites: Fifteen hours anthropology and consent of instructor.

351 Urban Sociology

Urban theory and research techniques emphasizing the demography, ecology and social organization of American cities. Attention is given to the sociological aspects of urban planning and redevelopment. Prerequisite: 201.

352 Bureaucracy and Man

Examination of theory and research on structures, processes and impact of large-scale formal organizations, including industrial, commercial, governmental, religious, military, political and educational organizations. Prerequisite: 201

353 Social Inequality

The study of structured inequality in the distribution of prestige and economic rewards; theoretical conceptions of stratification, social classes and class conflict; effects of stratification on behavior and attitudes; social mobility in industrial society. Prerequisite: 201.

360 Social Psychology (Behavioral Science 330)

Relation of the individual to his social environment with emphasis on personality development and role behavior. Analysis of interpersonal behavior with reference to problems of conformity and influence. Prerequisites: One 200-level psychology course and 201. Required for major in behavioral science.

361 Collective Behavior

An analysis of various forms of collective behavior: Crowds, cults, social movements and mechanisms involved in the precipitation and fruition of same. An emphasis on institutional and social-psychological consequences is maintained. Prerequisite: 201.

370 Comparative Institutions

An analysis of the theoretical and methodological issues of the comparative study of societies, cultures and their institutions

with particular attention on universalizing across cultures. Prerequisite: 201.

371 Sociology of Education

The study of social processes and interaction patterns in educational organizations; the relationships of such organizations to social stratification and other aspects of society; social relation within the school, formal and informal groups, school culture, roles of teachers, students and administrators. Prerequisite: 201.

372 The Family

Sociological analysis of the family as an institution, viewed in historical and cross-cultural perspectives. Emphasis on the relationship between the social structure and the family system and on changing family patterns. Prerequisite: 201.

380 Population Problems

Social causes and consequences of population structure and change. Demographic theories concerning population growth, population distribution and density, age, sex, ethnic composition and economic growth. Emphasis on how variations in fertility, mortality and migration arise and how they influence society. Prerequisites: 201 and consent of instructor.

381 Crime and Delinquency

A sociological analysis of criminal behavior and juvenile delinquency. Focus on the extent, causes, methods of treatment and programs of control and prevention of crime and delinquency. Prerequisite: 201.

382 Minority and Ethnic Relations

An examination of majority-minority relations in contemporary society with attention to specific ethnic, religious and racial minorities, particularly the American Negro. Prerequisite: 201.

393 Introduction to Social Work

The nature of the social work profession. Designed to acquaint the student with the range of opportunities in social work as well as the student's potential in social work. Does not count toward a departmental major. Students who have taken **Sociology 294** cannot receive credit for **Sociology 393**. Five credit hours - Prerequisite: 201 - offered twice a year.

394 Individual and Group Social Work

Basic social work practices as applied to individuals, families and groups. Emphasis upon techniques and skills necessary in social work. Does not count toward a departmental major. Five credits. Prerequisites: 294, 373, or 393 and written consent of instructor. Offered twice a year.

395 Social Work and Community Organization

The societal milieu in which programs actually operate, including philosophy and theory of welfare and community relations. Social workers in community organizing roles, the role of social workers as advocates and techniques and problems of organizing community action. Does not count toward a departmental major. Five credit hours. Prerequisites: 294, 373, or 393 and written permission of instructor.

399 Independent Readings

Independent supervised readings in selected topics. A student may take only one reading course for one to four credits per

term. No more than 10 hours of 399 and 499 combined may count toward a major or minor in the department. Prerequisites: 201, 205 and the written consent of the instructor before registration.

401 Sociological Theory

Presentation and discussion of prevalent views on society, development of scientific method in the social sciences and critical study of major sociological theories. Prerequisite: 15 hours in sociology.

405 Anthropological Theory

A discussion of the major historical developments and trends in anthropology. Prerequisite: 15 hours in anthropology.

430 Kinship and Social Organization

A survey and practical application of basic kinship concepts and terminology. The major theories of social organization are critically evaluated. Cross-cultural perspective is emphasized. Prerequisites: 205 and 230.

445 Language and Culture

The theoretical and practical implications of the relationship between language and culture are studied. Emphasis is placed on the role of modern linguistic theories in contemporary anthropology, social psychology, learning theory and ordinary language philosophy. Prerequisites: 15 hours in the department and the consent of the instructor; courses in psychology and philosophy recommended.

460 Behavioral Science Senior Seminar (Behavioral Science 422)

Independent research and investigation from an interdisciplinary perspective conducted in a seminar format. A joint offering of the Anthropology-Sociology and Psychology Departments. Limited to seniors with majors in behavioral science. Prerequisite: Consent of the instructor.

490 Special Topics Seminar

A seminar for the study of important topics not ordinarily covered in other courses. Offered in response to special departmental interests of faculty and students. Prerequisites: 201, 205 and consent of the instructor.

491 Practicum: Career-Service

Agency experience in the community relating practical training and independent study in a specialized area. Limited to one to three credits per term with an eight credit maximum. Prerequisites: 25 hours in the department and consent of instructor.

495 Environments and Cultures of Grand River Basin (Environmental Science 495)

Pleistocene events, land forms, soils, vegetation, wildlife and cultures of the Grand River basin from 15,000 B.C. to modern times. Prerequisites: Junior or senior status in biology, environmental science, geology or anthropology-sociology and permission of instructor.

499 Independent Study

Research conducted individually with faculty supervision. Attention given to written and oral presentation of research findings. A student may take only one independent study course for one to four credits per term. No more than 10 hours of 399 and 499 combined may count toward a major or minor in the de-

partment. Prerequisites: 15 hours in the department and written consent of instructor before registration.

ART

REQUIREMENTS FOR A MAJOR PROGRAM IN ART

The Art Department offers curricula leading to the B.A. and B.S. degree. The B.A. may be taken with the structured or general distribution options while the B.S. is available under the general distribution option only.

Art majors must complete a minimum of 50 hours of credits in art, including **Art 101**, and **150** and additional courses in both studio and art history with at least one art history course above the 100 level.

Students wishing teacher certification in art should plan to complete 55 credits in art. **Psychology 201** and **301** should be taken prior to arranging for teacher aiding (junior year) and directed teaching (senior year).

Required courses for teacher certification in art at the elementary level are: **Art 101, 150** and **380**. **Art 225, 245, 255, 265, 275**, and 15 hours of credit in art electives are recommended.

Students interested in graduate work in art history should consult with the departmental chairman regarding a suggested curriculum and foreign language requirements.

REQUIREMENTS FOR A MINOR PROGRAM IN ART

Art minors must complete a minimum of 30 hours in art, including **Art 101** and **150** and additional courses in either studio or art history.

TYPICAL CURRICULUM FOR THE B.A. DEGREE IN ART (GENERAL DISTRIBUTION OPTION)

First Year: **Art 101, 150** and **245**
One writing skills course (100-level English course)
Two social science distribution courses
Two science and mathematics distribution courses
One humanities distribution course

Second Year: **Art 255** and **265**
Three foreign language courses
One social science distribution course
One arts distribution course
One humanities distribution course
One elective

- Third Year: **Art 260, 366 and 270**
 One foreign language course
 One science and mathematics distribution course
 One humanities distribution course
 Three electives
- Fourth Year: **Art 255 and 399**
 Seven electives

COURSES OF INSTRUCTION: ART HISTORY

Each course carries five hours credit, except where noted.

- 101 Introduction to Art**
 Introduction to the visual arts. Examination of creative, social, historical and aesthetic aspects of selected works of art.
- 222 Art in Europe from 1500 to 1800**
 This course covers the development of architecture, painting, sculpture and minor arts in the 16th, 17th and 18th centuries. Prerequisite: **Art 101**.
- 226 Contemporary Art**
 A survey of contemporary European and American architecture, sculpture, painting and minor arts from the early 20th century to the present. Prerequisite: **Art 101**.
- 302 The History of the Aesthetics of Nature**
 Examines the origin of Western perception of the landscape and nature in the visual arts from 1500 to the present day. Prerequisite: **Art 101**.
- 305 American Art**
 A survey of architecture, sculpture, painting and minor arts in America from the Colonial period through the 20th century. Prerequisite: **Art 101**.

COURSES OF INSTRUCTION: STUDIO

- 150 Introduction to Studio**
 Study of, and experimentation with, fundamental elements of visual expression as exemplified in applications to, drawing, crafts, printmaking, sculpture and multi-media.
- 245 Introduction to Crafts**
 Creative design as applied to jewelry-making, textiles and leather. Emphasis upon a variety of basic techniques in fabrication. Prerequisite: **Art 150**.
- 248 Weaving**
 Simple off-loom weaving, using all sorts of weaving techniques and patterns. Prerequisite: **Art 150** or permission of instructor.
- 251 Advanced Composition**
 Advanced problems in visual organization incorporating two- and three-dimensional media. Prerequisite: **Art 150**.
- 255 Introduction to Drawing**
 A study of fundamental pictorial concepts of drawing. Experimentation with varied technical means and media directed

toward both descriptive and expressive ends. Prerequisite: **Art 150**.

260 Introduction to Painting

Experimentation with varied techniques and with different compositional ideas related to painting. Use of representational and non-representational subject matter. Prerequisite: **Art 150**.

265 Introduction to Printmaking

Experimentation with varied techniques and with different composition ideas related to some basic forms of printmaking. Included is work with monoprints, "found objects," cardboard prints, lino prints, woodcut or wood engraving and engraving on plexiglas. Prerequisite: **Art 255**.

270 Introduction to Sculpture

Direct modeling and construction as approaches to sculpture. Experimentation with plaster, clay, wood and metal. Prerequisite: **Art 150**.

275 Introduction to Ceramics

Basic techniques and concepts related to pottery and ceramics, with some historical background. Prerequisite: **Art 150**.

280 Art for Classroom Teachers*

Materials, methods of motivation, and techniques for teaching art to elementary children, with emphasis on the contemporary philosophy of art education. Not for art majors or minors.

281 Art in Special Education*

Techniques for teaching art to exceptional children with emphasis on mentally retarded. Development of student familiarity with various materials for use with exceptional children. For students going into special education. Available for art students only in addition to major and minor requirements.

285 Art in Public Education

This course is designed to offer art majors who are planning to teach art an opportunity to investigate some of the contemporary issues of public education and to examine pertinent ideas as they relate to art education from K-12. Class discussions, laboratory experiences and readings will involve the student in an analysis and critical evaluation of various means of exposure to the creative process. Required for certification of art teachers for K-12th grades. Credit toward the major program is restricted to students planning to teach art. **Art 285** should be taken prior to the teacher aide experience.

346-347 Crafts II

Advanced problems in creative design in the fields of jewelry, textiles and leather work. Prerequisite: **Art 245**.

356 Drawing II

A continuation of **Art 255** with emphasis on in-depth exploration of fundamental pictorial concepts of drawing and on individual problems. Prerequisite: **Art 255**.

*Students certified by the director of the Educational Studies Institute as candidates for teacher certification may enroll in **Art 280** and **281** without completing **Art 150** as a prerequisite.

361-362 Painting II

A continuation of **Art 260** with emphasis on in-depth exploration of one or more areas introduced in **Art 260**. Prerequisite: **Art 260**.

366-367 Printmaking II

A continuation of **Art 265** with emphasis on further exploration of one or more printmaking areas introduced in **Art 265**. Prerequisite: **Art 265**.

371-372 Sculpture II

A continuation of **Art 270** with in-depth exploration of tri-dimensional media and emphasis on individual problems. Prerequisite: **Art 270**.

376-377 Ceramics II

A continuation of **Art 275** with emphasis on individual solutions to problems in design, clay and glaze compositions, building techniques, and firing. Prerequisite: **Art 275**.

399 Special Problems in Art

A further exploration of a problem in art history or studio art encountered in previous study. This course is for juniors and seniors majoring or minoring in art, with the approval of the adviser and instructor. The course may be repeated for credit up to a maximum of 10 hours.

462-463 Painting III

A continuation of **Art 361** with advanced and more individual problems. Prerequisite: **Art 361**.

467-468 Printmaking III

A continuation of **Art 366** with emphasis on color intaglio printing technique. Introduction to lithography. Emphasis on independent expressive development. Prerequisite: **Art 366**.

472-473 Sculpture III

A continuation of **Art 371** with strong emphasis on exploration of processes and materials. Prerequisite: **Art 371**.

499 Advanced and Independent Works of Art

Advance and independent work for variable credit in art history or studio art not included in other courses. This course is for seniors majoring in art, with the approval of the adviser and instructor. The course may be repeated for credit up to a maximum of 10 hours.

ACQUISITION OF STUDENT WORKS OF ART

Upon occasion the Art Department may wish to retain permanently certain student works of art. Such acquisition requires consent of the student.

Each student work so donated to the college will be properly recorded as a permanent acquisition of the college, to be used in classes and/or in exhibitions either on or off campus.

BIOLOGY**REQUIREMENTS FOR THE MAJOR PROGRAM IN BIOLOGY**

The biology major is designed to help the student obtain a comprehensive understanding of the life sciences. That is, the biology faculty believe it is preferable at the undergraduate level for students to become familiar with the major principles and unifying concepts of biology rather than to specialize. Reflecting this philosophy, the curricular requirements introduce the fundamental areas of biology, yet they are flexible enough to permit the individual to select among several alternatives.

Biology majors must complete at least 46 hours in biology, exclusive of **Biology 105, 200, 207** and **225**. Each student must take all of the core courses below and at least one choice from each of the other lists (I, II, and III).

CORE	I	II	III
Biology 190	233	206	404 and 405
Biology 210	235	232	406 and 407
Biology 220	333	302	450 and 451
Biology 310 and 311			420
Biology 390		442	
Biology 400 and 401			

In addition, majors must complete the following cognates: **Chemistry 112, 231 and 232** (or **241, 242 and 243**); **Mathematics 125 or 201**; **Physics 220, 221 and 222** (or **230, 231 and 232**); and a course in statistics. All junior biology majors must take the Undergraduate Record Exam (at the department's expense).

Study in geology is recommended for all biology majors. Those who plan to seek graduate degrees are strongly encouraged to achieve a reading knowledge of French, German, or Russian and to gain additional experience in statistics and calculus.

Students in biology may choose either the B.A. or B.S. degrees and may complete either the structured or the general distribution requirements.

TYPICAL CURRICULUM FOR THE B.S. DEGREE IN BIOLOGY (General Distribution)

First Year: One writing course (100-level English course)
 Five general distribution courses
 Biology 190

Chemistry 111
Mathematics 125

- Second Year: Three general distribution courses
Biology 210, 220 and one course from list I
Chemistry 112, 231 and **232**
- Third year: Two general distribution courses
Biology 310, 311 and one course from list II
Physics 220, 221 and **222**
 A course in statistics
 One elective
- Fourth year: **Biology 400, 401**, one course from list III,
 and a biology elective
 Six electives

PREMEDICAL, PREOSTEOPATHIC AND PRE DENTAL STUDIES

Students interested in careers in medicine or dentistry may choose the biology major. Such students should become familiar with the requirements for admission to medical and dental schools early in their undergraduate years. Specific advice is available from faculty advisers.

OTHER CAREER OPPORTUNITIES FOR BIOLOGY MAJORS

Graduate and professional schools have traditionally been the immediate goals of many students who major in biology. There are few opportunities for research in biology without advanced degrees. In recent years competition for entrance into graduate programs in biology has stiffened. Consequently, we suggest that only highly motivated students consider these career goals.

Biology majors among the early graduating classes from Grand Valley have already received Ph.D. degrees and are currently teaching in colleges. The Ph.D. and M.S. degrees also qualify an individual for research positions in educational institutions, government and private industry.

Many of our students have also become teachers at the elementary and secondary levels. Other jobs for biology majors without advanced degrees do not fall into neat categories. Examples of the positions held by past biology majors from the CAS may give you insight into some of the possibilities: quality control food technologist, laboratory technician, sanitarian for county health department and biologist for an engineering firm. In addition, the biology major qualifies individuals for other positions in federal, state and local government agencies. Students with an interest in sales can apply to firms which

handle pharmaceuticals, agricultural materials, scientific equipment and the like.

Biology also represents a satisfying major for individuals for whom immediate career goals are not of top priority. Natural history aspects of biology in particular lend themselves to lifelong avocations, and knowledge of biological principles is being applied increasingly by nonprofessionals to social problems.

REQUIREMENTS FOR THE MINOR PROGRAM IN BIOLOGY

The student choosing a biology minor must earn at least 30 credits in biology exclusive of **Biology 105** and including **Biology 190, 200** or **210**, and **220**. Note that **Chemistry 111** is a prerequisite for **Biology 190**.

BIOPSYCHOLOGY MAJOR

Students interested in this interdisciplinary major should consult the Psychology Department listing for further information.

COURSES OF INSTRUCTION

105 Human Ecology

The study of man's relationships with his environment. Emphasis is placed on the evolution of man, environmental determinants of human culture, human population problems and man's impact upon the environment. Lecture and discussion. This course does not count toward a biology major or minor. Five hours credit. Recommended for general distribution.

190 Introductory Cellular and Ecological Biology

Life as a physico-chemical system; structure and function of cells; principles of physiology and of ecological systems. Lecture and laboratory. Prerequisite: **Chemistry III** (may be taken concurrently). Not open to those completing the former **Biology 201**. Five hours credit. Allowed for general distribution.

200 Human Heredity

General introduction to the concepts of heredity with emphasis on human genetics. Lecture and discussion. Recommended for general distribution.

206 Natural History of Vertebrates

Taxonomy, ecology, life histories, behavior and distribution of vertebrates, with special reference to those of the region. Lecture, laboratory, and several Saturday field trips. Prerequisite: **Biology 105** or **190**.^{*} Five hours credit. Allowed for general distribution.

207 Local Flora

Taxonomy, ecology, life histories and distribution of the plants of Western Michigan. Lecture, laboratory, and two Saturday

^{*}Formerly **Biology 201**.

field trips. Does not count as part of the biology major, but may be used toward a biology minor or group science major or minor. Not open to those completing **Biology 333**. Five hours credit. Recommended for general distribution.

210 **Genetics**

Fundamental concepts of genetics and cellular reproduction. Lecture and laboratory. Prerequisite: **Biology 190**.^{*} Five hours credit. Allowed for general distribution.

220 **Introductory Organismic and Evolutionary Biology**

Principles of development; animal behavior; diversity among organisms; mechanisms of organic evolution. Lecture and laboratory. Prerequisite: **Biology 210** or **200**. Five hours credit.

225 **Biology and Human Affairs**

An introduction to the biologically based theories concerning human behavior, race, evolution, population control and eugenics. Lecture and discussion. Does not count toward biology major. Five hours credit. Recommended for general distribution.

232 **Invertebrate Zoology**

Comparative anatomy, physiology, embryology and evolution of major invertebrate groups. Lecture and laboratory. Prerequisite: **Biology 220**.^{*} Five hours credit. (Not offered 1974-75)

233 **Morphology of Non-vascular Plants**

Structure, life cycles and phylogeny of algae, fungi and bryophytes. Lecture and laboratory. Prerequisite: **Biology 220**.^{*} Five hours credit. (Not offered 1974-75)

235 **Morphology and Anatomy of Vascular Plants**

Structure, life cycles and phylogeny of vascular plants. Lecture and laboratory. Prerequisite: **Biology 220**.^{*} Five hours credit.

302 **Comparative Vertebrate Anatomy**

Phylogeny and anatomy of vertebrates. Lecture and laboratory. Prerequisite: **Biology 220**.^{*} Five hours credit.

310 **Cell Biology**

Structure and physiological processes of the cell. Lecture. Prerequisites: **Chemistry 232** (may be taken concurrently) and **Biology 210**. Four hours credit.

311 **Cell Biology Laboratory**

Methods of study of the physiology of cells. Prerequisite: Concurrent enrollment in **Biology 310**. Two hours credit.

333 **Systematic Botany**

Principles and methods of taxonomy of vascular plants. Lecture, laboratory, and three Saturday field trips. Prerequisite: **Biology 220** or permission of instructor. Five hours credit.

380 **Selected Topics**

Readings, lecture, discussions, lab or field experience (or any combination of the preceding) in specific biological topics. Prerequisites dependent upon topic selected and permission of

^{*}Formerly **Biology 201**.

the instructor. One to five hours credit. (Winter 75, Radiation Biology; Spring 75, Microtechnique)

390 Seminar

Student presentation of selected topics in biology. Open to junior and senior biology majors and minors. One hour credit; may be repeated once for credit. (Fall 74, Cave Ecosystems; Winter 75, Feedback Control of Biological Processes; Spring 75, Biological Rhythms)

399 Readings in Biology

Independent supervised readings on selected topics. Credit and topics must be prearranged with appropriate staff members and approved by the department chairman. May be elected for up to five hours of credit toward a biology major. One to three hours credit per term.

400 Ecology

Populations, communities and ecosystems. Lectures. Prerequisites: **Biology 190*** and junior or senior status in biology and environmental science or consent of instructor. Four hours credit.

401 Ecology Laboratory

Quantitative techniques for the analysis of structure and function of populations, communities and ecosystems. Laboratory and three Saturday field trips. Prerequisites: A course in statistics and concurrent enrollment in **Biology 400**. Three hours credit.

404 Comparative Animal Physiology

Functions of the organ systems of animals. Lecture. Prerequisites: **Biology 220*** and **310***; **Biology 302** recommended. Four hours credit.

405 Animal Physiology Laboratory

Laboratory techniques and experiments in animal physiology. Prerequisite: Concurrent enrollment in **Biology 404**. Two hours credit.

406 Plant Physiology

Water relations, carbohydrate metabolism and translocation, photosynthesis, mineral nutrition, plant hormones and growth and development. Lecture. Prerequisite: **Biology 220*** and **Biology 235** recommended. Four hours credit.

407 Plant Physiology Laboratory

Experiments in plant physiology. Prerequisite: Concurrent enrollment in **Biology 406**. Two hours credit.

420 Developmental Biology

Descriptive and experimental approach to the development of organisms with emphasis on animals. Lecture and laboratory. Prerequisites: **Biology 220** and **Chemistry 232**. Five hours credit.

440 Limnology

Ecology of lakes and streams with emphasis on the physical, chemical and biological factors affecting their productivity.

*Formerly **Biology 201**.

Lecture, laboratory, and two Saturday cruises. Prerequisites: **Biology 400** and **401** or consent of instructor. Five hours credit. (Not offered 1974-75)

442 Animal Behavior

The behavior of invertebrates and vertebrates with emphasis on adaptive significance. Lecture and laboratory. Prerequisite: Two courses in biology or psychology or consent of instructor. Five hours credit.

450 Microbial Physiology

Physiology, genetics and ecology of acellular and unicellular organisms. Lecture. Prerequisites: **Biology 220*** and **310**. Four hours credit.

451 Microbial Physiology Laboratory

Techniques in the study of the physiology of microorganisms. Prerequisites: Concurrent enrollment in **Biology 450** and **SHS 212**. Two hours credit.

499 Research in Biology

Can be elected for up to five hours credit toward the major in biology. Hours, credit and topic to be arranged with individual staff members. Prerequisite: 3.0 grade point average in biology and consent of the department.

SCHOOL OF BUSINESS

The business administration program, which leads to a B.S. degree in business administration and follows the CAS professional distribution option, is designed to prepare you for a career in business or for graduate study. The means to these objectives are:

- to build upon a strong foundation in the liberal arts,
- to develop an understanding of the social and legal environment in which business exists and performs its function,
- to explore some of the major problems of contemporary business,
- to generate an ability to create and apply scientific knowledge to the making of decisions in rapidly changing business situations,
- to make opportunities available through a Business Internship Program to establish a record of experience in business while pursuing academic studies.

If you major in business administration you must complete **Business 220, 221, 360, 290, 329, 330, 415** and **434**. You must also take **Elementary Analysis, Computer Programming, Statistics (Mathematics 125, 152 and 215)**, and **Economics 210, 211** and **414**. Twenty hours of your electives must be in

*Formerly **Biology 201**.

business courses, depending on your interests and career plans.

Additionally, four areas of specialization have been designed for you. Although an area of specialization is not required to receive a degree in business administration, completing one improves your chances of making progress in that professional area upon graduation. They are designed to help you plan an undergraduate program appropriate to your career and professional goals. Students contemplating graduate studies or desiring specialization should consult with their academic advisers early in the program. In all areas of the business curriculum, you may qualify for the Business Internship Program.

TYPICAL CURRICULUM FOR BUSINESS ADMINISTRATION MAJORS (Professional Distribution Option)

- First Year: One writing skills course
 One social science distribution course
 Two arts distribution courses
 One humanities distribution course
 Two science distribution courses (two of the required mathematics courses may be elected)
Economics 210
 One elective
- Second Year: One humanities distribution course
 One course in mathematics (the other required mathematics course)
Economics 211
Business 220, 221, 360 and 290
 Two electives
- Third Year: **Business 329 and 330**
 Seven electives
- Fourth Year: **Business 415 and 434**
Economics 414
 Six electives

ACCOUNTING

Accounting prepares students for careers in public, industrial and governmental accounting. A student can pursue a program which meets the educational requirements to sit for the Michigan CPA examination.

Recommended Courses: Core requirements, **Business 325** and three of the following:

- Business 323 Managerial Cost Accounting**
- Business 326 Tax Theory and Problems**
- Business 427 Auditing**
- Business 428 Advanced Accounting Problems**

Accounting students who expect to sit for the CPA examination in Michigan should complete **Business 323, 325, 326, 427** and **428**.

Students who plan a career in governmental or industrial accounting or plan to sit for the CMA (Certificate in Management Accounting) examination should consult with their advisers to plan an appropriate program.

MARKETING

The marketing specialization prepares students with the proper knowledge and skills to understand the function of marketing in the firm and in society. The marketing curriculum focuses on the social utility created by marketing in the satisfaction of demand by the development, promotion, exchange and distribution of goods and services and on the social criticisms of marketing philosophy and tactics. Completing the marketing specialization equips students for the continuing development of marketing decision-making talents and provides entry into the marketing profession.

Recommended Courses: Core requirements, **Psychology 201, Sociology 201, Business 361, 362, 461** and **Business 363**. Other marketing courses are being developed.

OPERATIONS MANAGEMENT

Study in the operations management area emphasizes the application of scientific and quantitative techniques to the decision-making processes within the firm. Operations management deals with inventory, cost analysis, production control, schedules and decision-making of a type associated with efficient production.

Recommended Courses: Core requirements, **Business 323** and **350** and two of the following:

- Business 332 Personnel Management**
- Business 490 Seminar in Quantitative Analysis**
- Business 499 Independent Study in Operations Management**
- Economics 312 Microeconomics Theory**
- Mathematics 225 Linear Algebra**

PERSONNEL AND LABOR RELATIONS

This specialization prepares you for careers in personnel, industrial relations and manpower areas in private as well as public institutions.

Recommended Courses: Core requirements, **Psychology 201,**

Sociology 201, Business 332 and 436 and two of the following:

Psychology 410	Principles of Psychological Tests & Measurements (Prerequisite Psychology 201)
Sociology 382	Minority and Ethnic Relations
Business 499	Independent Study in Personnel and Labor Relations

BUSINESS INTERNSHIP PROGRAM

The School of Business offers an enrichment program of cooperative work experience in business to prepare you for your career and to provide you with an opportunity to earn while learning.

Initial Phase (freshman and sophomore years)

You carry a regular academic course load for the first two years, completing humanities, social studies and science distribution requirements, mathematics requirements and courses in principles of economics and accounting. You should contact the director of the Business Internship Program at any time during your first two years if you intend to elect the program. You are encouraged to seek part-time production or clerical employment with a local firm during this period. The program director will have a number of these jobs available. A few full-time jobs will permit you to work an entire term, followed by a term of full-time study, until you have completed your freshman and sophomore years.

Main Phase (junior and senior years)

If you are qualified you will be recommended by the program director for placement in meaningful, creative, paid positions with cooperating employers on one of the following two schedules, depending on the location of the employer and the desires of the employer and you.

Alternating Quarters—A quarter of full-time employment (approximately 40 hours each week) is followed by a quarter of full-time study (15 to 20 credit hours) on campus, and this is repeated until graduation. Employers are generally located in the midwest. You will pay your transportation and living costs from your earnings. We attempt to arrange living and dining arrangements in a college dormitory near the place of employment. Two students are alternated in the same position. This schedule may delay graduation by one or more quarters.

Continuous Study-and-Employment—Mornings are spent in classroom study (usually two, five-hour courses per quarter),

afternoons (usually 1-5 p.m., Monday through Friday) at work with employers within commuting distance of the college, until graduation.

You will usually remain with the same firm for the entire main phase period, gaining experience in a variety of positions. Positions and employers have been selected to enable you to put classroom theory into practice. You will report to a field adviser within each firm who provides advice and counsel and grades performance. Seminars are held each month in which you, other interns, faculty and field advisers, participate to obtain maximum value from the employment. You also are required to write a term paper each quarter on a topic related to your internships. Academic course credit is given for each quarter's participation, whether on or off campus, provided the grade from your field adviser, seminar work and written report are satisfactory. It is quite possible that if you and your internship employer are favorably impressed with each other, and if a position is available, you can step into permanent employment with that firm upon graduation. Most interns who have graduated from the program have been offered—and have accepted—responsible permanent positions with their internship employers.

COURSES OF INSTRUCTION

Each course carries five hours of credit, except where noted.

Business 220 Principles of Accounting I

Introduction to accounting and the application of accounting theory to the reporting needs of the business firm. Topics include: recording process, income determination, asset valuation, equities and financial statements.

Business 221 Principles of Accounting II

Continuation of **Business 220** with emphasis upon the uses and limitations of accounting data from the viewpoint of management and other users of accounting information. Topics include: financial statement analysis, funds statement, planning and control techniques and cost accumulation methods. Prerequisite: **Business 220**.

Business 290 Quantitative Business Analysis

Introduction to mathematical models for business analysis. Uses of such analysis in making economic and business decisions under a variety of conditions. Mathematical programming, queuing theory, and competitive models. Prerequisites: **Mathematics 105** and **215** or permission of instructor.

Business 323 Managerial Cost Accounting

Study of decision-making tools involving the generation and uses of accounting data for planning and controlling business

operations and as an aid to solving special non-routine investment problems. Prerequisite: **Business 221**.

Business 325 Intermediate Accounting

Theory and applications in the determination of income and the measurement and valuation of assets and equities. Analysis of accounting principles related to general purpose reporting. Prerequisite: **Business 221**.

Business 326 Tax Theory and Problems

Consideration of the basic theory and practice applicable to the determination of the taxable income of individuals, partnerships and corporations. Prerequisite: **Business 220 and 221**.

Business 329 Law and Business

Aspects of law including contracts, agency and corporations. The interaction between business practices and commercial law through study of the Uniform Commercial Code. The businessperson's legal role in society.

Business 330 Concepts of Management

The management process through an examination of its functions—planning, organizing, motivating and controlling work and work performance in a business organization. Theoretical concepts and applications through use of selected case materials. Prerequisite: **Economics 211**.

Business 332 Personnel Management

An analysis of the human element from the management point of view. The work, environment, philosophy, policies and practices of the personnel division. Attention to basic personnel processes involving staffing, training, development of human resources including those relating to communications, motivation, remuneration and maintenance of relations with unions. Prerequisite: **Business 330**.

Business 350 Materials Management

Discussion and analysis of forecasting, inventory systems, optimum order quantities, materials planning, production scheduling and control, system evaluation and the interrelationships of these systems and factors in materials management and control. Prerequisite: **Business 323 and 330** or permission of the instructor.

Business 360 Marketing

Analyses, from a managerial viewpoint; the functions of promotion, price, product, and place. Application of marketing strategies through use of selected case materials.

Business 361 Consumer Behavior

This course is designed as an overall view of some of the basic perspectives of consumer motivation and behavior. The model specifies relevant variables that shape consumer action. Prerequisites: **Business 260 and Psychology 201**.

Business 362 Marketing Research

This course consists of a detailed examination of business research procedure and applications. Topics covered include the scientific method; problem definition; research design; location, collection and analysis of primary and secondary data; sampling techniques; and research cost-benefit analysis.

Through the use of case problems and projects these topics are made more meaningful to the student. Prerequisites: **Business 260** and **Mathematics 215**.

Business 363 Marketing Communications

This course deals with management of the components of the marketing communication function including personal selling, advertising, sales promotion and some marketing aspects of public relations activities for both consumer and industrial goods. (Prerequisite: **Business 260**)

Business 371-374 Business Internship Seminar

(Two credit hours each.)

Business 415 Corporate Finance

Application of economic concepts to financial problems of the firm in a changing money market. Prerequisite: **Business 221**.

Business 427 Auditing

The examination and verification of financial data for the purpose of establishing the reliability of financial statements. Emphasis on the nature and application of auditing standards and procedures. A short audit case is used to illustrate the work of the auditor. Prerequisite: **Business 325**.

Business 428 Advanced Accounting Problems

Special accounting problems related to partnerships, corporate business combinations, statements of affairs, realization and liquidations, consignment and installment sales and governmental units. Prerequisite: **Business 325**.

Business 434 Administrative Behavior

Integration and application of knowledge concerning individual, peer group, inter-group and other organizational behavior phenomena. Discussion, analysis and an overall survey of the interpersonal relationships in organizations through concrete cases involving people in business situations. Prerequisite: Senior standing or permission of instructor.

Business 436 Labor-Management Relations

Perspectives on the internal relationships between management and employees, unionized and nonunionized; problems and issues in the administration and negotiation of collective bargaining agreements. Discussion of industrial and manpower management problems that arise in the administration of the union relationship. Prerequisite: **Business 332**.

Business 471-473 Business Internship Seminar

(Two credit hours each.)

Business 499 Independent Study

Independent study in an area of interest to you, supervised by a member of the business faculty, culminating in a written and oral report. One to six hours of credit.

CHEMISTRY

CAREER OPPORTUNITIES IN CHEMISTRY

Chemists with bachelor's degrees find employment in a wide

variety of industrial, governmental and medical laboratories. Areas of employment include product development and testing, quality control, environmental monitoring and pollution control. Chemists are employed outside of the laboratory by chemical and pharmaceutical companies in sales, technical service and various phases of business. High school teaching is another option for the chemist with a bachelor's degree.

A degree in chemistry is excellent preparation for dental and medical schools and for further study in such fields as food science, oceanography, environmental science, patent law, microbiology, physiology and biochemistry. Advanced degrees in chemistry qualify an individual for careers in research and higher education.

Students may choose from three chemistry degrees: the B.A., the B.S. Academic Option and the B.S. Technical Option. The B.A. and B.S. Academic Option degrees offer a well-rounded education in chemistry and provide the best background for employment at the bachelor's level or entry into graduate or professional schools. On the other hand, the B.S. Technical Option degree is designed primarily for students who wish to work in laboratories and do not intend to go to graduate school. Although the Technical Option does not provide as strong a background in chemistry as the other two degrees, a student who chooses the Technical Option can broaden employment opportunities by electing courses in other fields. For example, a person who is interested in a management career in the chemical industry might take business courses in addition to the chemistry major. Or, additional courses in other sciences would be good preparation for interdisciplinary fields such as oceanography, environmental sciences or medical technology.

We recommend that students start out in the B.A. program or the B.S. Academic Option since it is easier to transfer from them to the Technical Option than vice versa. For any degree program in chemistry it is important to start the proper sequence of chemistry courses and to start the necessary mathematics and physics courses as soon as possible. Students who plan to major in chemistry should see a member of the Chemistry Department to plan their program at the earliest possible opportunity.

In addition to major requirements given below, CAS general distribution requirements of 55 credit hours also must be fulfilled for any of the chemistry major degree programs.

Specifically excluded from any major program in chemistry are **Chemistry 101, 102, 205, 231 and 232.**

To qualify for the B.A. degree, a student must complete at least 50 hours in chemistry. This must include **Chemistry 112, 113, 114, 222, 241, 242, 243, 356, 357 and 490; Mathematics 201 and 202; Physics 230 and 231,** and five credits in 400-level chemistry courses. **Chemistry 390** is required of students who will take their junior year in CAS. German or Russian is strongly recommended as the foreign language requirement. **Chemistry 351 and 352** are excluded from this program.

To qualify for the B.A. Academic Option a student must complete 50 hours in chemistry. This must include **Chemistry 112, 113, 114, 222, 241, 242, 243, 356, 357, 490,** and either **425 or 426; Mathematics 201, 202, 203;** and **Physics 230 and 231.** **Chemistry 390** is required of students who will take their junior year in CAS. An undergraduate major in chemistry as recommended by the American Chemical Society also would include **Chemistry 244, 358, 471, 472,** an additional five credits in 400-level chemistry courses, **Physics 232** and a reading knowledge of German or Russian. **Chemistry 351 and 352** are excluded from this program.

To qualify for the B.S. Technical Option, a student must complete 50 hours in chemistry. This must include **Chemistry 112, 113, 114, 222, 241, 242, 243, 244, 351, 352,** either **425 or 426 and 490; Mathematics 121, 152 and 215;** and **Physics 220, 221 and 222.** **Chemistry 390** is required of students who will take their junior year in CAS.

A student minoring in chemistry must complete 30 hours in chemistry. This must include **Chemistry 112, 113, 114** and either **231 and 232 or 241 and 242.** **Chemistry 481** is recommended for students in a secondary education program with a major or minor in chemistry. **Chemistry 101 and 102** are excluded from this program.

Students planning graduate work in chemistry are urged to select the B.S. Academic Option program. Inclusion of the additional courses recommended by the ACS will enhance a student's qualifications for graduate school programs.

Students planning to enter dental or medical school may wish to select the B.A. or B.S. Academic Option program provided other specific entrance requirements of these schools are completed. A special suggested curriculum for this purpose

may be obtained from the Chemistry Department.

Students interested in a pharmacy program may complete two years at Grand Valley followed by three years at a school of pharmacy. Since requirements vary somewhat among these schools, individual catalogs should be consulted in planning a pre-pharmacy curriculum. Chemistry Department faculty will assist interested students in the selection of appropriate courses. Suggested science courses for transfer to these schools include **Chemistry 111, 112, 113, 222, 241, 242, 243; Biology 190, 210, 220; and SHS 208 and 308.**

TYPICAL CURRICULUM FOR THE B.A. DEGREE IN CHEMISTRY

- First Year: **Chemistry 111, 112, 113, and 114**
Mathematics 121, 201 and 202
English 100, 102, 104 or World
Literature 101
 Two foreign language courses
- Second Year: **Chemistry 222, 241, 242 and 243**
Physics 230 and 231
 Two foreign language courses
 Two distribution courses
- Third Year: **Chemistry 356, 357 and 390**
 Four distribution courses
 Three electives
- Fourth Year: **Chemistry 490** and one other 400-level
 chemistry course
 Four distribution courses
 Four electives

COURSES OF INSTRUCTION*

101 An Introduction to the Physical Sciences (3-0-2)

This course, recommended for science distribution requirements of students in non-science areas, touches on scientific developments in the fields of astronomy, chemistry, geology and physics. Lectures, laboratory work and trips. There is no mathematics prerequisite. This is one of the courses required for the group science major in elementary science. Five hours credit. Fall; Spring.

102 Chemistry and the Environment (3-0-2)

This course is designed to relate the science of chemistry to the sociological and ecological problems which have arisen as a result of modern technology. For liberal arts students not majoring in science. **Chemistry 102** does not meet the general chemistry requirements of a chemistry major or minor. There

*Numbers in parentheses after the course title indicate the number of lecture, discussion and laboratory hours per week.

are no prerequisites for this course. This course is recommended for science distribution in the general distribution program. Five hours credit. Winter.

111 General Chemistry I (4-1-2)

Emphasis on atomic structure, periodic properties, state of matter, equations and simple stoichiometry. This course is a prerequisite for all further courses in chemistry. It should be the first course in chemistry taken by students with possible interest in science. Exemption can be earned by satisfactory performance on a qualifying examination before registration. Prerequisite: **Mathematics 100** is recommended. Six hours credit. Fall; Winter; Spring.

112 General Chemistry II (3-1-2)

Emphasis on reactions in solutions and chemical equilibria. Prerequisite: **Chemistry 111** or satisfactory performance on a qualifying examination before registration. Five hours credit. Fall; Winter; Spring.

113 Qualitative Inorganic Analysis (2-0-2)

Problems in the application of ionic equilibrium to inorganic qualitative analysis. Laboratory work illustrating the principles of qualitative analysis of anions and cations. Prerequisite: **Chemistry 112**. Two hours credit. Winter; Spring.

114 Inorganic Chemistry (3-0-0)

Survey of chemical behavior of the elements and their compounds. Prerequisite: **Chemistry 112**. Three hours credit. Spring.

205 Introduction to Forensic Studies (5-0-0)

Applications of natural sciences in the gathering of evidence and the identification of individuals. Use of fingerprints, voice prints and physical characteristics. Microscopic and spectroscopic examinations of fibers, paper and print. Chemical analysis of paints, metals and other materials. Course will include laboratory demonstrations of instruments and visit to police laboratories. Five hours credit. Fall; Spring.

222 Quantitative Analysis (3-0-6)

Volumetric and gravimetric methods of analysis; introduction to spectrophotometric and electrometric methods of analysis. Prerequisites: **Chemistry 113**. Five hours credit. Fall; Spring.

231 Organic and Biological Chemistry I (3-1-3)

A course designed to provide an introduction to organic chemistry for students in the health sciences, biology and environmental sciences. Nomenclature, classification and reactions of aliphatic, aromatic and heterocyclic compounds will be discussed with pertinent examples taken from the areas of the health and biological sciences. Prerequisite: **Chemistry 112**. Five hours credit. Every term.

232 Organic and Biological Chemistry II (4-0-3)

An introductory course in biochemistry designed for students in health sciences, biology and environmental sciences. Includes a brief survey of the structure and function of lipids, carbohydrates, proteins, coenzymes, and nucleotides along with a discussion of their involvement in metabolism and biosynthesis. Prerequisite: **Chemistry 231**. Five hours credit. Every term.

241 Organic Chemistry I (3-1-3)

This course in organic chemistry, together with **Chemistry 242** and **243**, is intended for chemistry majors and others who require a rigorous full-year course. Topics covered in this course include alkanes, alkenes, alkynes, aromatic compounds and stereochemistry. Prerequisite: **Chemistry 112**. Five hours credit. Fall.

242 Organic Chemistry II (3-1-3)

A continuation of **Chemistry 241**. Topics covered include spectroscopy, alkyl halides, alcohols, ethers, carboxylic acids and their derivatives, aldehydes and ketones, amines and phenols. Prerequisite: **Chemistry 241**. Five hours credit. Winter.

243 Organic Chemistry III (3-0-0)

A continuation of **Chemistry 242**. Topics covered include carbanions, conjugate addition, neighboring group effects, molecular orbitals, heterocyclic compounds, fats, carbohydrates and amino acids. Prerequisite: **Chemistry 242**. Three hours credit. Spring.

244 Qualitative Organic Analysis Laboratory (0-0-6)

Separation and identification of organic compounds using classical and instrumental methods. Prerequisite: Credit or registration in **Chemistry 243**. Two hours credit. Spring.

320 Applied Analytical Chemistry

Application of classical and instrumental chemical analytical methods to individual problems in chemistry or other natural sciences. Prerequisites: **Chemistry 222** and permission of Chemistry Department chairman and project sponsor. One to three hours credit. Every term.

323 Instrumental Techniques in the Clinical Laboratory (2-0-2)

Through lectures and laboratory practice, students will become familiar with the theory and techniques essential to the use and maintenance of electronic instruments used in clinical chemistry. Prerequisites: **Chemistry 222** or permission of instructor. Three hours credit. Spring.

351 Physical Chemistry for the Life Sciences (3-0-0)

Physical-chemical concepts for students of biology, health sciences, environmental sciences, geology, chemistry (Technical Option) and related fields. Credit cannot be given for both **Chemistry 351** and **356-357**. This course does not satisfy the requirements of the B.A. or B.S. (Academic Option) degree programs in chemistry. Prerequisite: **Chemistry 231** or **241**. Three hours credit. Winter.

352 Applied Techniques in Chemistry (1-0-6)

A laboratory course in the application of analytical and physical-chemical laboratory techniques. Instrumentation; data analysis; spectroscopy; ion exchange; kinetics; calorimetry and other selected areas. Credit cannot be given for both **Chemistry 352** and **357**. This course does not satisfy the requirements of the B.A. or B.S. Academic Option programs in chemistry. Prerequisites: **Chemistry 222** and either **351** or **356**. Three hours credit. Winter.

356 Physical Chemistry I (5-0-0)

Introduction to the mathematical-physical interpretation of chemical theory. Chemical kinetics; kinetic-molecular theory of gases; quantum chemistry. Prerequisites: **Mathematics 202**, credit or registration in **Physics 230** or permission of instructor. Five hours credit. Winter.

357 Physical Chemistry II (3-0-6)

Continuation of the mathematical-physical interpretation of chemical theory. Classical thermodynamics; chemical bonding; molecular spectroscopy; use of the computer. Prerequisites: **Chemistry 356** and **Chemistry 222** or permission of instructor. Five hours credit. Spring.

358 Physical Chemistry III (3-0-0)

Continuation of **Chemistry 357** with emphasis on molecular structure and methods for its determination. Diffraction methods; electric and magnetic properties of molecules; macromolecules; molecular orbital theory. Prerequisite: **Chemistry 357**. Three hours credit. Fall.

381 Scientific Glassblowing

Practical experience in scientific glassblowing involving techniques in drawing points, forming round and flat bottom tubes, tube bending, flaring and finishing and making straight, "T" and ring seals will be pursued. Prerequisite: Open only to junior and senior chemistry majors with departmental approval. One or two hours credit. Winter.

390 Chemistry Seminar I (0-1-0)

Student presentation of topics from current chemical literature. Ordinarily, participation in three quarters of seminar required for one hour of credit. Open only to junior chemistry majors and minors. Required for majors in the junior year. Fall; Winter; Spring.

391 Chemistry Laboratory Internship

Practical training and independent study in the specialized areas of chemistry. Prerequisite: Chemistry major with a minimum of 30 hours in chemistry and permission of instructor. One to two hours credit per term. Can be taken for a maximum of six hours credit. Every term.

425 Electroanalytical Chemistry (3-0-6)

Potentiometric, conductometric and voltametric methods of analysis. Chronopotentiometry, coulometry, electrogravimetry and stripping analysis. Prerequisites: **Chemistry 356** or **Chemistry 351** and **352**. Five hours credit. Spring; even years.

426 Optical Methods of Analysis (3-0-6)

Theory of spectra at all wavelengths and relation to molecular structure and qualitative analysis. Practice in ultraviolet, visible, infrared and atomic absorption spectroscopy, fluorimetry, flame photometry and photometric titrations. Prerequisite: **Chemistry 357** or **351** and **352**. Five hours credit. Spring; odd years.

441 Advanced Organic Chemistry (3-0-0)

An advanced treatment of organic structure, reactions and mechanisms and physical organic chemistry. Prerequisites: **Chemistry 243** and credit or registration in **Chemistry 357**. Three hours credit. Spring.

442 Advanced Organic Laboratory (0-0-8)

Advanced synthetic and physical organic techniques. Prerequisite: Credit or registration in **Chemistry 441**. Two hours credit. Spring.

461 Biochemistry (3-0-0)

Structure and function of lipids, carbohydrates, proteins, coenzymes and nucleotides. Included will be a survey of the energetics of intermediary metabolism and an introduction into the transfer of genetic information. Prerequisites: **Chemistry 243**, credit or registration in **Chemistry 357**, and permission of instructor. Three hours credit. Spring; Fall.

462 Biochemistry Laboratory (0-0-6)

Laboratory techniques and experiments in the study of amino acids, proteins, enzyme action, carbohydrates, lipids, nucleic acids and the energetics of metabolism. Prerequisite: Credit or registration in **Chemistry 461** and permission of instructor. Two hours credit. Fall.

471 Advanced Inorganic Chemistry (3-0-0)

Structure and bonding as related to chemical and physical properties of inorganic compounds. Prerequisite: Credit or registration in **Chemistry 357**. Three hours credit. Winter.

472 Advanced Inorganic Laboratory (0-0-6)

Preparation and characterization of inorganic compounds emphasizing special techniques. Prerequisite: Credit or registration in **Chemistry 471**. Two hours credit. Winter.

480 Selected Topics in Chemistry

Topics covered will reflect the special interests of the student and/or the instructor. Prerequisite: Permission of the instructor. Two or three hours credit.

481 History of Chemistry

(See **History of Science 400**)

490 Chemistry Seminar II (0-1-0)

Student presentation of topics from the current chemical literature. Ordinarily, participation in three quarters of seminar required for one hour credit. Open only to chemistry majors and required of them in the senior year. Fall; Winter; Spring.

499 Investigation Problems

Supervised study in special areas of chemistry for senior chemistry majors. One to five hours credit. Can be taken for a maximum of 10 credits. Prerequisite: Permission of instructor. Every term.

ECONOMICS

REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS

The economics program is designed to satisfy your curiosity about the inner workings of the United States and the world economy.

Your study of economics will prepare you for adventure in

private enterprise, non-profit firms, and government, or for continued study in graduate schools of business, economics and law. The program allows you to keep your options open and maximize flexibility.

If you major in economics, you can work toward the completion of a B.S. or B.A. degree. Completion of the B.A. degree requires 20 hours of foreign language study. In pursuing your B.A. or B.S. degree, you may choose either the structured or the general distribution options. If you desire to major in economics you must complete a minimum of 45 hours in economics, including **Economics 210, 211, 312, 313, 414; Business 220**; and at least 15 hours from **Economics 335, 340, 345, 370, 422, 450, 460, 480, 499** or **Business 490**. You must elect **Elementary Analysis, Computer Programming, Statistics I**, and either **Linear Algebra I** or **Logic (Mathematics 125, 152, 215** and either **Mathematics 225** or **Philosophy 202**). You may apply the mathematics courses as partial fulfillment of the distribution requirements under the structured or general options to the extent allowed. Also, you are eligible to participate in the Business Internship Program. If you desire to enter a graduate program after completion of the B.A. or B.S. or if you have an interest in more extensive work in mathematics, you should consult with your adviser at an early date about the alternatives open to you.

If you choose economics as a minor, you are required to complete at least 30 hours in economics, including **Economics 210** and **211**. A minor is required only for teacher certification, and the contents of the minor should be determined in consultation with your faculty adviser.

TYPICAL CURRICULUM FOR ECONOMICS MAJORS (General Distribution Option)

- First Year: One writing skills course
One social science distribution course
Two arts distribution courses
Two humanities distribution courses
Three science distribution courses (the three required mathematics courses may be used)
- Second Year: One arts distribution course
One humanities distribution course
Economics 210 and 211
Five electives (including any of the four required mathematics courses not taken as distribution courses)

Third Year: **Business 220**
Economics 312, 313 and 414
Five electives (including one of your economics electives)

Fourth Year: Nine electives (including two of your economics electives)

COURSES OF INSTRUCTION

Each course carries five hours of credit, except where noted.

Economics 210 Principles of Economics (Macro)

Introduction to principles of economics, stressing analysis of aggregate factors which determine national economic phenomena. Study of national income, employment, money and international trade.

Economics 211 Principles of Economics (Micro)

Introduction to the theory of price formation and resource allocation within and between industries.

Economics 312 Microeconomic Theory

The theory of price formation and resource allocation in product and factor markets given various market structures. The role of law in the economy is considered. Applications are made to problems of public and private corporate policy. Prerequisite: **Economics 211**.

Economics 313 Macroeconomic Theory

The structure of modern scientific macroeconomic analysis. National income and its distribution, demand theory, aggregate supply, labor markets, growth, and governmental policies for achieving national objectives. Prerequisite: **Economics 210**.

Economic 335 Urban Economics

An application of economic principles to the urban crisis. Topics to be examined include location analysis, urban public finance, urban renewal, pollution, poverty and ghetto economic development. Prerequisite: **Economics 211**.

Economics 340 Public Finance

A study of the budgetary process with emphasis on the federal budget including analysis of fiscal policy and the public debt, incidence of taxation and types of taxes plus study of the special tax and financial problems of metropolitan areas. Prerequisite: **Economics 210**.

Economics 345 Environmental Economics

Theoretical and empirical analysis of the economic causes of, and solutions to, environmental problems. The implications of these causes and solutions for public policy will be examined. Topics covered include economic growth, population growth, air pollution, water pollution, solid waste treatment and miscellaneous contemporary topics.

Economics 370 Human Resources

Theoretical and empirical analysis of the effect of education, training, mobility, health care and job satisfaction on social and economic productivity of people and on the distribution of

society's income; the implications of these investments in human resources for public policy.

Economics 414 Monetary Economics

The study of commercial banks with emphasis on the Federal Reserve System's control of the money supply and interest rates, monetary theory, and the use of monetary policy to achieve domestic and international stability. Prerequisite: **Economics 210 and 211.**

Economics 422 Antitrust Economics and Management

An integration of microeconomic theory and juristic law, illustrated by contemporary United States antitrust law and its employment to develop knowledge of management in light of the legal environment of business and the problems of social control through law. Prerequisite: **Economics 211.**

Economics 450 International Economics

A study of international trade theory including comparative advantage, development of a two-nation model, terms of trade and analysis of customs unions, balance of payments problems and economic problems in different areas of the world. Prerequisite: **Economics 210 and 211.**

Economics 460 Economic Development

Use of economic principles to formulate strategies to allow underdeveloped countries to achieve economic growth. Study will include analysis of economic growth, long-run growth theories, social overhead investment, import substitution, monetary control and population control programs. Prerequisite: **Economics 210 and 211.**

Economics 480 History of Economic Thought

A survey of the clashing forces that have influenced the evolution of the points of view, methods, theories and public policies of the great economists. Emphasis falls on the diversity of 20th century economics and its character as a positive social science. Some of the topics include Christian economic thought, Marx and the Marxists, institutionalism and the New Deal and the Keynesian "revolution." Prerequisite: **Economics 210, 211** or consent of instructor.

Economics 499 Independent Research

Independent research in an area of interest to you, supervised by a member of the economics faculty, culminating in a written and oral report. One to six hours of credit.

ENGLISH LANGUAGE AND LITERATURE

REQUIREMENTS FOR MAJOR PROGRAM

In planning requirements for the English major, the English Department has provided for an acquaintance with the historical development of literary forms and ideas and concentration on the work of single great figures, while still allowing the student some freedom of selection. The English major will work with an adviser to design a course of study allowing for the broadest possible range of experience in literature and

intellectual history. Basic courses in philosophy and history are appropriate for the prospective English major. Courses in history of science, philosophy (especially aesthetics), the fine arts, and foreign literature are highly recommended. Lists of recommended works in literature and literary criticism are available to assist the student in self-directed reading.

The English Department offers the B.A. under the general distribution program. A student majoring in English is required to complete a minimum of 55 hours above the 100 level. The following courses are required: **World Literature 101**, one course chosen from **World Literature 202, 203 or 204**; **English 212, 250, 251 and 361**; one 400-level course (**403, 413, 423, 433 or 445**); and **Philosophy 220**, a required cognate.

The balance of the major program should be selected in consultation with an English faculty adviser from English and world literature courses above the 100 level. **Philosophy 320** may be used as part of the major. An English major is required to take two cognate courses selected from the following: **History 105 and 106, Philosophy 101, Art 101, Music 100, Theatre 101 and History of Science 201 and 202.**

Vocational opportunities for English majors are diverse. They include elementary or secondary teaching, or graduate study in English or comparative literature as preparation for a college teaching career. An English major is appropriate preparation for professional schools, for careers in journalism or book publishing and for careers in many other private industries. Candidates for teacher certification are urged to elect **English 308, 309 and 351 or 352.** Students planning to attend graduate school should elect more than one of **World Literature 202, 203, 204**, and more than one 400-level course (**403 or 445** are especially recommended). Students interested in journalism should consult Professor Dwelle. The department has available copies of a pamphlet, *English; The Pre-Professional Major*, which contains information on English as a pre-law or pre-medical major, or as a preparation for careers in book publishing and other areas of private industry.

The English Department, in conjunction with the Foreign Language Department, offers a minor in English and world literature.

TYPICAL CURRICULUM FOR ENGLISH MAJORS

First Year: One writing skills course
 World Literature 101

One humanities distribution course
 One science distribution course
 Foreign language

Second Year: **English 250, 251 and 212**
 Social studies distribution courses*
 Foreign language
 Arts distribution courses
 Cognates, especially **Philosophy 220**

Third Year: **English 361**
World Literature 202, 203 or 204
 Electives toward major (any English or world literature course above the 100 level or **Philosophy 320**)
 Teacher aiding (if candidate for certification)
 Cognates

Fourth Year: One 400-level English course
 Electives toward major (any English or world literature course above the 100 level or **Philosophy 320**)
 Minor (if candidate for certification)
 Practice teaching (if candidate for certification)

COURSES OF INSTRUCTION

English 100, 102 and 104 fulfill the writing skills requirement. **English 102, 104 and 212** are recommended for humanities credit in the general distribution option, with the exception of **English 308, 309, 399** and all 400-level courses. All other English courses are allowed for humanities credit in the general distribution option.

100 Composition

A study of the elements of composition with practice in writing. This is one of the four courses that meets the writing skills requirement. Five hours credit.

102 Modern Literature

An introduction to literature through an analysis of representative modern poems, drama and fiction. Emphasis on writing essays. This is one of the four courses that meets the writing skills requirement. Five hours credit.

104 English Language

An introduction to the English language through a study of history, analysis and social and literary contexts of English

*Candidates for teacher certification who wish to carry the normal 15-hour course load and still graduate in 12 terms will probably wish to use **Psychology 201** and **301** for social studies distribution. The English Department strongly urges candidates for certification to consider taking more than the usual minimum of 12 terms to complete their course work.

words. Emphasis on dictionary study and writing essays. This is one of the four courses that meets the writing skills requirement. Five hours credit.

212 Shakespeare

A study of selected lyrics, comedies, histories and tragedies. Five hours credit.

250 English Writers I

An introduction to English literature through the study of major authors of the Medieval and Renaissance periods. Five hours credit.

251 English Writers II

An introduction to English literature through the study of major authors of the 18th, 19th and early 20th centuries. Five hours credit.

308 The Teaching of Reading

A study of the theories and methods of teaching reading in the elementary grades. Not available for English major, English minor or humanities distribution credit. Recommended as part of the distributed minor for elementary certification. Prerequisite: Concurrent enrollment in, or completion of, the teacher aide program. Five hours credit.

309 Children's Literature

A survey of literature appropriate for children and adolescents, designed to acquaint elementary and secondary teachers with criteria for guiding children's reading. Five hours credit.

311 Renaissance Literature

A study of representative authors from 1500 to 1650 exclusive of Shakespeare and Milton. Five hours credit.

321 Poetry from Dryden through Blake

Selected readings in the major poets. Emphasis on Neoclassical modes leading to the Romantic reaction. Five hours credit.

331 British Poetry of the Nineteenth Century

Studies in selected Romantic and Victorian poets. Five hours credit.

332 The Victorian Novel

Studies in representative British novelists of the 19th century. Five hours credit.

347 Major American Writers to 1860

American poetry and prose from the colonial period to the mid-19th century, with an emphasis on the major works of the period, including the writings of Taylor, Edwards, Irving, Poe, Hawthorne, Emerson, Thoreau and Melville. Five hours credit.

348 Major American Writers from 1860 to 1925

American poetry and prose from the mid-19th century to the age of Hemingway and Faulkner, with emphasis on the important works of Dickinson, Whitman, Twain, Crane, James, Dreiser, Robinson and Sherwood Anderson. Five hours credit.

351 Creative Writing

Exercise in various forms of writing. Projects chosen by students in consultation with the instructor. Five hours credit.

- 352 Rhetoric**
A study of classical and modern precepts of rhetoric with exercises in the art of composition. Five hours credit.
- 355 Journalism**
A study of the theory and practice of journalism with emphasis on news reporting. Exercises in writing and editing news stories are required. Offered once a year. Not available for humanities distribution credit. Five hours credit.
- 361 Contemporary English Language**
An analysis of the structure of English sounds and a presentation of the premises underlying modern analyses of English grammar. Five hours credit.
- 371 Modern Drama**
Studies in selected plays of the late 19th and the 20th centuries. Five hours credit.
- 372 Modern Poetry**
Studies in major British and American poets of the 20th century. Five hours credit.
- 373 The Modern Novel**
Studies in selected novelists of the 20th century. Five hours credit.
- 380 Topics in English and American Literature**
Studies of selected authors, movements, periods, genres or critical concepts. Topics will be announced one quarter in advance. Five hours credit.
- 399 Independent Readings in Literature**
No more than five hours credit in **English 399** may be applied to the English major or to the English and world literature minor. One to five hours credit.
- 403 Medieval Literature**
Intensive studies in the literature of the Old and Middle English periods, with emphasis on Chaucer. Prerequisite: **English 250** and **251** or consent of instructor. Five hours credit.
- 413 Major Renaissance Writers**
Intensive studies in Milton and one or two other major Renaissance writers. Prerequisite: **English 250** and **251** or consent of instructor.
- 423 Major Eighteenth-Century Writers**
Intensive studies in selected prose writers of the 18th century. Prerequisite: **English 250** and **251** or consent of instructor. Five hours credit.
- 433 Special Topics in Nineteenth and Twentieth Century Literature**
Intensive study of one or two major writers or of an important literary movement or critical concept. Topics will be announced one quarter in advance. Prerequisite: **English 250** and **251** or consent of instructor. Five hours credit.
- 445 Literary Criticism**
Intensive study of the development of literary criticism, with special attention to the function of criticism at the present time.

ENGLISH AND WORLD LITERATURE

REQUIREMENTS FOR A MINOR PROGRAM

A student minoring in English and world literature may emphasize either English and American literature or the literatures of other countries in translation. A minor program requires a minimum of 30 hours of English and/or world literature courses above the 100 level, including **English 212** and **361. World Literature 101** is strongly recommended. For students emphasizing English and American literature, **English 250-251** are recommended. Students emphasizing literature in translation are urged to elect at least one of **World Literature 202, 203, or 204**. This minor program is not open to English majors. There are, however, certain requirements and electives in world literature for English majors.

COURSES OF INSTRUCTION

Although there are no formal prerequisites for any course, 200-level courses, and especially 300-level courses, usually assume the student has had either **World Literature 101** or **English 102**. All world literature courses are allowed for humanities distribution credit. **World Literature 101** fulfills the writing skills requirement.

101 Greek Literature

An introduction to literature through an analysis of Greek masterpieces in translation. Emphasis on writing essays. Five hours credit.

202 Literary Masterpieces - Early Continental

Roman, Medieval and Early-Renaissance literature in translation with emphasis on Virgil and Dante. Five hours credit.

203 Literary Masterpieces - Renaissance and Enlightenment

Selected works in translation of Cervantes, the Spanish drama of the Golden Age and French Neoclassicism; and works of Marlowe, Shakespeare and Swift. Five hours credit.

204 Literary Masterpieces - 1800-1914

Selected works in translation from Romanticism through the Modernism of the early 20th century stressing the impact of Marx, Darwin, and Freud on literature. Authors considered include Goethe, Flaubert, Baudelaire, Ibsen, Dostoevsky, Strindberg, Mann and Kafka.

301 French Drama and Poetry in Translation

A survey of French drama and poetry emphasizing the period from 1789 to the present. Not open for credit to students who have had **French 303, 414 or 416**. Five hours credit.

302 The Modern French Novel in Translation

A survey of the French novel concentrating on the golden age of

the novel, 1830-1960. Not open for credit to students who have had **French 303, 414 or 416**. Five hours credit.

- 311 Masterpieces of Germanic Literature in Translation from the Middle Ages through Classicism**
Germanic literature from the early Middle Ages through 1832, including the Poetic Edda, the Nibelungenlied and major works of Goethe and Schiller. Background readings in Germanic mythology. Not open for credit to students who have had **German 303 or 305**. Five hours credit.
- 312 Modern German Literature in Translation**
German literature of the 20th century with emphasis on the novel. Secondary readings in 19th century backgrounds (Marx, Wagner, Nietzsche) and on the Weimar, Nazi and post-war eras. Authors include Mann, Kafka, Hesse, Brecht and Grass. Open for credit to German majors, but credit does not count towards the major. Five hours credit.
- 321 Spanish-American Novel in Translation**
A study of the 20th century Spanish-American novel. Counts as an elective in Latin American studies. Not open for credit to students who have had **Spanish 410**. Five hours credit.
- 322 Early Spanish Literature in Translation**
A survey of Spanish literature from its beginnings to 1800, including Don Quixote and other works of the Golden Age. Not open for credit to students who have had **Spanish 302**. Five hours credit.
- 323 Modern Spanish Literature in Translation**
A survey of Spanish literature of the 19th and 20th centuries. Not open for credit to students who have had **Spanish 303**. Five hours credit.
- 331 Nineteenth Century Russian Literature in Translation**
The development of Russian literature from its literary apprenticeship through the Romanticism of Pushkin and Lermontov, the Natural School of Gogol, the Realism of Turgenev, Dostoevsky, and Tolstoy and the drama and short stories of Chekov. May count toward the minor in Russian. Five hours credit.
- 332 Twentieth Century Russian Literature in Translation**
Developments in Russian literature from Symbolism, Futurism and Acmeism through the experimentation of the 1920's, the enforced Socialist Realism of the 30's and 40's and the reemerging artistic freedom of the 50's and the 60's. May count toward the minor in Russian. Five hours credit.
- 345 Afro-American Literature**
Poetry, drama, fiction and essays by prominent Black American and African authors. Five hours credit.
- 380 Special Topics in World Literature in Translation**
Special major works, authors, genres, movements, themes or critical concepts in one or more national literatures. Topics will be announced one quarter in advance. Five hours credit.

ENVIRONMENTAL SCIENCES

Man's surroundings, his disruption of ecosystems and his future on this planet are the subjects of the environmental sciences degree program. Facing a decline in the quality of life and a rapidly deteriorating environment, man's very survival is a stake. The environmental scientist has the task of preserving the future, protecting the present and restoring the past resources that enable man to exist on earth.

The environmental scientist is a generalist, knowledgeable in the basic natural sciences and social sciences, but with the added capability of integrating these in a multi-disciplinary approach to problem identification and solution. The breadth of studies ranges from the ecology of stream invertebrates to computer technology, from soil studies to regional development planning.

The Environmental Sciences Department curriculum integrates a core of fundamental studies in biology, chemistry, geology, mathematics and social studies with the departmental offerings specifically related to environmental evaluation, problems and solutions. Studies, which follow the general distribution option, lead to the B.S. degree.

REQUIREMENTS FOR MAJOR PROGRAM

Majors must complete a minimum of 46 hours within environmental sciences and 40 hours of cognates selected from the recommended list. Within the major there are five areas of specialization: regional planning and resource management, ecosystem analysis, environmental monitoring, environmental education and natural history interpretation. Student internships can be arranged in all areas of specialization. The following is a listing of the required courses in each of the areas.

Regional Planning

- Major: **Environmental Sciences 150, 216, 220, 240, 280, 380, 400, 420** and 13 hours of environmental sciences electives.
- Cognates: **Biology 400/401; Chemistry 102; Economics 345; Geology 101, 102, 420; Mathematics 215, 152; Political Science 102, 203, 205, 309; and Sociology 201 or 351.**

Ecosystem Analysis

- Major: **Environmental Sciences 150, 216, 220, 240, 280, 300, 380, 460** and 13 hours of environmental sciences electives.
- Cognates: **Biology 206, 207 or 333, and 400/401; Chemistry 111,**

112; Geology 101, 102; Mathematics 152, 215; and Physics 206.

Environmental Monitoring

Major: Environmental Sciences 150, 216, 240, 280, 300, 380, 400, 410 and 13 hours of environmental sciences electives.

Cognates: Biology 400/401, 440; Chemistry 111, 112, 113, 114 222, 320; Geology 100; Mathematics 152, 215; and Physics 206.

Environmental Education and Natural History Interpretation

Major: Environmental Sciences 150, 240, 280, 320, 380, a 400-level course and 15 hours of environmental sciences electives.

Cognates: Biology 206, 207 or 303, 400/401; Chemistry 102; Physics 105, 206; Sociology 205, 310, 325 and 335
Students in environmental education must take Psychology 201, 301; Education 305/307 and Education 405/407. Natural history interpretation students do not take the psychology and education sequences.

Students in any area of the environmental sciences who expect to do graduate level work are strongly recommended to take **Mathematics 201, 202, 203; and Physics 220, 221, 222 or 230, 231 and 232.**

TYPICAL CURRICULUM FOR REGIONAL PLANNING

First Year: A writing skills course (**English 100**)
One arts distribution course
One humanities distribution course
Two social science distribution courses
Geology 101 and 102
Political Science 102
Environmental Sciences 150

Second Year: **Environmental Sciences 216, 240, 280** and three hours of electives in environmental sciences
Mathematics 152 and 215
Physics 206
One arts distribution course
Political Science 203
One humanities distribution course

Third Year: **Environmental Sciences 220, 380, 400** and three hours of electives in environmental sciences
Chemistry 102
Political Sciences 205 and 309
One social science distribution course
One arts distribution course
One humanities distribution course

Fourth Year: **Environmental Sciences 420** and 12 hours of electives in environmental sciences

Biology 400/401

Sociology 201 or **351**

Economics 345

Electives (11 hours)

COURSES OF INSTRUCTION

150 **The Science of Environment**

An introduction to the environmental sciences; perception, appreciation and ethics of man and his impact on his physical, biological and cultural surroundings. Lecture, discussion and two Saturday field trips. Five hours credit.

216 **Experimental Design for Environmental Sciences**

The application of techniques for designing experiments, reducing and interpreting data. Lecture only. Prerequisite: **Mathematics 215**. Two hours credit.

220 **Ecosystem Analysis and Modeling**

An introduction to the basic principles and methodology for the analysis and modeling of environmental systems. Practical experience in the application of these techniques (including computer simulation) is an integral part of the course. Lecture, laboratory and discussion. Prerequisite: One course in natural science. Five hours credit.

240 **Meteorology and Climatology**

The atmosphere, broad aspects of weather and climate, microclimatology and paleoclimatology. Lecture and laboratory. One Saturday field trip. Prerequisite: One course in natural science. Five hours credit.

280 **Principles of Soil Science**

Physical, chemical and biological properties of soils; their identification, classification, productivity and management. Lecture and laboratory. Two Saturday field trips. Prerequisite: One course in chemistry and one course in geology. Five hours credit.

300 **Laboratory Methods for Environmental Sciences**

Selection, measurement, and interpretation of environmental conditions, emphasizing concepts, methods and instruments dealing with microenvironmental analysis. Lecture and laboratory. Prerequisites: One 200-level environmental sciences course and **Chemistry 112**. Five hours credit.

320 **Principles of Resource Management**

The principles of resource management: categories of natural resources emphasizing biological, ecological and economic factors affecting their use. Lecture, discussion, laboratory and two Saturday field trips. Prerequisite: **Environmental Sciences 150** or permission of instructor. Five hours credit.

380 **Seminar on Environment**

Student presentation and discussion of current interest areas in the environmental sciences. Open to junior and senior environmental science majors, or to others by permission of the instructor. One hour credit; may be repeated for three credits.

399 Readings in the Environmental Sciences

Independent supervised readings on selected topics. Credit and topics prearranged with appropriate staff members. One to five hours credit.

400 Landforms and Landform Evaluation

A study of recognition and complexity of landforms and methods for studying land capability and utilization. Lecture, laboratory and two Saturday field trips. Prerequisites: **Geology 101** and **Environmental Sciences 280; Geology 102, 420** highly recommended. Five hours credit.

410 Environmental Pollution and Control

The study of the identification, measurement and assessment of environmental pollutants and the means of controlling them. The course will emphasize field methods and techniques. Lecture, laboratory, discussion and field work, including two or more Saturday field exercises. Prerequisites: **Environmental Sciences 300, Chemistry 222**, or permission of instructor; **Biology 400-401** recommended. Five hours credit.

420 Regional Planning

Comprehensive ecological and environmental planning emphasizing the analysis of regional systems, systems interactions and decision making processes for setting land use policy. Lecture, laboratory and two Saturday field trips. Prerequisite: **Environmental Science 400** or permission of instructor. Five hours credit.

425 Freshwater Fisheries Management

Theory and practice of fishery management. Population analysis and methods of increasing fishing quality. Lecture, laboratory and one Saturday field trip. Prerequisite: **Biology 206** or permission of instructor. Two hours credit.

430 Principles of Wildlife Management

Waterfowl, upland game birds and big game management; life histories, census techniques and management procedures. Lecture, laboratory and two Saturday field trips. Prerequisite: **Biology 206** or permission of instructor. Three hours credit.

460 Productivity of Ecosystems

Function of ecosystems; their productivity and nutrient cycling. Applications of systems analysis and model-building to terrestrial and aquatic ecosystems. Lecture, laboratory and two Saturday field trips. Prerequisites: **Environmental Sciences 216, 220; Biology 400/401**. Five hours credit.

480 Ecology of the Great Lakes

Ecologic examination of a large physical-biologic system. The geology, physical history, processes, sediments, chemical properties, nutrient cycling, life forms and productivity of the Great Lakes. Lake Michigan will be used as a field laboratory. Field study will include several cruises on the Angus. Prerequisite: Permission of the instructor. Five hours credit. (Same as **Geology 480**.)

495 Environments and Cultures of the Grand River Basin

Pleistocene history, landforms, soils, vegetation and wildlife, and cultural development in the Grand River Basin over the past 20,000 years. Lectures, laboratory and field trips. Prerequisite:

Junior-senior status in the natural or social sciences and permission of the instructor. Five hours credit. (Same as **Sociology 495.**)

499 Research in Environmental Sciences

Research conducted individually with faculty supervision and/or in cooperation with other majors in the environmental sciences. Can be elected for up to 10 hours credit toward the major program. Prerequisite: Junior or senior status in environmental sciences. One to five hours credit.

FOREIGN LANGUAGES AND LITERATURE

A bachelor of arts degree in a modern foreign language is a true liberal arts degree, comparable to one in English, philosophy or history. Combined with a teaching certificate, the B.A. in a modern foreign language offers the possibility of teaching the foreign language primarily at the secondary level, or working in a program teaching English as a second language or as part of a bilingual program. Combined with a major or partial major in another field, the B.A. in a foreign language offers many exciting job opportunities in the United States and abroad; for example, in international business, foreign service, interpreting, community social service agencies or as a bilingual secretary. Knowledge of a modern foreign language has value in virtually every field and career choice. Students are especially urged to consider combining foreign language studies with the public service curriculum or with business administration.

A student working toward a B.A. degree must successfully complete the fourth quarter course in a foreign language, or fulfill the requirement through the proficiency examination.

ADVANCED PLACEMENT IN LANGUAGE COURSE

Students who have studied a foreign language in high school or those who have had other training in a foreign language must take a placement examination if they wish to continue study in that language. The placement examination will aid them in determining the course in which they should enroll. Entering students will receive college credit for each course bypassed as a result of the examination up to a maximum of 20 credits. Transfer students who have studied a foreign language at another college are not eligible to take the placement examination, but rather must enroll in the appropriate language course.

Students who demonstrate a fourth quarter proficiency on the placement examination will be certified to the Records Office as having fulfilled the college foreign language requirement. Others will be placed in courses according to their degree of competence and will satisfy the requirement upon completion of the fourth quarter course.

No credit will be given to students who have had one year or more of a modern foreign language in high school unless they take the appropriate foreign language placement examination prior to enrolling in that foreign language.

LANGUAGE LABORATORY

Students in the foreign language courses have the most modern language laboratory facilities at their disposal. In addition to the language lab which students attend as a regular part of their language course, they may also gain additional valuable practice by selecting any of the many tapes available in that language for use with one of the 35 individual tape recorders.

SELF-INSTRUCTION PROGRAM

Students may enroll in **Beginning Conversational Arabic, Italian, Japanese, Portuguese** or **Serbo-Croatian** on a self-instructional basis. Instructional materials are purchased from the bookstore and instructional tapes may be used in the language laboratory or they may be checked out. Weekly sessions with native speakers are scheduled. Supervision of the program and evaluation of the individual student's performance are provided by personnel from the Foreign Language Department. Permission to enroll in these courses must be obtained from the chairman of the Foreign Language Department.

TYPICAL CURRICULUM FOR FOREIGN LANGUAGE MAJORS (Group II) with Teacher Certification (Structured Distribution Program)

- First Year: Three foreign language 100-level courses
 One writing skills course
 Two arts distribution courses*
 Two humanities distribution courses*
 One science distribution course*

*Candidates for a teaching certificate must have an approved minor, and should, at the earliest possible time, begin choosing courses in a minor area.

- Second Year: Three foreign language 200-level courses
Two arts distribution courses
Psychology 201 and **301** (social science distribution)*
Two science and mathematics distribution courses
- Third Year: Three foreign language 300-level courses**
English 361 (humanities distribution)*
Education (FL) 305 or **307***
One science and mathematics distribution course
Two electives
- Fourth Year: Three foreign language 300-400 level courses
Education (FL) 403, 405, or 407*
Three electives

It is strongly recommended that majors take advantage of the foreign study programs for an invaluable experience in a native situation.

Transfer students who wish to major in a foreign language at Grand Valley must take a minimum of 10 credit hours of advanced level course work (300 or above) with the Foreign Language Department at Grand Valley to qualify for a major.

The 499-course is available to qualified students for independent study in areas not covered by the regular foreign language offerings.

FRENCH

REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS

Students majoring in French are required to take a minimum of 45 hours of study in this language beyond **French 103**, including 15 hours of intermediate French (or its equivalent) and 30 hours of 300- or 400-level courses. In addition they must take **English 361** if they seek teacher certification.

*Majors who are not seeking a teacher certificate are not required to take these courses, and consequently have 40 credits more in major or elective courses, nor do they need a minor, thus having an additional 30 hours of electives for a total of 70.

** A major requires a minimum of 45 credit hours above the 100-level courses. Students who wish to study additional courses in their major are welcome to do so.

Students choosing French as a minor program must complete 30 hours of French beyond the **French 103** course, including **202, 203, 204** (or its equivalent) and three 300- or 400-level courses.

Education (FL) 307-Teacher Aide Seminar is offered during winter term only.

COURSES OF INSTRUCTION

Each course carries five hours of credit. All courses are conducted primarily in French.

101 Elementary French I

Audio-lingual introduction to the language with emphasis on understanding, speaking and reading. Extensive use of taped materials in the language laboratory as a regular part of class work.*

102 Elementary French II

Continuation of **French 101**.*

103 Elementary French III

Conclusion of studies begun in **French 101**.*

121 Basic French I

An audio-lingual introduction to the language for students and travelers given on a pass/fail basis. Concentration on understanding and speaking and the acquisition of a repertoire of basic expressions.

131 French for Music Students

A one-term course designed for music students to enable them to perform in the language. Emphasis on pronunciation, intonation, music vocabulary and development of reading skills limited to the repertoire. Offered winter term.

202 Intermediate French I

Study of French style and idiomatic construction through writing and readings from the masters; continued practice in listening and speaking; review of grammar supplemented with drill work in the laboratory. Prerequisite: **French 103** or consent of instructor.*

203 Intermediate French II

Continuation of **French 202**.*

204 Intermediate French III

Conclusion of studies begun in **French 202**.*

301 Survey of French Literature I

A survey of French literature, Middle Ages through 16th century. Prerequisite: **French 204** or consent of the instructor.

302 Survey of French Literature II

A survey of French literature of the 17th and 18th centuries. Prerequisite: **French 204** or consent of the instructor.

*Offered also in Tours, France.

303 Survey of French Literature III

A survey of French literature of the 19th and 20th centuries. Prerequisite: **French 204** or the consent of the instructor.

304 French Conversation and Composition I

Extensive practice in oral and written composition; some translation from English to French; attention to finer points of grammar and style. Prerequisite: **French 204** or consent of the instructor.*

306 French Conversation and Composition II

Continuation of **French 304**. Extensive practice in oral and written composition, emphasis on contemporary French. Prerequisite: **French 204**.

308 French History and Civilization

A study of the main themes of French civilization, of the making of the French nation with its implications for contemporary France, and of its literary manifestations. Taught in French. Prerequisite: **French 204**.

310 Contemporary French I

French civilization and culture as seen through writings in books and periodicals; discussion on current events. Prerequisite: **French 308** or consent of the instructor.

311 Contemporary French II

Continuation of **French 310**. A meaningful analysis of French civilization and culture as seen through periodicals and daily newspapers. Prerequisite: **French 204**.*

404 Advanced French Composition I

Advanced grammar and syntax, translation and stylistics. Prerequisite: **French 304**.*

406 Advanced French Composition II

Continuation of **French 404**. Advanced grammar and syntax, translation and stylistics. Prerequisite: **French 304**.*

410 French Literature of the Seventeenth Century

Study of the development of French classicism; particular attention to Descartes, Corneille, Moliere, Pascal, LaFontaine and Racine. Collateral readings on the social and historical background. Prerequisite: **French 302** or consent of the instructor. Offered 1974-75 and alternate years.

412 French Literature of the Eighteenth Century

Study of the philosophical movement in France; particular attention to Montesquieu, Voltaire, Rousseau and Diderot; literary history of the age with readings from important work in the field of belles lettres. Prerequisite: **French 302** or consent of the instructor. Offered 1975-76 and alternate years.

414 French Literature of the Nineteenth Century

Study of drama, criticism, poetry and the novel of the 19th century. Prerequisite: **French 303** or consent of the instructor. Offered 1975-76 and alternate years.

416 French Literature of the Twentieth Century

Study of contemporary literature with representative works in

*Offered also in Tours, France.

prose, poetry, drama and scenarios. Prerequisite: **French 303** or consent of the instructor. Offered 1974-75 and alternate years.

420 French Literature after 1945

Study of contemporary literature with representative works in prose, poetry, drama and scenarios since WW II. Prerequisite: **French 303.***

499 Topics in French Literature

Independent study must meet with departmental approval.

GERMAN

REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS

Students majoring in German are required to take a minimum of 45 hours of study in this language beyond **German 103**, including 15 hours of intermediate German (or its equivalent) and 10 hours of literature courses. A student seeking teacher certification must take **English 361**, preferably before enrolling in teacher aiding. In addition, majors are urged to pursue studies in history, philosophy and world literature.

Students choosing German as a minor program must complete 30 hours of German beyond the **German 103** course, including 15 hours of intermediate German (or its equivalent) and courses **301**, **302** and one literature course.

Education (FL) 307-Teacher Aide Seminar is offered winter term only.

Students interested in German literature in translation should refer to course listings under English and world literature.

COURSES OF INSTRUCTION

Each course carries five hours of credit. All courses are conducted primarily in German.

101 Elementary German I

An introduction to spoken and written German; practical application of grammatical principles in the use of the language; reading of simple texts.

102 Elementary German II

Continuation of **German 101**

103 Elementary German III

Continuation of **German 102**

104 Scientific German

Readings taken from the field of the sciences with emphasis on comprehension. Prerequisite: **German 103.**

*Offered also in Tours, France.

121 Practical Conversational German

An audio-lingual introduction to the language for students and travelers given on a pass/fail basis. Concentration on understanding and speaking and the acquisition of a repertoire of basic expressions.

131 German for Music Students

A one-term course designed for music students to enable them to perform in the language. Emphasis on pronunciation, intonation, music vocabulary and development of reading skills limited to the repertoire. Offered spring term.

201 Intermediate German I

Reading of modern authors, review of grammar; conversation. Prerequisite: **German 103**.

202 Intermediate German II

Reading of modern authors, review of grammar; conversation, and composition. Prerequisite: **German 201**.

203 Contemporary German

Readings in contemporary German as a basis for conversation and composition. Prerequisite: **German 202**.

301 Conversation and Composition I

Oral and written mastery of the German language. Elements of advanced grammar and problems of style. Prerequisite: Three quarters of intermediate German or equivalent.

302 Conversation and Composition II

Continuation of **German 301**. Prerequisite: **German 301**.

303 Introduction to German Literature I

A brief survey of German literature from Lessing to Hebbel. Prerequisite: Three quarters of intermediate German or equivalent, or consent of instructor.

304 Introduction to German Literature II

A brief survey of German literature from Hebbel to the present. Prerequisite: Three quarters of intermediate German or equivalent, or consent of instructor.

305 Introduction to German Literature III

A brief survey of early German literature before the classical period. Prerequisite: Three quarters of intermediate German or equivalent, or consent of instructor.

401 Classicism

A study of 18th century ideals and culture. Intensive reading of masterpieces by Lessing, Goethe, Schiller and others. Theme writing. Prerequisite: Two 300-level courses or consent of instructor.

402 Romanticism

Reading and discussion of major works from the early and the late Romantic movements. Prerequisite: Two 300-level courses or consent of instructor. Offered 1975-76 and alternate years.

403 Nineteenth Century Literature

A study of the poetry and shorter prose works of the period with emphasis on the "Novellen" of Gotthelf, Keller, Storm and Stif-

ter. Prerequisite: Two 300-level courses or consent of instructor.

404 **Twentieth Century Literature**

A consideration of modern literary movements. Reading of works by Mann, Kafka, Rilke and other 20th century authors. Prerequisite: Two 300-level courses or consent of instructor. Offered 1975-76 and alternate years.

499 **Independent Study**

Prerequisite: Consent of department.

ITALIAN

131 **Italian for Music Students**

A one-term course designed for music students to enable them to perform in the language. Emphasis on pronunciation, intonation, music vocabulary and development of reading skills limited to the repertoire. Five hours credit. Offered fall term.

RUSSIAN

REQUIREMENTS FOR MINOR PROGRAM

Students choosing Russian as a minor program must complete 30 hours of Russian beyond **Russian 103**. Russian literature in translation may be used as part of this requirement. Students interested in Russian literature in translation should refer to course listings under English and world literature.

A recommended course for students interested in securing a strong minor in Russian is **History 390**. Please note that this course is not included in the minor program.

COURSES OF INSTRUCTION

Each course carries five hours of credit. All courses are conducted primarily in Russian.

101 **Elementary Russian I**

An introduction to Russian pronunciation and grammar.

102 **Elementary Russian II**

Continuation of **Russian 101**. Prerequisite: **Russian 101** or equivalent.

103 **Elementary Russian III**

Continuation of **Russian 102**. Prerequisite: **Russian 102** or equivalent.

201 **Intermediate Russian I**

Continued study of grammar and vocabulary aimed at the mastery of more difficult reading and conversation. Prerequisite: **Russian 103** or equivalent.

202 **Intermediate Russian II**

Continuation of **Russian 201**. Prerequisite: **Russian 201** or equivalent.

301 Introduction to Russian Literature I

A brief survey of Russian literature from its beginnings to mid-19th century. Prerequisite: **Russian 202** or equivalent.

302 Introduction to Russian Literature II

A brief survey of Russian literature of the second half of the 19th century. Prerequisite: **Russian 301**.

303 Introduction to Russian Literature III

A brief survey of Russian literature from the middle of the 19th century to the 20th century. Prerequisite: **Russian 302**.

304 Russian Composition and Conversation

Extensive practice in oral and written Russian through grammar review, translation, theme writing and reports. Prerequisite: **Russian 202** or its equivalent.

399 Independent Research

Individual study of various topics of advanced grammar and/or Russian literature supervised by a member of the Russian faculty.

SPANISH

REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS

Students majoring in Spanish are required to take a minimum of 45 hours of study in this language beyond **Spanish 103**, including **Spanish 201, 202, 203** or equivalent, and **440**. In addition they must take **English 361** if they seek teacher certification. They are also urged to pursue studies in anthropology, sociology, Latin American studies, history, world literature, public service, business and economics.

Students choosing Spanish as a minor program must complete 30 hours of Spanish beyond **Spanish 103**, including **Spanish 201, 202, 203** or equivalent.

Education (FL) 307-Teacher Aide Seminar is offered in winter term only.

Students interested in Spanish literature in translation should refer to course listings under English and world literature.

COURSES OF INSTRUCTION

Each course carries five hours of credit. All courses are conducted primarily in Spanish.

101 Elementary Spanish I

Audio-lingual introduction to the language with emphasis on understanding, speaking, and reading. Extensive use of taped materials in language laboratory as a regular part of class work.

102 Elementary Spanish II

Continuation of **Spanish 101**

- 103 Elementary Spanish III**
Continuation of **Spanish 102**.
- 201 Intermediate Spanish I**
Continuation of **Spanish 103**. Special emphasis on oral and reading practice based on literary texts.
- 202 Intermediate Spanish II**
Continuation of **Spanish 201**. Introduction of writing techniques.
- 203 Intermediate Spanish III**
Continuation of **Spanish 202**.
- 300 Conversation and Composition I**
Oral and written mastery of the Spanish language. Elements of advanced grammar and problems of style. Prerequisite: **Spanish 203**.
- 301 Conversation and Composition II**
Continuation of **Spanish 300**. Prerequisite: **Spanish 300** or consent of instructor.
- 302 Conversation and Composition III**
Continuation of **Spanish 301**. Prerequisite: **Spanish 301** or consent of instructor.
- 308 Spanish Phonetics**
Introduction to the sound system of Spanish. Phonetic transcription of texts in Spanish. Prerequisite: **Spanish 203** or consent of instructor.
- 310 Spanish Civilization and Culture**
An introduction to the political, social, economic and cultural history of Spain. Prerequisite: **Spanish 203** or consent of instructor. Taught in Spanish.
- 311 Latin American Civilization and Culture**
An introduction to the political, social, economic and cultural history of Latin America. Prerequisite: **Spanish 203** or consent of instructor. Taught in Spanish.
- 320 Spanish Literature I**
Survey of Spanish literature from El Cid through the Golden Age.
- 321 Spanish Literature II**
Survey of Spanish literature from the 18th century to the present.
- 322 Spanish American Literature I**
Survey of Spanish American literature from its beginnings to Modernism.
- 323 Spanish American Literature II**
Survey of Spanish American literature from Modernism to the present.
- 410 Spanish American Novel**
Intensive study of some of the major literary creations as seen against a general background of the major literary movements. Offered 1975-76 and alternate years.

430 Spanish Golden Age Literature

Study of the major writers of 16th and 17th century Spain. Offered 1974-75 and alternate years.

440 Cervantes

Survey of Cervantes' masterwork *Don Quixote de la Mancha*. Offered winter term.

450 Modern Spanish Novel

Study of the novel in 19th and 20th century Spain. Special emphasis on the realists and the generation of 1898. Offered 1974-75 and alternate years.

499 Independent Research

Individual study supervised by a member of the Spanish faculty. Prerequisite: Consent of department.

GEOLOGY AND EARTH SCIENCE

Geology is the study of the earth—its composition, processes and history. Major programs in geology and earth science offer students the opportunity to understand the nature and historical evolution of the earth's environment. The geology program provides undergraduate training for those who wish to go on to graduate study in applied fields of geology, oceanography, environmental science, geochemistry, geomathematics or geophysics. The earth science program prepares students for careers in primary and secondary science teaching and is useful to those seeking jobs in other areas immediately after graduation. Geology Department faculty members will be pleased to discuss additional opportunities and careers in geology and earth science.

REQUIREMENTS FOR MAJOR PROGRAM IN GEOLOGY

A candidate for the B.S. degree in geology must complete at least 50 hours in geology plus a summer geology field course. Required courses are **Geology 101, 102, 103, 460** (two hours), **499** (one to five hours) and a summer geology field course (four to eight weeks) approved by this department but offered by another university.*

A minimum of 45 hours of cognate courses is required as follows:

*Geology majors commonly attend Rocky Mountain field camps taught by faculty from schools such as the University of Michigan, University of Illinois, University of Nevada, Princeton University, etc.

Chemistry 111, 112, 113 and 114 (15 hours)

Mathematics 121 plus one of the following 10-hour sequences: **192-195, 215-216 or 201-202** (15 hours)

Physics 230, 231, 232 or 220, 221 and 222 (15 hours)

REQUIREMENTS FOR MAJOR PROGRAM IN EARTH SCIENCE

A candidate for the B.S. degree in earth science must complete at least 61 hours including **Geology 101, 102, 103, 210, 420 or 430, 460** (one hour), **499** (one to five hours); **Chemistry 111 and 112**; **Mathematics** (10 hours); and **Physics 220, 221 and 222**.

An earth science major seeking provisional teacher certification must complete **Geology/Education 305 or 307** (10 hours); **Education 470** (15 hours); **Psychology 201 and 301** (10 hours); and a minor program of study (30 hours).

REQUIREMENTS FOR MINOR PROGRAM IN EARTH SCIENCE AND GEOLOGY

Students seeking provisional teacher certification with a minor in earth science, and students desiring a minor in geology must complete 30 hours of geology courses, including **Geology 101, 102, 103, 210** and 10 hours 300- or 400-level geology courses.

TYPICAL CURRICULUM FOR THE B.S. DEGREE IN GEOLOGY

First Year: One writing skills course
Geology 101, 102 and 103
Chemistry 111 and 112
Mathematics 121
Two distribution courses

Second Year: **Geology 300, 301, 310 and 320**
Chemistry 113 and 114
Mathematics (10 hours)
Two distribution courses

Summer Field Camp (recommended after the first or second year).

Third Year: **Geology 460** (one hour)
One geology elective
Physics 230, 231 and 232 or 220, 221 and 222
Three distribution courses

Fourth Year: **Geology 460** (one hour) and **499** (three to five hours)
Two distribution courses
Electives

Transfer students in most cases will have completed the dis-

tribution courses including **Geology 101** and one cognate requirement. The following program would be typical for a transfer student seeking a B.S. degree in geology.

Third Year: **Geology 102, 103, 300, 305, 310, 320** and **460**
Three additional cognate and/or elective courses

Summer Field Camp

Fourth Year: **Geology 460** and **499**
Two geology electives
Six cognate and/or elective courses

COURSES OF INSTRUCTION

All courses carry five hours of credit except **Geology 315, 399, 460, 480** and **499** which have either less than five hours or variable credit.

100 Environmental Geology

Comprehensive examination of the relationship between man and the physical geologic environment. Study of geologic hazards (volcanism, earthquakes, mass movement, floods), mineral and energy resources (kinds, distribution, abundance, consumption), geologic aspects of waste disposal, pollution, and environmental health problems. Geology's role in regional planning will be stressed. This course does not count toward the geology major. Offered each quarter. Recommended for distribution.

101 General Geology I

Role of geology in today's world. A survey of the principles and processes of physical geology. Introduction to the earth's minerals and mineral aggregates and the study of geologic processes important in the development of land forms. Offered fall; winter and spring. Recommended for distribution.

102 General Geology II

A problem-oriented course that investigates the interactions between man and physical systems of the earth. Topics studied include energy systems of the atmosphere, hydrosphere and lithosphere. The laboratory portion of the course is intended to develop basic skills in map making and interpretation. Offered fall and winter. Recommended for distribution. Prerequisite: **Geology 101**.

103 General Geology III

Basic concepts of historical geology. Succession of events through which the earth has passed, including the history of life. Offered spring term. Prerequisite: **Geology 102**.

210 Rocks and Minerals

Hand specimen study of common rocks and minerals. Emphasis on identification, composition, origin, association and economic importance. Especially suitable for teacher candidates. This course does not count toward the geology major.

Offered spring term in alternate years. Recommended for distribution.

220 Principles of Physical and Historical Geology

Non-laboratory course in physical and historical geology primarily for non-science students wanting a basic knowledge of geology. Especially suitable for teacher candidates and humanities and social studies majors. Not open to geology-earth science majors or to students who have had **Geology 101** or its equivalent. Offered winter term in alternate years. Recommended for distribution.

300 Mineralogy

The study of mineral growth, structure and occurrence. The determination of minerals by their physical, chemical and crystallographic properties. Offered fall term. Prerequisite: **Chemistry 105**.

301 Optical Mineralogy

The determination of minerals by their optical properties in crushed fragments and rock thin sections using the petrographic microscope. Mineral genesis, alteration and textural relationships. Offered winter term. Unsuitable for distribution. Prerequisite: **Geology 300**.

305-307 Junior/Senior High School Earth Science Teacher Aide Seminar

The methods and materials useful to effectively communicate concepts of science to secondary school students are discussed in seminar on campus. Students spend several hours off campus each day in actual classroom experience. Must be taken concurrently with **Education 305** or **307**. Offered spring term. With permission, open to any science major with junior standing.

310 Petrology

The origin, nature, occurrence and identification of rocks. Offered spring term. Unsuitable for distribution. Prerequisites: **Geology 101** and **305**.

315 Geological Field Methods

Principles and applications of surveying and geophysical instruments in geological field work. Practical field exercises in making planimetric and topographic base maps are required. Offered fall term. Unsuitable for distribution. Prerequisites: **Geology 102** and permission of instructor. Two hours credit.

320 Structural Geology

The principles of structural geology including elementary treatment of stress and strain, theory of rock failure, description and origin of rock structures and selected techniques of structural analysis are covered. Offered spring term. Unsuitable for distribution. Prerequisite: **Geology 102**.

399 Reading in Geology

Independent study of geological literature. Topics to be prearranged with appropriate staff members. Offered every term. Unsuitable for distribution. Prerequisite: Consent of instructor. Credit: One to three hours per term; may be taken for a maximum of six hours, no more than three of which may apply to major requirements.

400 Invertebrate Paleontology

The study of fossils and the record of prehistoric invertebrates. Offered winter term in alternate years. Unsuited for distribution. Prerequisite: **Geology 103** or permission of instructor.

**405-407 Junior and Senior High School Earth Science
Directed Teaching**

15 hours credit. (See **Education 405-407**.) Cannot be taken in the same year as **Geology/Education 305/307**.

410 Stratigraphy

The sedimentology, description and correlation of sedimentary rocks. Emphasis will be on stratigraphic sequences, facies analysis and environmental interpretation. Laboratory work will include techniques for analysis of sedimentary fabric, texture, structure, composition and sequence in sediments and sedimentary rocks. Offered spring term in alternate years. Unsuited for distribution. Prerequisite: **Geology 103**.

420 Geomorphology

The patterns and genesis of landforms with emphasis on fluvial processes, climatic factors and environmental implications. Laboratory work will include the interpretation of topographic maps and aerial photographs and the study of geomorphic features and processes in areas near the campus. An independent study project or research paper will be required. Offered fall term in alternate years. Unsuited for distribution. Prerequisite: **Geology 102**.

430 Oceanography

Principles and processes largely of a physical nature such as waves, tides, currents and submarine volcanic and seismic action. Modern geophysical methods of study of lakes and oceans. Offered fall term in alternate years. Prerequisite: **Geology 101**. Five hours credit.

460 Geology Seminar

Student investigations of geologic literature and problems. Spring and/or fall departmental field trips. Required of geology and earth science majors in both the junior and senior years. Offered fall, winter and spring terms. Unsuited for distribution. Ordinarily, participation in three quarters required for one hour credit.

480 Selected Topics in the Geological Sciences

Topics covered will reflect special interests of students and/or the instructor. Those subjects involving regional geology or specific field problems will involve field trips and/or field work in the area of interest, with preparation of appropriate guides, reports, maps, sections, etc. Offered on request. Unsuited for distribution. Prerequisite: Permission of the instructor. One to five hours credit.

499 Special Study Seminar

Supervised experiments, discussions and report writing. Topics and hours by arrangement. Required of geology-earth science majors. Offered every term. Unsuited for distribution. Prerequisite: Consent of instructor. One to five hours credit.

SCHOOL OF HEALTH SCIENCES

The School of Health Sciences (SHS) currently offers major programs in Biomedical Communications, Community Health Planning, Health Sciences, Medical Technology, Nursing, Preprofessional Studies and minor programs in health sciences and microbiology. Areas of concentration include health services administration, nursing home administration, health education, health planning and public health. The School of Health Sciences also offers a non-degree certificate program in Emergency Medical Training.

Students in all health sciences programs will be expected to complete the SHS core courses during their freshman and sophomore years—whenever possible, with more specialized courses for each major program to be taken during the student's junior and senior years. Students in health sciences programs are required to complete CAS professional distribution requirements except in the case of students in the Preprofessional Program, who may choose the general degree option.

Students planning to obtain degrees in nursing, medical technology or preprofessional studies must make formal application for acceptance into the upper division level of their programs during their sophomore year (junior year for junior or community college transfer students), as explained in the SHS program descriptions. Freshman and transfer students should discuss their programs with SHS faculty advisers prior to course scheduling. Entering students planning to transfer to other colleges or universities for health science programs not currently offered at Grand Valley, (e.g. physical therapy, occupational therapy) should declare a health sciences major and be counseled by SHS faculty concerning the requirements for such programs.

CORE PROGRAM

Unless otherwise noted, the following courses will be required of students in all health sciences programs. These courses should, whenever possible, be taken during the student's freshman and sophomore years: **SHS 100, 200, 208, 210, 212 and 308; Mathematics 100; Chemistry 111, 112 and 231-232.**

SHS - Physics 200 and Chemistry 231-232 are not acceptable for preprofessional students; however, **Physics 220-221-222, Chemistry 241-242 and Chemistry 461-462** are required.

SHS 250, 260 and 340 are required of nursing students, and are strongly recommended for students in other health science programs.

BIOMEDICAL COMMUNICATIONS

The biomedical communications program is an interdisciplinary program designed to educate students in the use of many types of audio and visual media for use in health and medicine. The biomedical communicator is increasingly becoming a vital member of the overall biomedical team. The communicator must pool together the research and observations of those he assists and create a direct and meaningful communications package that best conveys ideas and data. He works directly with health-oriented personnel such as physicians, surgeons, nurses, engineers, chemists, biologists, technicians, educators, etc. Areas of concentration include graphics, design and layout, photography, television and video tape, as well as a knowledge of health sciences and management. The off-campus internship in a biomedical communications setting during the student's senior year gives the student the chance to display a working knowledge of the acquired skills and to actively function as a member of the biomedical team. The program is diversified yet multimedia oriented enough to enable a graduate to adapt to the many changing and specialized career choices. Completion of the program leads to a bachelor of science degree in biomedical communication and can lead to certification as a Registered Biomedical Photographer (RBP).

CAREER POSSIBILITIES

A biomedical communicator may perform or specialize in any number of the following tasks in a hospital or other health-related setting: surgical photography; close up photography; darkroom processing; construction of displays and graphic presentations; operation of closed circuit television; production of videotapes and films; illustration of medical textbooks; design and layout of a hospital news bulletin; organizing and presenting audio slide programs; designing education modules as a teaching aid for health science and medical students; producing communications packages that best sell an idea or product designed by a physician or technician.

PROGRAM REQUIREMENTS

General requirements include five credit hours in writing skills; 10 credit hours of Group I (arts) courses; 10 credit hours

of Group II (humanities) courses; and 10 credit hours of Group III (social sciences) courses. In addition, specialized and professional courses in health sciences, art, graphics, photography, media and biomedical communications are required. Specific program course requirements are available from the director of the biomedical communications program or the director of the School of Health Sciences.

COMMUNITY HEALTH PLANNING

Community Health Planning has been approved by the State Department of Higher Education as a degree program, and courses and areas of emphasis are being developed. Details can be obtained from the director of the School of Health Sciences.

HEALTH SCIENCES

The program, leading to a B.S. degree in health sciences, includes 68 credit hours of electives which gives students the flexibility of taking courses to fit their particular needs and interests. This program is especially suitable for students who desire a 4:1 medical technology program, who plan to apply to graduate school or who do not want to enter more specific career-oriented SHS programs.

Program Requirements

General requirements: Five credit hours in writing skills, 10 credit hours of Group I (arts) courses, 10 credit hours of Group II (humanities) courses and 10 credit hours of Group III (social sciences) courses.

Specific requirements: **Biology 190, SHS 100, 208, 210, 212, 280, 308** and 15 quarter hours of SHS electives of which 10 credits must be 300- or 400-level SHS course; **Mathematics 110,* Chemistry 111,* 112, 231 and 232, or Chemistry 241, 242, 461-462 and SHS 200 or Physics 220, 221 and 222, or Physics 230, 231 and 232.**

Students preparing for advanced studies (i.e. graduate school) would elect the advanced chemistry and physics options: **Chemistry 241, 242, 461-462 and SHS 200 or Physics 200, 221 and 222, or Physics 230, 231 and 232.**

HEALTH SCIENCES MINOR PROGRAM

Students seeking a minor in health sciences are required to

*Unless a qualifying exam can be passed.

complete a total of 32 credit hours which must include **SHS 100, Biology 190,* SHS 210 and 202 or 208, 308 and 220**. Additional credits must be taken from SHS listings.

Biology majors seeking a health science minor design their minor program to fit their needs in consultation with an SHS faculty adviser.

MEDICAL TECHNOLOGY

Medical technologists qualify for positions requiring general or specialized laboratory experience in hospital laboratories, clinics and physicians' offices. In large hospitals, a medical technologist may be occupied principally or entirely with hematology, bacteriology or chemistry. There are opportunities for graduates with sufficient ability to work in research and teaching laboratories associated with larger clinics, foundations, universities and industry.

Students may prepare themselves for training in a school of medical technology by acquiring a degree in biology, chemistry or health sciences. Health science students interested in a career in medical technology may elect the 3+1 program or the preprofessional studies program. Students contemplating attending graduate school or wishing to maximize their medical career options are advised to undertake the preprofessional studies curriculum.

Persons currently working in the clinical laboratory, and wishing to review or extend their knowledge in the laboratory sciences, may elect courses and workshops offered through Laboratory Science Continuing Education and/or elect regular college courses on a part-time basis.

3+1 MEDICAL TECHNOLOGY

Students in this program take three years of study in general education and science on the GVSC campus, followed by one year of professional training in-residence at one of the 10 affiliate schools of medical technology.* Upon completion of the fourth year, the student is awarded the B.S. degree and is

*Butterworth Hospital, St. Mary's Hospital, and Blodgett Memorial Hospital, Grand Rapids; Hackley Hospital, Muskegon; Munsen Medical Center, Traverse City; St. Joseph Mercy, Pontiac; Burns Clinic, Petoskey; St. Luke's Hospital, St. Mary's Hospital, Saginaw; and Bronson Methodist Hospital, Kalamazoo.

eligible to take the certifying examination of the Board of Registry of Medical Technologists of the American Society of Clinical Pathologists.

Admission Requirements

Students must make formal application for admittance to the program no later than April 15 of their sophomore year. The applicant must have completed a minimum of 70 quarter hours and at least five courses in science and mathematics, three of which must be laboratory courses, at the time of application. Sophomores who have not met these requirements must apply by October 15 of their junior year.

Transfer students who enter as juniors are encouraged to apply for admission to the program as soon as their admission to Grand Valley has been confirmed. To insure notification of acceptance before June 15, transfer students should apply no later than April 15 of their sophomore year.

Although each applicant will be considered on an individual basis, at least a 2.5 GPA and demonstrated proficiency in laboratory science will be required for admission. Sophomores who fail to meet the qualifications may, at the discretion of the admissions committee, be permitted to re-apply during their junior year.

Program Requirements

General requirements: Five credit hours in writing skills, 10 credit hours of Group I (arts) courses, 10 credit hours of Group II (humanities) courses and 10 credit hours of Group III (social sciences) courses.

Specific requirements: **Biology 190, SHS 100, 208, 210, 212, 220, 308, 392 and 471, 472, 473 (Medical Technology Internship); Chemistry 111*, 112, 231, 232, 113 and 222; Physics 200; and Mathematics 110.***

LABORATORY SCIENCE CONTINUING EDUCATION

A series of credited and non-credited evening and weekend short courses, workshops and term courses in topics relevant to persons concerned with medical laboratory careers. Offerings will include such specific topics as: basic medical sciences, hematology, clinical chemistry, immunohematology,

*Unless qualifying exam can be passed.

medical microbiology, management and communications and teaching methods.

Persons interested in this program may learn the special details regarding the topics and dates of the offerings, admission, etc., by visiting either the Continuing Education Office in the Campus Center or the School of Health Sciences in Lake Michigan Hall.

MICROBIOLOGY MINOR

This program is designed to increase students' knowledge and understanding of microbiology and mastery of associated techniques. A minor in microbiology will increase a student's employment opportunities at the baccalaureate level as well as help prepare the student for advanced studies at the graduate or professional level. Graduates may find employment as microbiologists in state public health laboratories, medical laboratories and in industrial pharmaceutical companies.

The student choosing a microbiology minor must earn at least 30 credits, including all courses in group A and the balance from group B.

Group A: **SHS 210, 212, 412 and 413**
 Biology 450 and 451
 SHS 390-Biology 390, Seminar,
 Topics in Microbiology

Group B: **SHS 300, 410, 431, 432 and 433**
 SHS 390-Biology 390, Seminar,
 Topics in Microbiology
 SHS or Biology 399, Readings
 (in Microbiology)
 SHS or Biology 499, Research
 (in Microbiology)

NURSING

Grand Valley received approval from the Michigan State Department of Education in 1971 to develop a baccalaureate program in nursing. The State of Michigan Board of Nursing gave initial approval of the curriculum design and plan for implementation on September 22, 1972. The first class of students was admitted to the clinical component of the program in January, 1973.

The nursing program is designed for academically superior students and will provide students with learning opportunities that will enable them to function as knowledgeable and skilled nurse practitioners in many health care settings.

The nursing program takes a minimum of four years to complete. The first two years consists primarily of the SHS core program. At the end of the second year, the student is able to formally apply for admission into the upper-level or junior-senior years of the program, which will consist of nursing courses and clinical experiences under the supervision of SHS nurse faculty.

Admission Requirements

Because the size of the upper-level classes is limited by the availability of nurse faculty and clinical facilities, acceptance to the College of Arts and Sciences will not automatically insure acceptance into the program's upper level. A student's acceptance into the upper level depends upon three conditions: (1) completion of all the courses in the core program, (2) acceptable grade point average (2.5 GPA is considered minimal); and (3) approval of admission into the program by the director of nursing education. If a student fails to gain acceptance into the nursing program, he or she will be advised regarding the availability of student openings in nursing programs at other institutions (LPN, diploma RN, ADN and BSN), as well as of other programs in the health field.

Students are advised to contact Grand Valley's counseling office and formally declare their interest in nursing as soon as they arrive on campus as full-time students. Transfer students are eligible to apply for admission into the clinical portion of the nursing program provided that they have completed course work equivalent to that required in the SHS core program.

Program Requirements

General requirements: Five credit hours in writing skills, 10 credit hours of Group I (arts) courses, 10 credit hours of Group II (humanities) courses. Group III (social sciences) courses are included in the specific program requirements.

Specific requirements: In addition to the general requirements listed above, the following courses are required: **Mathematics 110,* Biology 190; Chemistry 111,* SHS 200, 208, 210, 212, 250, 260, 280, 308, 320, 321, 322, 340, 420, 421 and 422.**

PREPROFESSIONAL STUDIES

This program consists of courses prescribed by professional

*Unless a qualifying exam can be passed

schools (i.e. medical, dental, osteopathic and graduate) as essential to the successful completion of the professional school curriculum, plus electives necessary to provide the educational breadth and maturity required by professional schools. Although the requirements of professional schools are basically the same, there are some differences in comparing one professional school with another. Since it is impossible to tailor a curriculum to meet simultaneously the requirements of every professional school, it is the student's responsibility, in consultation with an adviser, to see that the requirements are fulfilled for the particular professional school(s) in which the student is interested.

Although it is not absolutely necessary for a student interested in a professional school to be a preprofessional major, this program has been designed to meet the requirements of most professional schools, especially those in Michigan.

Admission Requirements

To be formally admitted to this program students submit a formal application (obtained from the School of Health Sciences) to the Preprofessional Studies Committee by April 15 of the sophomore year. The applicant must have completed a minimum of 70 quarter hours and at least five courses in science and mathematics at the time of application. Sophomores who have not met these requirements may apply by April 15 of their junior year. Transfer students who enter as juniors may also apply by April 15 of their junior year. Only under extremely rare circumstances will students be admitted to the program after their junior year.

Although each applicant is considered on an individual basis, at least a 3.00 GPA and a demonstrated proficiency in science are required for admission to the program. Sophomores who fail to meet the qualifications may, at the discretion of the admissions committee, be permitted to re-apply during their junior year.

Program Requirements

The following curriculum leads to the B.S. or B.A. degree in preprofessional studies in health sciences under the general distribution requirements and fulfills the requirements for admission to medical schools in Michigan. In addition, it includes courses that are required and/or strongly recommended by the majority of the nation's medical, dental, osteopathic, and graduate schools.

General requirements: Five credits in writing skills, 15 credits of Group I (arts) courses, 15 credits of Group II (humanities) courses and 15 credits of Group III (social sciences).

Specific requirements: **SHS 100** or **Biology 105; Biology 190; SHS 208, 210, 220, 300, 308, 350 and 391; Chemistry 111,* 112, 113, 241, 242, 251 and 461-462; Physics 220, 221 and 222 or 230, 231 and 232; and Mathematics 121. Biology 420-1, Chemistry 222 and SHS 390** are strongly recommended. Other recommended electives include **Biology 220, Mathematics 152, 201, 202, 203, 215 and Chemistry 243.**

EMERGENCY MEDICAL TRAINING

EMT is a non-degree program designed for the training of individuals working directly with emergency services. These include ambulance drivers, firemen, policemen and other related teams of individuals concerned with the provision of emergency medical services. Course work includes an eleven credit two-term course in emergency medical training (**SHS 051**) which includes techniques of emergency medical care with emphasis on cardiopulmonary resuscitation and telemetry. Upon successful completion of this course the student is eligible to receive Dunlop certification and GVSC-EMT certification. The second course, **EMT-C (SHS 151)** is a six-credit one-term course in cardiology and prepares the student to interpret life-threatening arrhythmias and to be knowledgeable in definitive treatment of cardiac patients. Permission of the director of the EMT program is required for registration.

COURSES OF INSTRUCTION

Each course carries five hours of credit, except where noted.

051 Emergency Medical Training (EMT)

Techniques of emergency medical care including cardiopulmonary resuscitation and telemetry. Upon successful completion of **EMT 051**, the student is eligible to receive Dunlop certification and GVSC-EMT certification. Prearranged permission of the instructor required. Eleven credit hours; two terms.

100 Man and Disease

Man's attempt to understand and combat disease currently as well as throughout the course of history. Current thoughts in the areas of mental and emotional health, functioning of the human body, nutrition, and trends and techniques in health practice will be discussed.

*Unless a qualifying exam can be passed.

151 Emergency Medical Training - Cardiology

A six-credit one-term course in cardiology that prepares the student to interpret life-threatening arrhythmias and to be knowledgeable in definitive treatment of cardiac patients. Permission of the director of the EMT program is required for registration.

200 Physics for the Health Sciences

Topics in physics especially applicable for students in health sciences, including electricity, mechanics, sound, and electromagnetic radiation. Lecture and laboratory. Prerequisites: **Mathematics 110** and **Chemistry 111**.

202 Human Anatomy and Physiology

An introduction to the fundamentals of structure and function of the human body. Cannot be counted toward an SHS major other than medical audiovisual technology. Lecture and laboratory. Prerequisites: **Biology 190** and **Chemistry 111**.

208 Human Anatomy

An attempt to fill the gap between Marcus Welby and medical school anatomy. Gross, microscopic and development anatomy are covered in a systems sequence. Basic function is correlated with structure. Lecture and laboratory. Prerequisites: **Biology 190** and **Chemistry 111**.

210 Mammalian Cytology and Genetics

The interrelationship of structure and function of cells; concepts of gene expression with examples drawn primarily from man. Lecture and laboratory. Prerequisites: **Biology 190** and **Chemistry 111**.

212 Bacteriology

Fundamental principles and techniques of bacteriology, including bacterial morphology, physiology, classification and genetics. Special emphasis is placed on pathogenic microorganisms. Lecture and laboratory. Prerequisites: **Biology 190** and **Chemistry 111**. **SHS 210** or **Biology 310** are recommended.

220 Health Care Delivery

An introduction to health care delivery in the United States today. Lectures and discussions focus on the problems, trends and proposals of financing, designing and delivery of health care. The course is intended to help health science students be more enlightened consumers and providers of health care. Prerequisite: Sophomore standing or above. Two credits.

230 History of Medicine

A study of the evolution of our modern understanding of anatomy, physiology, disease, treatment and the history of the health care profession. Emphasis is placed on the period of modern medicine (after 1700). Prerequisites: **SHS 100** or permission of instructor. Four credits.

250 Human Growth, Development and Maturation

Somatic, psychological and sociological factors which contribute to healthy human maturation from conception through death. Lecture and laboratory. Prerequisites: **Psychology 201**. A course in anatomy is recommended.

260 Physiology of Human Behavior

Interrelationships between physiological and psychological phenomena in individuals in both normal and pathological situations. Prerequisites: **Psychology 201, Biology 190, Chemistry 111** and **SHS 202** or **208** or **Biology 302**. **SHS 308** is recommended.

300 Biophysics of Macromolecules

The molecular basis of cell structure and function including aspects of heredity, regulation of cellular activity, mechanisms of hormone activity and regulation. Prerequisites: **Physics 200** or **Physics 220, 221** and **222**, or **Physics 230, 231** and **232**; **SHS 210** or **Biology 310** and **Chemistry 232** or **461** (may be taken concurrently).

308 Mammalian Physiology

Examination of nerve, muscle and endocrine physiology, followed by a study of regulatory mechanisms of correlated body functions in mammals. Organ and system physiology is related to control mechanisms at the cellular and biochemical level. Lecture and laboratory. Prerequisites: **SHS 208** and **210, Chemistry 232** or **461-462, Physics 200** or **220, 221** and **222** or **230, 231** and **232**.

310 Hematology

An in-depth study of normal blood cell development, morphology and function. Some common blood dyscrasias will be studied with emphasis on the biochemical and cytological changes involved in the disease process. Lecture. Prerequisites: **SHS 208** and **Chemistry 232** or permission of instructor. Three hours credit.

311 Clinical Hematology Laboratory

An introduction to a wide variety of clinical laboratory procedures with emphasis on accurate performance, theoretical basis of the tests and correlation of the data to disease. Prerequisite: **SHS 310** or concurrent registration. Three hours credit.

320 Nursing I

The concept of wellness; disease prevention and maintenance of health through a variety of methodologies including clinical laboratories in nursing homes, health department clinics and neighborhood health centers. Prerequisites: Completion of SHS core curriculum and admission into the Nursing Program. Ten hours credit.

321 Nursing II

The state of relative wellness (episodic illness), and the factors involved in helping people of all ages to regain and extend their level of optimal wellness. Clinical laboratories are provided in a variety of community health care settings. Prerequisite: **SHS 320**. Ten hours credit.

322 Nursing III

The concept of acute illness and the nursing process as it relates to the hospitalized patient and his family. Clinical laboratories are provided in an intensive care unit, emergency room, adult medical and surgical units and a pediatric unit in an acute care facility; an acute care psychiatric facility is also used. Prerequisite: **SHS 320** and **321**. Ten hours credit.

323 Instrumental Techniques in the Clinical Laboratory

Through lecture and laboratory practice, students will become familiar with the theory and techniques essential to the use and maintenance of electronic instruments used in clinical chemistry. Prerequisites: Quantitative analysis or permission of instructor. Three credits.

340 Health Management

A two-phase course designed to explore the managerial-organizational aspects of health care delivery and the interpersonal components of team development and operation in the management and care of individual patients. Format includes lecture and experience-based learning in interpersonal, group and intergroup relations. Focus in this portion of the course is on personal growth of course members.

350 Mammalian Histology

The morphological and functional characteristics of the four basic tissue types. This course is presented in self-paced autotutorial modules. No laboratory. Prerequisites: One of the following courses: **SHS 202** or **208** or **Biology 302**. Two hours credit.

351 Histological Microtechnique

Preparation of tissues for microscopic examination. Laboratory. Prerequisites: **Biology 190**, **Chemistry 111** and **112**, **Biology 302** or **SHS 208** and **350** (may be taken concurrently). Two hours credit.

390 Health Sciences Seminar

A review of current scientific literature on selected topics; oral presentations by students. Topics will vary from quarter to quarter and will be announced in advance of registration. Prerequisite: Permission of instructor. Two hours credit.

391 Preprofessional Seminar

Professional school application procedures, MCAT and DAT information. Student-presented topics on selected areas of health care. Required of preprofessional students during their junior year. No credit.

392 Medical Technology Seminar

An introduction to the field of medical technology and the influences on the students' professional education and career development. Lectures and field trips. Required of medical technology majors during their sophomore year (junior year for transfer students). Two credits.

399 Readings in the Health Sciences

Independent, supervised readings on selected topics. Credits and topics must be prearranged with the faculty sponsor(s) and approved by the program chairperson. May be elected for up to five hours credit toward a major in any health science program or will permission for group science or biology majors. One to three credits.

408 Advanced Physiology

Physiological regulation with an emphasis on normal control mechanisms, tolerance limits and dysfunction. Topics may include control of locomotion and posture, endocrine control of organic metabolism and renal control of acid-base and elec-

trolyte balance. Lecture. Prerequisites: **SHS 308** or **Biology 404-405, Chemistry 232** or **461-462** or permission of instructor. Three hours credit.

409 Advanced Physiology Laboratory

Project-oriented laboratory covering selected topics from **SHS 408**. Prerequisites: **SHS 408** or concurrent registration. Three hours credit.

410 Immunology

Fundamentals of theories and techniques in immunology, including basic properties of antigens and antibodies, molecular structure of human immunoglobulins, theories of antibody formation and antigen-antibody reactions *in vivo* and *in vitro*. Lecture and laboratory. Prerequisites: **SHS 212** and **Chemistry 232** or **461-462**.

412 Medical Bacteriology

A study of the pathogenesis, pathology and epidemiology of bacterial diseases with emphasis on host-parasite interactions. Concepts of isolation and identification of pathogens will be included. Lecture. Prerequisite: **SHS 212**. **SHS 410** is recommended. Three credits.

413 Medical Bacteriology Laboratory

Isolation and identification of the more common bacterial pathogens with emphasis on current clinical methods and demonstrations of bacterial virulence in animal models. Prerequisite: **SHS 412** or concurrent registration. Three credits.

420 Nursing IV

Emphasis on the acutely ill patient and his family. Students will work with patients of all age groups and their families in acute care facilities (as well as in patients' homes). Prerequisites: **SHS 320, 321** and **322**. Ten hours credit.

421 Nursing V

Exploration of the multifaceted problems of the chronically ill person, his family, and the concomitant effects on the community. Prerequisites: **SHS 320, 321, 322** and **420**. Ten hours credit.

422 Nursing VI

Development of leadership skills as they apply to providing professional nursing care for patients. Students will select the clinical setting. Prerequisites: **SHS 320, 321, 322, 420** and **421**. Ten hours credit.

431 Pathogenic Organisms I - Virology

A study of the physical, morphological and metabolic characteristics of viruses. Emphasis is placed on pathogenesis, pathology and control mechanisms of viral diseases in man. Prerequisites: **SHS 212** or **Biology 450-451**. Two hours credit.

432 Pathogenic Organisms II - Mycology

Fundamental principles and techniques in the study of fungi. Emphasis is placed on specific mycoses of man. Prerequisites: **SHS 212** or **Biology 450-451**. Two hours credit.

433 Pathogenic Organisms III - Parasitology

A study of parasites and mechanisms of parasitism in man. Parasites and the methods of their detection are studied in

relationship to the site of parasitism. Prerequisites: Permission of instructor. Two hours credit.

NOTE: SHS 431, 432 and 433 are offered consecutively within one quarter. Students may take any one or all of the series.

471, 472 and 473 Medical Technology Internship

Theory and practicum in medical laboratory sciences under the direction of an affiliate school of medical technology and the director of the GVSC program. The 45 credits for the 12-month internship are distributed as follows: hematology and coagulation-10 credits; microbiology (bacteriology, mycology, virology and parasitology) - 10 credits; clinical chemistry (chemistry, urinalysis and radioisotopes) - 15 credits; immunohematology (blood bank and serology) - 10 credits.

481 Topics in Hematology

A variety of short courses and workshops specifically designed for practicing laboratory personnel, each of which focuses on a specific topic in hematology of interest to laboratory personnel. 0-3 credits.

482 Topics in Immunology

A variety of short courses and workshops specifically designed for practicing laboratory personnel, each of which focuses on a specific topic in immunology of interest to these personnel. 0-3 credits.

483 Selected Topics in Laboratory Science

A variety of short courses and workshops, specifically designed for practicing laboratory personnel, in non-science topics of interest to these personnel. Topics will include such areas as communications, management, computer science and teaching. 0-3 credits.

484 Topics in Clinical Chemistry

A variety of short courses and workshops, specifically designed for practicing laboratory personnel, each of which focuses on a specific topic in clinical chemistry of interest to these personnel. 0-3 credits.

485 Topics in Medical Microbiology

A variety of short courses and workshops, specifically designed for practicing laboratory personnel, each of which focuses on a specific topic in medical microbiology of interest to these personnel. 0-3 credits.

499 Research in the Health Sciences

Independent, supervised research in special areas of the health sciences. Credits and topic must be prearranged with faculty sponsor(s) and approved by the program chairperson. May be elected for up to five hours credit toward a major in any health science program or, with permission, for group science or biology majors. One to five credits.

HISTORY

REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS

Students majoring in history are required to take at least 45

hours, including **History 105, 106, 205, 206** and either **490** or **495**. Majors must maintain a GPA of at least 2.00 in courses in the department. Majors are expected to balance their selection of courses between American and European history. Majors must select at least three 300- or 400-level courses (not more than five credit hours in **History 399** and **499**). Majors may elect either the structured or the general distribution option.

Students minoring in history must complete at least 30 hours in history, including at least 10 hours chosen from courses at the 300- and 400-level; and must maintain a GPA of at least 2.00 in courses in the department. Minor course programs should be distributed between American and European offerings, and must be approved by the department.

Students planning to enter a program of graduate study in history should earn a B.A. degree, but also consider selecting courses in statistics and computer programming in addition to courses in literature and other social studies fields and additional language study.

Students preparing to teach history in the public schools may earn either a B.A. or B.S. degree. The B.S. degree requirements allow the secondary certification candidate more opportunity to elect courses in literature or related social science fields or in statistics. While students preparing to teach may select either the structured or general distribution option, the general option will provide more electives and greater scheduling ease.

The Breen Prize of \$100 for the best essay on an historical topic is awarded by the department each year. Essays are due by the first week of spring term. Details are available in the History Department office.

Advanced placement tests are offered for **History 105, 106, 205** and **206**.

TYPICAL CURRICULUM FOR A B.S. DEGREE IN HISTORY

- First Year: **History 105** and **106**
 One writing skills course
 Two arts distribution courses*
 Two social science distribution courses
 One mathematics and science distribution
 course
 One humanities distribution course

*Students seeking a B.A. degree should choose an introductory language sequence.

One arts distribution course
Two mathematics and science distribution courses
Three electives*

Third Year: Three 300- or 400-level history courses
Six electives**

Fourth Year: **History 490 and 495**
One history elective (300- or 400-level)
Seven electives***

COURSES OF INSTRUCTION

Each course, except where noted, carries five hours of credit. Courses numbered in the 100's and 200's are introductory and are designed primarily for freshmen and sophomores; courses numbered in the 300's and 400's are intended for interested juniors and seniors. Senior studies seminars, **490** and **495**, and independent reading and study, **399** and **499**, are the only courses that have prerequisites and are designed for majors and other advanced students.

105 Western Civilization to 1500 A.D.

A study of the development of the Western tradition. Lectures, reading and discussions. Recommended for distribution. Required for history majors.

106 Western Civilization, 1500 to the Present

A continuation of **History 105**. Recommended for distribution. Required for history majors.

205 American History to 1877

Analysis of the development of American society from colonies to nation. Focus on formation of American character and society, the role of democracy in American life, and the impact of the Revolution and the Civil War on American values and political institutions. Recommended for distribution. Required for history majors.

206 American History, 1877 to the Present

Analysis of major themes and developments in United States history. Emphasis on the evolution of political systems in an

*Candidates for teacher certification should choose **Psychology 201** and **301**, and a minor area course. Students seeking a B.A. degree should complete the language requirement.

Candidates for teacher certification should choose Teacher Aiding (Education 303, 305 or 307**) and minor area courses.

***Candidates for teacher certification should choose Student Teaching (**Education 403, 405 or 407**) and complete minor area courses.

urban industrial society, the development of a mass production economy, the emergence of America as a world power and the quest for social equality. Recommended for distribution. Required for history majors.

250 Latin America to 1825

Examination of developments in Iberian Peninsula and Latin America from 1479 to 1825, with discussion of leading facets of colonial life and the beginnings of "nationalistic" expression in the colonies. Allowed for distribution.

251 Latin America, 1825 to the Present

Emphasis on social, political and economic problems which face the republics of Latin America; with comparisons of different forms of "revolutionary movements" in selected countries. Allowed for distribution.

275 Minority Peoples in United States History

A study of the three major minority groups in the United States: Indians, Blacks, and ethnics. Emphasis is placed on the changing patterns of interaction between these groups and the larger society since 1850 and the dynamics of minority group development. Allowed for distribution.

280 Critical Issues in American History

Historical study of various topics (one selected each time the course is offered) that are of current interest and concern to the academic community. This course is of particular value to lower-division students and non-history majors who are concerned with complex contemporary social questions and who wish to acquire a historical perspective in relation to them. Allowed for distribution.

288 Eastern European Civilization: Medieval Russia

From the ancient Slavic princedoms through the Mongol conquest and the rise of Muscovy, a description and analysis of artistic, cultural, social, economic and political developments, with special attention to the geographic and historical factors which produced an evolution contrasting with that of the West. Offered in alternate years; next offering 1975-1976. Allowed for distribution.

310 Colonial and Revolutionary America

Concentration on various social and intellectual forces that created the dynamics of American colonial society and the impact those forces had in determining the course of the Revolutionary and Constitutional epochs. Allowed for distribution. (Formerly 305.)

315 Nineteenth-Century America

Analysis of American society in the process of change from a traditional, pre-industrial social order to a complex industrialized nation. Allowed for distribution.

317 History of American Foreign Relations

Historical development of United States relations with foreign powers. Concentration in significant periods of policy formation and change, with attention to factors determining policy. Allowed for distribution. (Formerly 405.)

- 319 Economic and Business History of the United States**
An analysis and description of the growth of a capitalistic-industrial economy. Special focus will be placed on its origins, patterns of development, institutions, entrepreneurial contributions and general social impact. Allowed for distribution.
- 325 Twentieth-Century America**
An analysis of the forces that have shaped society in contemporary America: Progressive Movement, the 1920's, New Deal and the world crises of the depression decade. Allowed for distribution.
- 327 American Urban History**
Analysis of organization and change within the American urban environment using a conceptual framework of city-building through time. Chronological study with emphasis on the modern American industrial city. Allowed for distribution. (Formerly 409.)
- 329 American Cultural and Intellectual History**
Focus on major intellectual traditions, the interrelation between intellectual formulations and the general social context and the development of a popular culture in the 19th and 20th centuries. Particular emphasis will be placed on the effects of changing patterns of values on American thought and life. Allowed for distribution. (Formerly 415.)
- 345 The Classical World**
Examination of trends or periods of the Greek and Roman world. Allowed for distribution.
- 355 The Middle Ages**
Political, economic and cultural aspects of medieval Europe. Allowed for distribution.
- 358 Renaissance and Reformation**
Representative political, economic and cultural aspects of the period 1300-1555, with emphasis on humanism and on religious reform. Allowed for distribution. (Formerly 465.)
- 360 Tudor and Stuart England**
English history from 1485 to 1714 with appropriate attention to political, constitutional and religious issues. Offered in alternate years; next offering 1974-1975. Allowed for distribution.
- 365 Early Modern Europe**
Development of the early modern state system in western Europe with appropriate consideration of attendant economic, social and intellectual developments. Offered in alternate years; next offering 1975-1976. Allowed for distribution.
- 376 Eighteenth-Century Europe**
Traditional institutions and values of the Old Regime, the new social and political attitudes represented in the Enlightenment and the reconstruction of society and government attempted through reform and revolution. Allowed for distribution.
- 385 Nineteenth-Century Europe**
Changes in society, the economy, the state and international affairs brought about by revolutions, industrialization, nationalism and war. Allowed for distribution.

389 Imperial Russia, 1682-1917

Russia under the great Romanovs, examined as a study of the struggle to modernize this vast, backward Eurasian empire, from Peter the Great to the final revolutionary catastrophe of 1917. Offered in alternate years; next offering 1974-1975. Allowed for distribution.

390 Soviet Russia

Examination of causes and consequences of the Russian Revolution of 1917, with particular attention to the aspirations of the revolutionaries; then a study of the historical development of the U.S.S.R. in the areas of economics, politics, military and foreign affairs, culture, society and ideology. Paramount consideration given to those aspects of Soviet life most affected by the attempt to modernize rapidly through applied Marxism. Allowed for distribution.

395 Twentieth-Century Europe

Recent economic, social, political and intellectual history of Europe.

399 Independent Reading in History

Advanced supervised reading on selected topics that complement programs of individual students. Prerequisites: Previous course work in area of readings and written permission of supervising instructor before registration. One to five hours credit. Not more than five credit hours may be counted toward a history major. Prohibited for distribution.

490 American Studies

Seminar consideration of special subjects in the field of American history; subject to be announced at least one term in advance. Research papers, reading and discussions. Prerequisite: One 300-level course in American history. Prohibited for distribution.

495 European Studies

Seminar consideration of special subjects in ancient, medieval or modern European history; subject to be announced at least one term in advance. Research papers, reading and discussions. Prerequisite: One 300-level course in European history. Prohibited for distribution.

499 Independent Study in History

Advanced, supervised research on selected topics and projects that complement programs of individual students. Prerequisites: Previous course work in area of study and written permission of supervising instructor before registration. One to five hours credit. Not more than five hours may be counted toward a history major. Prohibited for distribution.

MATHEMATICS

REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS

The Mathematics Department offers a number of options to the student interested in a career in mathematics. First, the mathematics major may choose to work toward either the B.A. or the B.S. degree. The student may also select either the

general or the structured distribution program. Finally, the student may desire to follow one of a number of different emphases (described below) in fulfilling the course requirements for the major in mathematics.

All mathematics majors must complete a minimum of 45 credit hours of mathematics, planned with the approval of a departmental faculty adviser. The 45 hours must include **Mathematics 201, 202, 203, 225** and either **293** or **499**. At least three courses in the major must be in the College of Arts and Sciences at the 300-level or higher, and at least two of these must be at the 400-level (excluding **499**).

A cognate requirement for the B.S. degree in mathematics is one of the following two-course sequences: **Physics 230** and **History of Science 435**, **Physics 230** and **231**, **Economics 210** and **Business 490** or **Economics 211** and **Business 490**.

Credit in the following courses may not be applied toward the major: **Mathematics 101, 103, 109, 110, 121, 125, 215, 221, 222, 305, 307** and **435**. There are two exceptions: **Mathematics 215** may be included for a major in the statistics emphasis provided **Mathematics 216, 311** and **415** are also included; and **Mathematics 222** may be included for a major who obtains the elementary teaching certificate.

The minor sequence in mathematics must include **Mathematics 201, 202, 225, 341, 420** and one additional course selected from **152, 203, 311, 321, 345** and **422**. At least two of these courses, at the 300-level or above, must be taken in the College of Arts and Sciences. These requirements may be waived only by action of the Mathematics Department. Students are encouraged to obtain prior approval of their minor program by the department.

A major in mathematics may include one or more of the following emphases:

Elementary or Secondary Certification

Majors who are seeking elementary certification are required to take **Mathematics 222, 341, 345** and **420**. Majors seeking secondary certification are required to complete **Mathematics 341, 345** and **420**.

Statistics or Actuarial Mathematics

Majors with this emphasis should include **Mathematics 215, 216, 311** and **415** in their programs.

In addition, students interested in statistics should have a good background in computers. Students interested in actuarial science should have a good background in business and economics. Many students with this background take one or two of the actuarial exams which are required for working as an actuary in an insurance company. These national exams can be taken on the Grand Valley campus in November and May under the supervision of the Mathematics Department.

Computer Science

Majors with this emphasis should include **Mathematics 152, 252, 255, 355 and 452** in their programs, and are encouraged to take **Mathematics 153, 215, 230, 345 and 405**.

Applied Mathematics

Majors who are seeking careers as mathematicians in industry or governmental agencies should include **Mathematics 152, 215, 216, 302, 405 and 406** in their programs.

Pure Mathematics

Majors who plan to do graduate work in pure mathematics should complete **Mathematics 400, 401, 402, 422 and 441**. Study of French, German or Russian is strongly recommended.

The department strongly recommends that all students interested in mathematics discuss career plans with one or more members of the mathematics staff. It is advantageous for a prospective major to obtain an adviser in the Mathematics Department as soon as possible. In addition to advice regarding possible program emphases and course selections in mathematics and related fields, an adviser is able to give valuable information regarding career opportunities.

TYPICAL CURRICULUM FOR A MAJOR IN MATHEMATICS

First Year: **Mathematics 121, 201 and 202** or **201, 202 and 203**
 Two arts distribution courses
 Two humanities distribution courses
 Two social sciences distribution courses

Second Year: **Mathematics 293**
 Two mathematics electives
 Two cognate courses
 One arts distribution course
 One humanities distribution course
 One social sciences distribution course
 One elective

- Third Year: Two or three mathematics electives
(300-level or higher)
Electives
- Fourth Year: Two or three mathematics electives (at least
two at the 400-level)
Electives

COURSES OF INSTRUCTION

Each course, except **Mathematics 152, 293 and 499**, carries five hours of credit. Any prerequisite may be waived by consent of instructor.

The Mathematics Department offers a qualifying examination to assist students in beginning their mathematical studies at the correct level. The two-part examination covers algebra, trigonometry and analytic geometry. Upon completion of the examination and after consultation with an adviser, a student will be advised whether to enroll in **Mathematics 109, 110, 121 or 201**. Students are advised to review their high school mathematics so their performance on the examination reflects their background accurately. The student is encouraged to take the most advanced of **109, 110, 121 and 201** that can be handled.

101 Introduction to College Mathematics

An overview of mathematics intended for students who wish to know what mathematics is about and how it is used but have no desire to be mathematicians. Designed for students with minimal background in high school mathematics. Topics covered are selected from symbolic logic, number theory, numeration systems, statistics, computers, graphs and networks, and mathematical structures. Recommended for General Distribution.

103 Computers in Society

Sociological and psychological implications of computers; general discussion of computer hardware and software; present and future applications of computers; study of the BASIC language. Recommended for General Distribution.

109 Elementary Algebra*

Introduction to topics covered in **Mathematics 110**. This course is designed for students who are unprepared for **Mathematics 110**. Grading is on a Pass-Fail basis. May not be counted towards a group science major or minor. Open only with permission of the Mathematics Department, granted after the qualifying examination.*

110 Algebra* (100)

Content is equivalent to most second-year high school algebra courses. Topics include the properties of real numbers, operations with polynomials and rational algebraic expressions, ex-

*See information regarding the qualifying examination.

ponents, radicals, equations and inequalities of first and second degree, linear functions and graphs and systems of linear and second-degree equations. May not be counted towards a group science major or minor.

121 Precalculus Mathematics*

Analytic geometry, analytic trigonometry, exponential and logarithmic functions. Prerequisite: **Mathematics 110** or equivalent.

125 Elementary Analysis (105)

A study of the concepts of calculus from an intuitive and historical perspective with applications in the social and biological sciences. Not part of the calculus sequence. Prerequisite: **Mathematics 110** or equivalent.

151 Computer Programming in BASIC

An introduction to the BASIC language. Students will learn to write programs in BASIC and run them from terminals. Useful to anyone who might be using the computer as a tool in later courses. Two hours of credit.

152 Computer Programming in FORTRAN (192)

Introduction to algorithms, their use in program design, flow diagrams. Implementation of problem solutions on the computer, using FORTRAN IV. Recommended for General Distribution.

153 Computer Programming in COBOL

An introductory course in data processing with emphasis on business data processing. The concepts, limitations and techniques of implementing a program on the computer using COBOL. Flow charts and computer programs will be prepared to be executed on a digital computer.

201 Calculus I*

First course in calculus. Differentiation and integration of rational and algebraic functions. Prerequisite: **Mathematics 121** or equivalent.

202 Calculus II

Continuation of **Mathematics 201**. Differentiation and integration of elementary transcendental functions. Integration techniques. Prerequisite: **Mathematics 201**.

203 Calculus III

Indeterminate forms, infinite series and multi-variate calculus. Continuation of **Mathematics 202**. Prerequisite: **Mathematics 202**.

215 Statistics I

The approach to statistical problems will be technique oriented. Descriptive statistics, probability distributions, estimation, testing hypothesis, two sample tests of hypothesis, goodness of fit, chi-square tests of contingency tables, regression and correlation and analysis of variance-one way, two way and latin squares. Prerequisite: **Mathematics 110** or equivalent.

216 Statistics II

The basic theory and concepts of the statistical methods

*See information regarding the qualifying examination.

studied in **Mathematics 215** are examined and the limitations and errors of these techniques are discussed. Prerequisite: **Mathematics 215** or consent of instructor.

221 **The Real Number System**

Development of intuitively accepted properties of real numbers, and the usual algorithms for arithmetic operations; natural numbers, integers, rational numbers and algebraic irrationals. Appropriate for elementary school teachers.

222 **Concepts of Geometry and Algebra**

The postulation method; sets, similarity and congruence. Algebraic structures; equations and inequalities; equivalence relations; algebra as a language; coordinate geometry; utilization of algebra in geometry. Appropriate for elementary school teachers. Prerequisite: **Mathematics 221**.

225 **Linear Algebra I**

Elementary linear algebra, including systems of linear equations, determinants, Cramer's Rule, matrix algebra and vector spaces of n -tuples. Prerequisite: **Mathematics 110** or equivalent.

230 **Mathematical Logic**

Sentential logic (truth-functional connectives, truth-tables and proofs); first-order predicate logic (quantifiers, symbolizing ordinary language, interpretations, validity, proofs by natural deduction and identity theory); informal proofs; theory of definition. Prerequisite: Consent of instructor.

252 **Problem Solving Using Computers**

Social implications. Computer applications in areas such as file management, gaming, CAI, simulation and modeling. Problem solving with emphasis on analysis, formulation of algorithms, and programming. Projects chosen from various applications areas including student's area of interest. Prerequisite: **Mathematics 152**.

255 **Introduction to Computer Science (195)**

Description of the computer and its logical structure; function of the parts of a computer. Algorithms, programming, language and problem solving in numerical and non-numerical situations. Prerequisite: **Mathematics 152** or equivalent.

293 **Problem Solving Seminar**

Techniques of proof including induction, direct and indirect proof. Analytic techniques. Forming and testing conjectures. Two hours of credit. Prerequisite: Consent of instructor.

300 **Intermediate Analysis**

An introduction to basic definitions and theorems of analysis. Properties of the reals, limit concepts. Prerequisite: **Mathematics 203**.

302 **Ordinary Differential Equations**

Emphasis on techniques of integration. Examples of methods used: linear equations with constant coefficients, Cauchy-Euler equations and solution by series. Brief mention of partial differential equations. Prerequisite: **Mathematics 203**.

311 **Probability**

Sample space, conditional probability, independence, Bayes'

Theorem, Bernoulli Trials, discrete and continuous random variables and their distributions, Chebyshev's inequality, joint distribution, expectation, variance, moment-generating function, Law of Large Numbers and Central Limit Theorem. Prerequisite: **Mathematics 202**.

321 **Linear Algebra II**

Systems of linear equations, vector spaces, bases, dimensions, linear transformations, matrices, determinants, reduction to canonical form, eigen-values and geometric applications. Prerequisite: **Mathematics 225**.

341 **Geometry**

Euclidean Geometry of two and three dimensions including separation postulates, parallel postulate and betweenness. Topics from non-Euclidean geometries. Prerequisite: **Mathematics 225**.

345 **Discrete Models**

Basic concepts of model building and graph theory. Particular topics in graph theory will be developed to provide a mathematical model for transportation, communication and social science problems. Prerequisite: **Mathematics 201** or **225** or consent of instructor.

355 **Organization of a Computing System**

Relationships among computer components, structures and systems. Hardware features, costs, capabilities and selection. Assembly language concepts and implementation. Prerequisite: **Mathematics 225**.

400 **Fundamentals of Analysis**

Elements of set theory, relations and functions. Countable and uncountable sets. Completeness of the Real Number System. Limits, continuity, uniform continuity and uniform convergence. Sequences and series of constants and of functions. Prerequisite: **Mathematics 300**.

401 **Real Variables**

Sets and functions, sequences of real variables and functions and Riemann integral, Lebesgue measure, measurable functions and Lebesgue integral. Prerequisite: **Mathematics 400**. Offered only as a reading course.

402 **Complex Variables**

Arithmetic and functions of a complex variable, their derivatives and integrals, Cauchy's theorem and formula, analytic continuation and residue calculus. Applications. Prerequisite: **Mathematics 300**.

405 **Numerical Analysis**

Numerical integration and numerical solution of differential equations. Numerical methods in linear algebra, matrix inversion and estimation of characteristic roots. Error propagation and stability. Prerequisites: **Mathematics 152, 225** and **302**.

406 **Applied Mathematical Analysis**

Mathematical methods of solving physical problems. Topics from Line Integrals, Vector Analysis, Fourier Series, Gamma Functions, Bessel Functions and Partial Differential Equations leading to: Legendre, Laguerre and Hermite polynomials. Pre-

requisites: **Mathematics 225** or its equivalent and **Mathematics 302**.

415 **Mathematical Statistics**

The nature of statistical inference, tests of hypotheses, sampling theory, point and interval estimation and distribution-free methods. Prerequisite: **Mathematics 311** or consent of instructor.

420 **Classical Algebra**

Theory of linear and polynomial equations in commutative rings; the rational, real, and complex number fields; the domain of integers. Fundamental theorems of arithmetic and algebra. Prerequisite: **Mathematics 225**.

422 **Algebraic Structures**

Groups, LaGrange's Theorem, homomorphism, normal subgroups, quotient groups and isomorphism theorems. Rings, ideals, integral domains, Euclidean rings, fields and Galois fields. Numerical and algebraic examples. Prerequisite: **Mathematics 321** or **420**.

430 **Foundations of Mathematics**

The origin and nature of fundamental concepts of mathematics and their foundations. Criticism and discussion in particular of the axiomatic approach, classical logic and the indiscriminate use of set theory. The principal philosophical approaches to mathematics. Prerequisite: **Mathematics 230**. Offered only as a reading course.

435 **History of Mathematics (480)**

This course deals with pre-classical, Arabic, Renaissance and modern mathematicians considered through their principal works and in relationship to the intellectual climates in which they lived. Prerequisite: Consent of instructor.

441 **Topology**

Topology of the real line and its generalizations to arbitrary sets. Subspaces, neighborhood systems, continuity and homeomorphism. Connected, compact and metric spaces. Prerequisite: **Mathematics 400** or **402**. Offered only as a reading course.

452 **Advanced Computer Project**

A computer project arranged with individual staff members with approval of the Mathematics Department. Prerequisite: **Mathematics 252** or **355** or consent of instructor.

499 **Independent Study**

Hours, credit and topic to be arranged with individual staff members with approval of the Mathematics Department.

MUSIC

REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS

The Music Department offers curricula leading to the B.A. and B.S. degrees. These programs present music in the context of a broad liberal education, prepare vocal and instrumental teachers for elementary and secondary schools, provide indi-

vidual 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.

The B.A. degree is available within the structured or general distribution options; the B.S. under the general distribution option only.

Students majoring in music must complete a minimum of 50 credit hours in music, planned with the approval of a faculty adviser in the department. Course requirements are as follows:

	B.A. (Structured)	B.S. (General)
Distribution courses	70 credit	55 credit
Music theory	15 hours	15 hours
Applied music	12	12
Secondary instruments	4	4
Music history and literature	6	6
Conducting	3	3
Ensemble	10	10
Electives	40	15
Foreign language	20	
Non-teaching minor		30
Certification (courses required for state teacher certification)		30
Total hours	180	180

Students desiring state teacher certification in elementary music should add **Music 355** to the above. **Psychology 201** and **301** should be taken prior to electing teacher aiding (junior year) and directed teaching (senior year).

Students in the vocal program should take **French 131** during their freshman year. This satisfies the humanities distribution requirement.

A student choosing to minor in music must complete at least 36 hours in this field, six of which must be in ensembles and six in applied music. Other approved courses are music theory, music history and music literature.

ADMISSION

In addition to the formal request for admission to GVSC, each applicant desiring to major or minor in music is required to arrange for a personal audition with the Music Department. When considerable geographical distance or extreme hardship prevents a personal audition, the applicant may, with the permission of the Music Department, submit a tape recording

of an appropriate performance. Arrangements for auditions may be completed only after the applicant has been admitted to the College of Arts and Sciences.

Auditions will be held on the following days:

- Fall term: Third Saturday in September and
first Saturday in December
Winter term: First Saturday in March
Spring term: First Saturday in May and June

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 until ready for college level applied music study.

TYPICAL CURRICULUM FOR THE B.A. DEGREE IN MUSIC (Vocal — Structured Option)

- First Year: **Music 100, 101, 130, 131, 132, 141, 142, 143 and 263**
One writing skills course
Two social science distribution courses
Two science and mathematics distribution courses
One humanities distribution course
(**Italian 131** is recommended)
- Second Year: **Music 101, 230, 231, 232, 241, 242, 243, 301, 302 and 303**
French 131 and **German 131**
One social science distribution course
One arts distribution course
One humanities distribution course
One elective
- Third Year: **Music 101, 341, 342 and 343**
One foreign language course
One science and mathematics distribution course
One humanities distribution course
One social science distribution course
Two electives
- Fourth Year: **Music 101, 441, 442 and 443**
One humanities distribution course
One science and mathematics distribution course
Five electives

TYPICAL CURRICULUM FOR THE B.S. DEGREE IN MUSIC (Instrumental — General Option)

- First Year: **Music 100, 102 or 103, 130, 131, 132, 141, 142, 143 and 263**
One writing skills course
One social science distribution course
Two science and mathematics distribution courses
Two humanities distribution courses

- Second Year: **Music 102 or 103, 230, 231, 232, 241, 242, 243 and 256**
 Two social science distribution courses
 One arts distribution course
 Three electives*
- Third Year: **Music 102 or 103, 253, 259, 320, 321, 322, 341, 342 and 343**
 One humanities distribution course
 One science and mathematics distribution course
 Teacher aiding (10 credits)
 Two electives*
- Fourth Year: **Music 102 or 103, 263D, 441, 442 and 443**
 Directed teaching (15 credits)
 Four electives*

COURSES OF INSTRUCTION

100 Introduction to Music Literature

Basic course in music, designed especially for liberal arts students and music minors to increase their understanding and enjoyment of music through intelligent listening habits. Five hours credit.

130 Fundamentals of Music

Integrated fundamentals of basic musicianship. Two hours credit.

131 Music Theory

Continuation of **Music 130**. Development of comprehensive musicianship. Prerequisite: **Music 130** or permission of instructor. Two hours credit.

132 Music Theory

Continuation of **Music 131**. Prerequisite: **Music 131**. Two hours credit.

230 Music Theory

Review of **Music 132**, and further development of comprehensive musicianship, with emphasis on creativity and performance. Prerequisite: **Music 132**. Three hours credit.

231 Music Theory

Continuation of **Music 230**. Prerequisite: **Music 230**. Three hours credit.

232 Music Theory

Continuation of **Music 231**. Prerequisite: **Music 231**. Three hours credit.

301 Music History and Literature

A chronological study of Western music in its historical and cultural setting. Romanesque through Baroque period. prerequisite: Permission of department. Two hours credit.

*A non-teaching minor must be earned through elected courses.

302 Music History and Literature

Continuation of **Music 301**. Classic through Romantic period. Prerequisite: Permission of department. Two hours credit.

303 Music History and Literature

Continuation of **Music 302**. Impressionism and the 20th century. Prerequisite: Permission of department. Two hours credit.

305-307 Teacher Aide Seminar

Accompanying music seminar to the junior high and senior high aiding experience. (See **Education 305-307**) Prerequisite: **Music 350** or **355**.

320 Introduction to Conducting

Fundamentals of baton technique; laboratory experience in conducting choral and instrumental works; cuing, score reading and terminology. Prerequisite: Permission of department. Three hours credit.

321 Intermediate Conducting

Development of baton technique, score analysis and preparation, rehearsal techniques, score reading and performance of representative compositions. Prerequisite: **Music 320**. Three hours credit.

322 Advanced Conducting

Score analysis and preparation, special problems in conducting opera, oratorio and ballet scores; rehearsals and performance with GVSC ensembles. Prerequisite: **Music 321**. Three hours credit.

350 Music for Classroom Teachers

A practical course for elementary teacher candidates introducing creative principles, methods and materials of music pertinent to elementary instruction. Five hours credit.

355 Teaching Music Creatively in Elementary Grades

A creative approach involving new teaching techniques and methods in teaching music to children in elementary school classrooms. Designed for music majors and minors only. Five hours credit.

399 Special Problems in Music

Independent study in problems of music and music education. To be arranged with the instructor. Variable credit.

CLASS INSTRUCTION IN VOICE AND INSTRUMENTS

The following classes are designed to provide teaching and performance skills in the medium indicated. One hour credit is earned following the completion of the third term. Instrumental majors take two terms of class piano and one of percussion for one hour credit.

250A, 250B, 250C Class Voice

253A, 253B, 253C Class Woodwinds

256A, 256B, 256C Class Brass

259A, 259B, 259C Class Strings

263A, 263B, 263C Class Piano**263D, Class Percussion****MUSIC ENSEMBLES**

Participation in the college music ensembles is available to all qualified students. Students concentrating in art, theatre, English, social service or teaching frequently consider musical experience and study closely allied with their primary interest.

Music majors must earn a minimum of 10 credit hours in major ensembles. Other students may apply toward graduation requirements a maximum of 12 credit hours earned in ensembles and applied music.

101 The GVSC Singers

The College choir. Prerequisite: Permission of the department. One hour credit.

102 The GVSC Concert Band

The College band. Prerequisite: Permission of the department. One hour credit.

103 The GVSC Orchestra

The College orchestra. Prerequisite: Permission of the department. One hour credit.

104 Woodwind, Brass, String, Percussion and Vocal

Ensembles and chamber music for various media. Prerequisite: Permission of the department chairman. One hour credit.

APPLIED MUSIC

141, 142, 143 Freshman

241, 242, 243 Sophomore

341, 342, 343 Junior

441, 442, 443 Senior

Applied music carries one hour of credit per term.

For Music Majors: Instruction in applied music will be given during weekly lessons and studio classes. Music majors are required to complete 12 credit hours of applied music in their voice or major instrument.

For Music Minors: Instruction in applied music will be given during one weekly half-hour lesson and regular studio classes.

Fee: There is no special instruction fee for applied music. All students wishing to elect applied music must present written permission of the instructor at time of registration.

Keyboard Proficiency: Because functional piano is so impor-

tant in music, a basic proficiency level is required. Students interested in a music major or minor should consult with a member of the music faculty as early as possible in order that further study can be planned if it is needed.

Students in applied music are expected to play a jury at the end of each term of study.

Applied music majors must perform a partial recital in their junior year and a full recital in their senior year. Music education majors are required to do a partial recital in their major performance media during their senior year.

Music major meetings are held weekly throughout the fall, winter and spring terms. Attendance is obligatory.

PHILOSOPHY

The main value of philosophy lies in its contribution to the education of the whole man. It examines the ultimate about himself and his values, about the world and his relationship to it, and about God. Thus it cuts across the other disciplines both by uncovering the basic assumptions of our various ways of understanding reality and by trying to achieve an explicit and informed scale of values as well as a conception of the world as a whole.

Its vocational value (except for teachers of philosophy) depends on the connection of its questions with other fields. Formal logic is close to mathematics; ethics is important for medicine, business, teaching and counseling; legal and political philosophy is essential to law and public service; philosophy of science has a bearing on the social and natural sciences; and aesthetics and the history of philosophy are useful to students in literature and the arts. Schools of law and theology are enthusiastic about philosophy as an undergraduate major. Almost any graduate, professional or career program depending on a liberal arts curriculum welcomes work done in philosophy.

REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS

Students majoring in philosophy must complete a minimum of 45 hours in the department, including **Philosophy 202, 301, 302, 304** and **490**. In addition, they must take at least one 300-level history course, and either one 300-level English or world literature course or **English 212, Shakespeare**, selected in consultation with major advisers.

Students majoring in other subjects but wishing a suitable concentration in philosophy are invited to work out an appropriate program of courses with a member of the department. Every course is designed to benefit students who are interested and reasonably prepared.

Students majoring in philosophy are required to complete the B.A. degree program; but they may do so following either the structured or the general program.

COURSES OF INSTRUCTION

Each course carries five hours credit, with the exception of **399** and **499**.

101 Introduction to Philosophy

A critical survey of the differing perspectives of Western thought which arise out of basic presuppositions about the nature of reality, reason and experience. Intensive study of at least one classical text.

102 Introduction to Liberal Learning

What is liberal education? Must it be in conflict with professional education? Can it influence our economic, political and religious life? What impact do these aspects of life in turn have upon liberal education? Some main answers to these questions will be examined.

201 Ethics

What is good? What is evil? Are there objective standards for right and wrong? Or are right and wrong just relative and subjective matters? These and related questions arising out of moral decisions we all must make will be considered, as well as the answers that have been given by some major philosophers, both past and present.

202 Logic

What is it to think straight? Are there rules or principles that govern sound reasoning? Or are we condemned always, as one philosopher once quipped, to "finding bad reasons for what we believe on instinct?" Can we ever know what anything really is when we try to define it? These are the kinds of questions we try to answer with the help of a standard textbook in logic.

220 Philosophy of Art, Literature and Film

An inquiry into the nature, criteria and significance of the fine arts and/or artistic creation and response.

231 The Phenomenological Grounds of Human Reality

An investigation of the fundamental characteristics of individual and social human-reality: the philosophical interpretation of the assumptions and accomplishments of the developed body of scientific thought. Emphasis is on philosophy of culture, philosophical biology and psychology.

301 History of Philosophy: Ancient

Plato and Aristotle, introduced by a discussion of pre-Socratic

philosophers, and supplemented by brief consideration of post-Aristotelian Hellenistic schools.

302 History of Philosophy: Medieval

Medieval thought from Augustine through Thomas, Scotus and Occam, with attention to the confrontation of Christianity and Greek Philosophy.

304 History of Philosophy: Modern

A study of the three basic attempts by modern man to overcome his feeling of alienation from the world: rationalism, empiricism and voluntarism. Readings in major philosophers from Descartes through Kant.

306 Nineteenth Century Philosophy

A study of the evolution of 19th century thought, emphasizing the alienation of the individual from society and nature, concentrating on such representative figures as Hegel, Mill, Marx, Kierkegaard and Nietzsche.

308 American Philosophy

A brief survey of philosophical thought in America from colonial times to 1825 (Edwards, Jefferson, Emerson), followed by a study of the "Golden Age," 1875-1930 (Pierce, James, Royce, Santayana, Whitehead, Dewey) with special emphasis on pragmatism as the representative American philosophical perspective.

321 Philosophy of Religion

Does God exist? Is there a life after death? How did evil enter the world? Is there any place for reason in religion, or is religious faith only a matter of subjective experience? Questions like these will be considered, as well as the answers that have been given to them by some important religious philosophers.

323 Philosophy of History

Classical, Judeo-Christian and modern interpretations of history, both western and non-western, including the interrelation of human culture, cosmic forces and nature; the problem of meaning in history; the question of historical knowledge; the 18th and 19th century idea of progress; the role of historicism in all modern thought.

330 The Nature of Man

Establishment of a logical structure for consideration of whether man differs from the rest of nature in degree only, or in kind, followed by review of the scientific and philosophical evidence relevant to a resolution of the question.

360 Philosophy of Science

Scientific knowledge as compared with that acquired in history and literature. Topics common to the physical, biological, and social sciences—such as discovery, explanation, confirmation, the nature of scientific models and laws, etc.—are considered.

399 Independent Readings

Reading on a topic or a philosopher, arranged, both as to credit and content, with a member of the department. Two to five hours credit.

407 Contemporary Philosophy

A consideration of the major philosophical movements in the

20th century and their implications. Analytic philosophy, existentialism and phenomenology are studied through attention to such representative thinkers as Russell, Wittgenstein, Sartre and Husserl.

422 Legal and Political Philosophy

Emphasis, in alternative years, on the fundamental presuppositions of legal and of political thought, including a comparison of classical and modern alternatives as exemplified in a concrete body of law and in contemporary political science.

450 Metaphysics

A study of representative metaphysical systems, problems and thinkers from the classical, modern and recent periods, as, e.g., Aristotle, Aquinas, Descartes, Hume, Kant and Whitehead, considering, e.g., the concepts of being, substance, causation and process.

490 Advanced Study

According to the needs of students, proseminars in historical and systematic studies in areas, philosophers and movements, of which the following are examples: Aristotle, Thomas, Hume, Kant, Hegel, Hellenistic philosophy, philosophy of history, advanced logic, advanced ethics, theory of knowledge, philosophy of science, advanced political philosophy and philosophy of education.

499 Independent Study

Intensive study of a topic or philosopher, arranged, both as to credit and content, with a member of the department. Reserved for seniors. Two to five hours credit.

PHYSICAL EDUCATION

ACTIVITY CLASSES

Our push-button technology makes for an easy life, but it doesn't do much for muscle. It leaves us more leisure time, but it encourages the spectator rather than the participant. Most people need and want healthful activity and recreation. This is what physical education is all about. Activity classes provide opportunities for the student to acquire basic skills in activities with high carry-over value which will be a lifetime source of healthful recreational exercise. Each activity course carries one hour of credit and meets for two hours each week. All classes are coed unless otherwise noted. A maximum of five hours of credit for these courses will be allowed to fulfill distribution requirements in the arts group.

150 Foundations of Physical Education

Designed for exploration of the student's own physical potential, this course deals with physical performance and ability, exercise and posture and good form in the basic skills of work and play. A testing program helps the student realize the personal value of a regular exercise program in improving and maintaining his or her optimum fitness for daily living.

- | | |
|---|--|
| 151 Archery | 161 Softball |
| 152 Golf | 162 Track and Field |
| 153 Volleyball | 164 Tennis |
| 155 Swimming
A. General
B. Advanced
W. W.S.I. | 165 Basketball
A. Men
B. Women |
| 156 Karate | 166 Square and Social Dance |
| 157 Crew
A. Men
B. Women
Prerequisite: 155 or 106 | 167 Group Games
Especially designed for future elementary teachers |
| 158 Skiing | 168 Fencing |
| 160 Weight Lifting
A. Men
B. Women | 169 Bowling |
| | 170 Water Skiing
Prerequisite 155 or 106 |

PHYSICAL EDUCATION AND RECREATION

GENERAL REQUIREMENTS

In addition to completing the major or minor in physical education or the minor in recreation listed below, students must earn participation points by taking part in a number of activities that will give a well rounded background in physical education and recreation and acquaint them with the opportunities available in the field.

CORE CURRICULUM

Physical Education 101, 102, 200, 201, 202, 301 and 400 are required courses for all students majoring or minoring in the department. All are coed.

REQUIREMENTS FOR THE MINOR PROGRAM IN PHYSICAL EDUCATION

For women: **Physical Education 106, 107, 108, 113, 114, 203, 205 and 401**; all courses listed in the core curriculum and five individual and dual sport activity classes.

For men: **Physical Education 103, 104, 105, 106, 203** and two theory courses from the major sports of football, basketball, baseball or track; all courses listed in the core curriculum, and five individual and dual sport activity classes.

REQUIREMENTS FOR THE MAJOR PROGRAM IN PHYSICAL EDUCATION

For women: The core curriculum and **Physical Education 106, 107, 108, 109, 113, 114, 203, 204, 205, 206, 300, 401** and **402** plus five individual and dual sport activity classes.

For men: The core curriculum and **Physical Education 103, 104, 105, 106, 203, 204, 207, 208, 300, 302, 303, 401** and **402** plus five individual and dual sport activity classes.

REQUIREMENTS FOR THE MINOR PROGRAM IN RECREATION

This is not a teacher certification minor. All courses listed in the core curriculum for physical education, five in individual and dual sport activity classes plus **Recreation 251, 252, 302, 318, 404, 405** and **418**.

FULFILLMENT OF DISTRIBUTION REQUIREMENTS

Students majoring in physical education and seeking teacher certification, in satisfying distribution requirements for graduation, are required to take 15 hours in the humanities, 15 hours in social studies, 15 hours in mathematics or science and five hours in the arts.

COURSES OF INSTRUCTION

Courses carry five hours of credit, except where noted. Note also where two courses of lesser credit can be combined and taken in the same quarter and time period to provide a total of five credits.

PE 101 Introduction and Orientation to the Profession (Coed)

Aims and objectives, professional preparation, professional opportunities, ethics, relationship of physical education to health education, recreation and athletics. A two-hour course in combination with **PE 102**.

PE 102 First-Aid and Athletic Training (Coed)

Conditioning, care of injuries, treatment, rehabilitating and taping. A two-hour course in combination with **PE 101**.

PE 103 Stunts and Tumbling (Men)

Safety measures in the gymnasium, calisthenics, stunts, tumbling and pyramid building. A two-hour course in combination with **PE 104**.

PE 104 Gymnastics (Men)

Safety measures in gymnastics and concentration on the use of gymnastic apparatus. A three-hour course in combination with **PE 103**.

PE 105 Minor Team Sports (Men)

Techniques and procedures for the teaching of soccer, speedball, volleyball and wrestling. A three-hour course in combination with PE 106.

PE 106 Swimming (Coed)

Basic fundamental skills in swimming and diving, life saving, instructor certification and waterfront administration. A two-hour course.

PE 107 Theory and Practice of Women's Fall Sports (Women)

Rules, theory, practice and teaching procedures for soccer, speedball and field hockey. A three-hour course in combination with PE 106.

PE 108 Theory and Practice of Women's Winter Sports (Women)

Rules, theory, practice, officiating and teaching procedures for volleyball and basketball. A three-hour course. Meeting four days each week.

PE 109 Rhythms and Dance Activities (Women)

Fundamental rhythms, folk, square, modern and social dance. A two-hour course.

PE 113 Stunts and Tumbling (Women)

Self-testing activities for elementary and secondary programs, safety measures and tumbling. A two-hour course in combination with PE 114.

PE 114 Gymnastics (Women)

As listed under PE 104. A three-hour course in combination with PE 113.

PE 200 Methods, Theories and Materials for Dance (Coed)

Techniques and procedures for elementary and secondary level rhythmic activities, square, folk and social dance. A three-hour course

PE 201 Recreation (Coed)

Nature, function, scope, theory, principles and philosophy, school-community programs, recreational aspects of physical education, leadership in schools, camps and communities. A three-hour course in combination with PE 202.

PE 202 Adapted Physical Education (Coed)

Fundamental concepts on adjustment and development of the handicapped person and recreation for the handicapped. A two-hour course in combination with PE 201.

PE 203 Methods of Teaching Physical Education (Coed)

Practical experience in the handling of a typical gymnasium teaching experience, low organization games, contests and relays. Observation and developing lesson plans. A three-hour course in combination with PE 204.

PE 204 Intramurals and Officiating (Coed)

Philosophy and organization. Finances, facilities and awards. Rules, game situations and basic officiating techniques. Practical experience to be gained in working in the college intramural

program. A two-hour course in combination with PE 203.

PE 205 Theory and Practice of Women's Spring Sports (Women)

Rules, theory, practice and officiating. Teaching procedures for softball, track and field. A three-hour course in combination with PE 206.

PE 206 Conditioning Activities, Body Mechanics and Dynamics (Women)

Physical inventory to appraise body shape, function and ability to relax. Basic techniques to attain goals for improving and/or maintaining body image. How to look better, feel better and do better. A two-hour course in combination with PE 205.

PE 207 Skill Techniques for the Teaching and Coaching of Baseball (Men)

History and techniques, fundamentals of fielding and playing each position. Teamwork, strategy and study of the rules. A three-hour course in combination with PE 208.

PE 208 Skill Techniques for Teaching and Coaching of Track (Men)

Organization, strategy, rules and development of track and field athletics. A two-hour course in combination with PE 207.

PE 300 Kinesiology and Physiology of Activity (Coed)

Laws and principles of mechanics as they apply to the use of the human body, human mechanism and its process of motor function. A three-hour course. Prerequisite: SHS 202-Anatomy and Physiology.

PE 301 Health Education (Coed)

Personal, community and school. Principles of healthful living, health services and the healthy school environment, health and safety aspects of physical education. A three-hour course.

PE 302 Skill Techniques for the Teaching and Coaching of Football (Men)

History, techniques, equipment, conditioning, fundamentals, individual positions, offense, defense, strategy and rules. A three-hour course in combination with PE 303.

PE 303 Skill Techniques for the Teaching and Coaching of Basketball (Men)

History, techniques, equipment, conditioning, fundamentals, individual positions, offense, defense, strategy and rules. A two-hour course in combination with PE 302.

PE 400 Administration and Supervision (Coed)

Nature and function, legal liability, insurance, travel, budget and finance, personnel, facilities, equipment and supplies, scheduling, records, reports, public relations, organization and management of programs. A three-hour course.

PE 401 Physical Education Curriculum (Coed)

Framework of the over-all school curriculum, organization of content and learning experiences in elementary and secondary

school programs, curricular materials and achievement. A three-hour course in combination with PE 402.

PE 402 Measurement and Evaluation (Coed)

Introduction to scientific measurement and evaluation, special studies, research projects and instrumentation. A two-hour course in combination with PE 401.

RECREATION COURSES

PER 251 Activities of the Recreation Program

Simple crafts, dramatics, dance calling, low organization games, social events and hobbies. Methods and techniques. A two-hour course in combination with PER 252.

PER 252 Teaching of Outdoor Skills

Techniques and procedures for teaching camping, archery, boating and water safety, fishing, hiking, equipment, etc. A three-hour course in combination with PER 251.

PER 304 Playgrounds and Recreation Centers

Leadership and administration of playgrounds, community centers and resort facilities. A two-hour course.

PER 318 Field Work in Recreation

To be taken in specialization area of municipal or resort recreation. Practical experience in a well supervised program under direction of the off-campus cooperating agency. A four-hour course.

PER 404 Issues in Recreation

Concentrated study of a current recreation problem or issue. Public relations in recreation, facility acquisition and development, national park system, etc. A one-hour course.

PER 405 Administration of Recreation and Parks

The organization and administration of recreation programs. Problems of surveys, finance, publicity, program planning, leadership liability, facility planning and maintenance. A three-hour course in combination with PER 418.

PER 418 Philosophy of Recreation

The contribution of purposeful recreation to the development of the complete person. History of the recreation movement. A two-hour course in combination with PER 418.

399—499 Special Studies

Special studies in physical education and/or recreation upon consultation with department chairman.

PHYSICS

REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS

A physics major is required to take a minimum of 50 credit hours in physics, which must include **Physics 230, 231, 232, 233, 330, 340, 380** and 15 additional credit hours in physics approved by the department. **Mathematics 201, 202, 203, 302**

and **Chemistry 112** must also be taken. Majors should complete **Mathematics 201** in the fall term of their freshman year.

A physics minor is required to take a minimum of 30 credit hours in physics, which must include **Physics 220, 221, 222** or **230, 231** and **232** plus 15 additional credit hours in physics approved by the department.

TYPICAL CURRICULUM FOR THE B.S. DEGREE IN PHYSICS LEADING TO GRADUATE WORK

- First year: **Mathematics 201, 202, 203** and **192***
Physics 230 and **231**
Chemistry 111 and **112****
 Writing Skills course
- Second year: **Mathematics 302** and **321**
Physics 232 and **233**
 One elective
 Four distribution courses
- Third year: **Mathematics 402** and **406**
Physics 330, 340, 350 and **380**
 Three distribution courses
- Fourth year: **Physics 430, 441, 450** and **499**
 Three distribution courses
 Three electives

ENGINEERING PROGRAMS

Within the Physics Department are two engineering options: The two-two program and the three-two program. Students electing the two-two program spend their first two years in CAS and then transfer to an engineering school for the final two years. Students electing the three-two program spend their first three years in CAS and then transfer to an engineering school for two additional years. Students who complete the two-two program will earn an engineering degree from the engineering school. Students who complete the three-two program will earn a B.S. degree in physics from CAS in addition to an engineering degree from the engineering school.

SUGGESTED TWO-TWO PROGRAM LEADING TO A DEGREE IN ENGINEERING

- First year: **Engineering E100** and **E101**

*If precalculus (**Mathematics 121**) is needed it should be taken in the first term.

Exemption can be earned for **Chemistry 111 - see Chemistry listing.

Mathematics * 152, 201, 202 and 203
Physics 230 and 231
Chemistry 112
English 100

Second year: **Engineering** E250
Mathematics 302 and 321
Physics 232 and 233
Four cognates

SUGGESTED THREE-TWO PROGRAM LEADING TO A DEGREE IN ENGINEERING

First year: Same as above

Second year: **Engineering** E250
Mathematics 302 and 321
Physics 232 and 233
Four distribution courses

Third year: **Mathematics** 402 and 406
Physics 330, 340, 350 and 380
Economics 210 and 211
One distribution course

COURSES OF INSTRUCTION

Each course carries five hours of credit, except where noted.

E100 Engineering Orientation

An introduction to the engineering profession with emphasis on the role of the engineer and scientist in industry and in society. Orients the student to the major areas of engineering, typical engineering practice and career preparation. Two hours credit. Offered fall term.

E101 Communications Graphics

Elementary graphic communications using both freehand and instrument techniques to treat such topics as elements of visual design, graphical presentations, multiview and pictorial representations, auxiliary views sections, dimensions, tolerances and lettering. Three hours credit. Offered fall term.

105 Descriptive Astronomy

Non-mathematical investigation of the solar system, star clusters, nebulae, pulsars, the Milky Way galaxy and extra galactic objects. Astronomical instruments and their use are studied. Topics include laws of planetary motion, spectral classification and theories of cosmology. Recommended as a distribution course.

106 Physics of the Atmosphere and Oceans

Descriptions of air and water flow and their interactions. Energy sources and exchanges. Direct application of subject matter to an understanding of environmental pollution problems. Oceanographic sampling techniques demonstrated on board the ANGUS. Recommended as a distribution course.

*If precalculus (**Mathematics 121**), is needed, it should be taken in the first term.

200 Physics for the Health Sciences

Survey of physics topics particularly applicable to the biomedical and health science professions. Newtonian mechanics, basic electricity, radiant energy, light, X-rays and nuclear radiation.

206 Science, Technology, and Society

Case studies on the impact of physical science in shaping solutions to contemporary problems of society. Recent studies have included such topics as the U.S. energy outlook, electrical power generation, the natural limits to energy conversion, hazards of nuclear reactors, and the atomic bomb. Recommended as a distribution course.

208 Introduction to Systems

An introduction to the principles and laws that apply to systems found in the humanities, social sciences and physical sciences. Of special interest will be systems of an interdisciplinary nature (e.g. physics and the environment). The possibility of a general system theory will be examined.

215 Photographic Science - Black and White I

History of photography. Photographic materials and processes. Physics and chemistry of emulsions and processes. Exposure effects. Reciprocity Law and its failure. Optics. Variability and process control. Laboratory training in camera usage and dark-room procedures.

220-221-222 General Physics I, II, III

A non-calculus course sequence in mechanics, thermodynamics, electromagnetism, A.C. and D.C. circuits, waves, sound, optics, ionizing radiations and quantum mechanics. While it is possible that **Physics 220, 221** and **222** may be elected singly or in any order, the student is strongly urged to take them in sequence. It is further recommended that the student have mathematical preparation at the level of **Mathematics 121**. Offered in sequence starting in the fall.

224 Physics of the Solid Earth

Introduction to the physical history and analysis of the earth. The earth and the universe. Seismology and the earth's interior. Thermal history. Geomagnetism. Isotopes and dating. The laws of physics and the earth as physical system. Physical significance of the moon—past and future.

225 Acoustics

Physical, musical, architectural, psychological and anatomical aspects of sound. Particular emphasis will be placed on the physical basis of music and the acoustical properties of auditoria.

228A-228B-228C Introduction to Electronic Systems

An introduction to the basic components of modern electronic systems and computers. Topics include digital, relay, integrated, switching, counting, and logical circuits, operational amplifiers and the behavior of individual components. An integral part of each course is a special project applying the material of the course to a project of interest to the individual student. **Physics 228A** is two hours credit. **Physics 228B** and **228C** are one hour credit each. Prerequisite: Consent of instructor.

230 Principles of Physics I

Kinematics and dynamics. The first course in a four-term sequence. The study of forces including conservation of momentum and energy, angular momentum and oscillating systems. Prerequisite: **Mathematics 201** (may be taken concurrently). Offered winter term.

231 Principles of Physics II

Electricity and magnetism. The second course in a four-term sequence. Coulomb's and Gauss' laws, electric fields and potentials, circuits and magnetic fields leading to Maxwell's equations. Prerequisite: **Physics 230** and **Mathematics 202** (the latter may be taken concurrently). Offered spring term.

232 Principles of Physics III

Waves and thermodynamics. The third course in a four-term sequence. Study of waves and oscillations, optics and laws of thermodynamics with some statistical physics. Prerequisite: **Physics 231** and **Mathematics 203** (the latter may be taken concurrently). Offered fall term.

233 Principles of Physics IV

Continuation of **Physics 232**. Radioactivity, planetary model of the atom; electron and nuclear masses and charges. Special relativity, origin of quantum physics, photoelectric and Compton effects. X-rays. Introduction to wave mechanics. Prerequisite: **Physics 232** or consent of instructor. (Formerly **350**.) Offered winter term.

E250 Mechanics of Materials

Principles of statics. Determination of movement and force resultants. Mechanics of deformable bodies, stress, strain, shear, torsion and bending in beams. Three credit hours. Prerequisites: **Physics 230** and **Mathematics 201**. Offered spring term.

307 Teacher Aide Seminar**316 Photographic Science - Color I**

Historic search for a color process. Physics of color and color vision. Additive and subtractive systems. Kelvin temperature, light sources and spectral response of color emulsions. Chemistry of color processing. Laboratory training in the Ektachrome process. The exposure, processing, duplication and correction of transparencies. Slide presentations in media. Prerequisite: **Physics 215**.

330 Intermediate Mechanics

Kinematics of a particle, oscillations, central forces, Kepler's Laws and Rutherford scattering. Prerequisites: **Physics 232** or consent of instructor and **Mathematics 302** (may be taken concurrently). Offered fall term.

340 Intermediate Electricity and Magnetism

Electrostatic fields, dipoles and multipoles, charge distributions and dielectrics; Gauss' Law, the uniqueness theorem, Laplace's and Poisson's equations. Magnetic fields, magnetic induction and Ampere's circuital law. Induced currents, inductance; magnetic materials and hysteresis. Prerequisites: **Physics 330** or consent of instructor and **Mathematics 302**. Offered winter term.

350 Intermediate Modern Physics

Emphasis on theoretical concepts involved in special relativity theory and quantum theory. Prerequisite: **Physics 340** or consent of instructor. (Formerly **450**). Offered spring term.

360 Heat and Thermodynamics

Temperature, equations of state, laws of thermodynamics, work and heat systems, heat capacities, phases and entropy. Prerequisites: **Physics 350** and **Mathematics 302**.

380 Advanced Laboratory

Laboratory activities related to intermediate physics, including some shop techniques and the use of computers in analyzing experimental data. Prerequisite: **Physics 233** or consent of instructor.

399 Readings in Physics

Independent supervised readings on selected topics. Prerequisite: Consent of instructor. Two to five hours credit.

410 Optics

Geometrical and physical optics, interference and diffraction. Propagation of light in material media. Prerequisite: **Physics 350**.

430 Advanced Mechanics

Theoretical mechanic systems of particles, rotating coordinate systems, generalized coordinates, virtual work and LaGrange's equations. Prerequisite: **Physics 330**.

440 Advanced Electricity and Magnetism

Maxwell's equations, electromagnetic wave propagation in free space and in materials. Reflection and refraction of electromagnetic waves; wave guides and coaxial lines; electromagnetic radiation. Prerequisite: **Physics 340**.

450 Quantum Mechanics

Addition of angular momenta, scattering, approximation methods, Pauli Principle, Applications to transitions, molecular and solids. Prerequisite: **Physics 350**.

460 Physics of the Solid State

Structure and physical properties of crystalline solids; ionic crystals; free electron theory of metals; band theory of solids; effects of impurities and imperfections. Prerequisite: **Physics 350**.

499 Senior Physics Seminar

Investigation of current ideas in physics for senior students majoring in physics. Content determined by the student in conference with tutor. Completion of a substantial paper based upon reading and/or laboratory work. Course to be handled by tutorial only.

POLITICAL SCIENCE**REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS**

A student seeking the B.A. or B.S. degree is required to take at least 45 hours in political science, including **232** and one of the

400-level courses. These hours must be distributed across at least three sub-fields within the department and half must be at the 300 level or above. Courses are listed below under five sub-field headings. A sixth sub-field, public administration, is included with the Public Service Program.

A student minoring in political science is required to complete at least 30 hours in the department, half of which should be at the 300 level or above.

There is no firm sequence in which a major should select political science courses, although normally 100- and 200-level courses will be taken first. A student should plan ahead to be certain that **232** and a 400-level course can be worked into the schedule conveniently.

The flexibility in course selection just referred to makes it important for the student to seek the advice of a faculty member in the department when choosing courses. There are many careers possible for someone with a political science major or minor and the courses and program selected can be tailored to fit the needs and interests of the student.

Recent studies have shown that students with a B.A. or B.S. degree with a major or minor in political science find positions in a wide variety of fields—with a large percentage of persons employed in business and commerce.

Nevertheless, political science as a major or minor field can also lead to careers more closely identified with political science itself. Some of these careers include government work in administration, foreign service and specialized overseas assignments. Teaching positions at all levels can be pursued with a political science major or minor. There are also many careers in public action and interest groups which go well with a political science degree.

PRE LAW

Courses in political science are generally regarded as among those which students preparing for a career in law should take. Also important are courses in history, economics, sociology, psychology and philosophy (among others). The student is reminded that law schools prefer students with a solid background covering a variety of disciplines and that law school courses are quite specific in content (which means that the undergraduate program should provide a solid framework of general knowledge). For examples, writing and study skills, the

ability to think logically, knowledge of government organization and processes and the economic-social environment of the law should be acquired prior to entering law school.

Recommended courses for the pre-law student might properly include American and English history, economics and accounting, logic (philosophy), writing skill courses as well as courses in political science. Pre-law students may count **Philosophy 340** (legal) and **Philosophy 350** (political) as part of their political science major.

Careers in law cover a wide range of areas including government and corporate law, civil practice, trial practice (including criminal law) and teaching.

COURSES OF INSTRUCTION

Each course, except where noted, carries five credit hours.

101 The Idea of a Social Science

Survey of the development of modern social science from Hobbes to the present. Analysis of some of the major problems and controversies surrounding the "human sciences" including whether there can be a unified science, whether humans are uniquely different and the various meanings of scientific objectivity. This is not a political science course per se, but is deemed an appropriate course to introduce students to problems and issues which confront any of the social sciences.

AMERICAN GOVERNMENT AND POLITICS

102 Introduction to American Politics

Who gets what, when and how in society are continuing political, social and philosophical questions. This course deals with past and current answers to the ever-present debates over the formulation, execution, justification and impact of public policy. Examples are drawn primarily from the United States. Individual instructors emphasize particular methods and subject matter.

203 State and Local Politics

Students work as task force teams developing policy positions on several current state and local political issues. The course aims at developing: (1) an understanding of how the many governments in the state and local system are related; (2) an understanding of the constraints and flexibility of governmental structures; (3) skills needed to analyze political processes, including elections; (4) measures of the social impact of public policies.

204 Political Parties and Interest Groups

This course is an examination of leading theoretical explanations of the role of group actors in the political dimension of social life. The bulk of the examples are drawn from the American experience with some attention given to parliamentary, and both Communist and non-Communist policies.

205 Urban Politics

A computer-assisted simulation of the urban political scene with students performing the roles of important political figures. The roles include elected city and county politicians, city and county planners, administrators and private interest groups. Area political activists will assist the student player. After six simulated years of political activity, students will evaluate urban politics literature and the simulations of each in the light of the other.

305 Legislative Processes

Analysis of the role of legislatures and their internal processes, formal and informal, in the United States and other selected countries.

306 Judicial Processes

A study of the federal courts in the American political system and an analysis of how judges are recruited, how they make decisions, and how these decisions are justified.

307 Teacher Aide Seminar

308 Executive Processes

An examination of the American executive, comparing the President, governor, mayor, manager, etc. according to the resources of power, the function in the political system, and the patterns of decision-making characteristics of each.

309 Environmental Politics

This interdisciplinary course relates the political system to other physical and social systems, examines the impact of technological change on the political system and studies the special management problems of environmental programs. It consists of lectures, discussions, meetings with environmental activists, field trips to the Center for Environmental Study and cooperative work with students from other colleges and universities. There are no prerequisites except for political science and public service majors whose special assignments require **Political Science 203** and **205** or the consent of the instructor as prerequisites. Frequency of offering: Every spring.

INTERNATIONAL RELATIONS

211 Introduction to International Relations

An introductory analysis of world politics. The course is designed to comprehend the contemporary international political phenomena. It deals with analytical framework, factors influencing foreign policy, patterns of political interactions, nature and process of conflict resolution and values of international peace.

312 American Foreign Policy

Influence of domestic pressures on foreign policy formation, the various organizations involved in policy formation and the policy problems of the post-war period.

313 International Organization

Systematic analysis of theories, developments, roles and problems of general and regional organizations with emphasis on the United Nations and the European communities.

314 International Law

A study of the general principles of international law with emphasis on the political and economic forces influencing the international legal system.

315 International Relations of Latin America

Analysis of the Inter-American system and United States-Latin American relations. Special attention will be focused on the Organization of American States, economic integration, foreign policy of the major Latin American states and development of United States policy. Tutorials in either Spanish or English.

COMPARATIVE POLITICS**221 Introduction to Comparative Politics**

Concepts and approaches to comparative political analysis with case studies drawn from several European countries.

322 Government and Politics of Latin America

Analysis of political institutions, processes and political development. Treatment of various topics including historical patterns, economic development, the military and communism. Tutorials in either English or Spanish.

323 Government and Politics of the Middle East

Examination of the Middle East and North Africa as a problem area in international politics. Historical background will be covered only to the extent necessary for understanding the present political structure and issues. The focus will be on comparative government, politics and problems of development rather than on the Arab-Israeli conflict.

324 Government and Politics of the Soviet Union and Eastern Europe

An inquiry into the institutions, politics and problems of the Soviet bloc with emphasis on variations within the Communist pattern and differences between the Communist pattern and Western pattern.

325 Government and Politics of China and Japan

Study of the following topics: Historical paths of institutional development, political institutions and power structure, political culture, role of ideology, process and style of decision-making, elite-mass relationship, political behavior and characteristics of Chinese and Japanese politics.

POLITICAL THEORY**231 Introduction to Political Theory**

Various approaches to the study of theory with examples taken from classical theories. Analysis of structure and function of theories.

232 Modern Political Theory

Special emphasis on the political theories created by Hobbes, Locke, Rousseau, Burke and Marx. Other thinkers are chosen with the participation of students.

333 The Critical Temper in Social Thought: Marx, Engels, Lenin

This course is designed to provide a critical analysis of some of the 19th and 20th century general theorists and activists whose works continue to influence our society. The fathers of Marxism and Communism are discussed within a "philosophy of science" framework which includes pre-Marxians such as Hegel, as well as post Leninists such as Tito and Mao.

PUBLIC ADMINISTRATION

See School of Public Service for course descriptions. Three of the following may be applied toward the major.

SPS 222 - Introduction to Public Administration

SPS 224 - Administrative State and Public Policy

SPS 323 - Developmental and Comparative Administration

SPS 497 - Seminar: Issues in Public Administration

SPS 310 - Research Methods and Applications

ADVANCED COURSES

399 Readings in Political Science

Independent advanced readings on selected topics. Prerequisites: Previous course work in the area of interest and permission of the instructor supervising the reading. One to five credit hours.

490 Field Experience

Field experience with an agency primarily involved in the derivation or implementation of public policy together with individually constructed readings, research, reports, etc., appropriate to the assignment. Prerequisites: Extensive work in political science and permission of sponsoring instructor.

495 Seminar in International Relations

Consideration of special subjects in international relations; subject to be announced at least one term in advance. Research papers, readings and discussions. Prerequisites: Extensive background in political science and consent of the instructor.

496 Seminar in Latin American Politics

Consideration of special subjects in Latin American politics; subject to be announced at least one term in advance. Research papers, readings and discussions. Prerequisites: Extensive background in Latin American Studies and consent of the instructor.

497 Seminar in the Study of Politics

Consideration of special problems in the study of politics; subject to be announced at least one term in advance. Research papers, readings and discussions. Prerequisites: Extensive background in political science and consent of the instructor.

498 Seminar in Comparative Politics

Consideration of special subjects in comparative politics; sub-

ject to be announced at least one term in advance. Research papers, readings and discussions. Prerequisites: Extensive background in political science and consent of the instructor.

499 Independent Research

Individual research in an area of interest to the student which culminates in a written and oral report. Designed for political science majors who find that the seminars do not fit their research interests. Prerequisites: Extensive background in political science and consent of the instructor supervising the research.

PSYCHOLOGY

The department offers a B.A. or B.S. degree with either the general or the structured distribution options.

REQUIREMENTS FOR MAJOR AND MINOR PROGRAMS

Psychology majors are required to take a minimum of 50 hours in the department, including **Psychology 201** and **251**. **Psychology 251** should be taken early in the program. Psychology majors should take at least one course in each of the following four categories: Category I - **Psychology 303, 304, 306, 307, 333** and **Behavioral Science 330**. Category II - **Psychology 351, 361, 363, 364, 365** and **430**. Category III - **Psychology 301, 302, 305** and **401**. Category IV - **Psychology 362, 405** and **420**. Not more than 10 credit hours in **Psychology 399** and/or **498** may be counted toward the major.

Students planning to do graduate level work in psychology or related fields (social work, school psychologist, guidance and counseling, etc.) are advised to take **Psychology 351** and **499**.

Biology 200, Philosophy 360, Mathematics 215, and Sociology 201 are recommended elective cognates. **Behavioral Science 330** and **422** can be counted toward a major in psychology.

A behavioral science major is offered in cooperation with the Anthropology-Sociology Department. Majors must take 10 courses from the Psychology and Anthropology-Sociology Departments. As many as six or as few as four courses may be elected from each department. Students are further required to take **Behavioral Science 330** and **422**. Three additional courses are expected to be elected from the following group: **Biology 200, Philosophy 202, Mathematics 215** and other advanced courses in philosophy and political science.

Biopsychology is an interdisciplinary program leading to a B.S. degree in Biopsychology. The program is designed to give

the major a background in biological and psychological principles which should enable him to integrate the knowledge in the two fields as it applies to the biological correlates of behavior. Students graduating from this program will be prepared to do graduate work in the fields of psychology and the neurosciences. In addition a graduate will have the necessary background to function as a junior member of a research team in industries such as pharmaceutical companies and in hospitals which have on-going biobehavioral research programs. Biopsychology majors are required to take a minimum of 35 credit hours in biology and 35 credit hours in psychology. In addition a thesis is required under the direction of either the Biology or Psychology Department. Specific courses to be taken are: **Biology 190, 210, 302, 404 and 405, 450 and 451 and 442; Psychology 201, 251, 351, 361 or 364, 363, 430 and 420; Thesis 499; Mathematics 110* and 215; Chemistry 111*, 112, 231 and 232; Physics 200 or 221 or 222. Mathematics 201** is strongly recommended for students contemplating graduate school; **Chemistry 113 and 222** for students interested in industry. General or structured distribution requirements must also be met.

Psychology minors are required to take at least 30 credit hours in the department (not more than five credit hours in **Psychology 399**).

COURSES OF INSTRUCTION

All courses carry five hours credit, except **Psychology 399**, which can be taken for variable credit. **Psychology 201** is a prerequisite for all courses in the department, except for **Psychology 362**. Students are urged to consult with their academic adviser in selecting courses appropriate to their interests and ambitions.

201 Introductory Psychology

General introductory survey of the discipline of psychology.

251 Psychological Investigation

Consideration of statistical applications and experimental methods in psychology.

301 Child Development: The School Years

The individual child as a learner in home, school and society, emphasizing biological, physiological and psychological inter-

*May be fulfilled by qualifying examination.

relationships. Individual studies in natural and laboratory situations. Measurement and analysis of human growth processes.

302 Mental Hygiene

Psychological principles involved in man's adjustment to himself and the socio-cultural environment as well as in personal growth. Attention is also given to coping with difficulties and to prevention of maladjustment.

303 Abnormal Behavior

The description and analysis of a wide range of behaviors considered abnormal. Some consideration of theories and treatment approaches. Opportunities for field trips to mental health facilities in the area.

304 Psychology of the Exceptional Child

Study of exceptional children and their problems. Emphasis on understanding the nature and extent of problems of various types of exceptionalities and on possible ways of dealing with them.

305 Psychology Applied to Teaching

Study of psychological principles applied to classroom instruction. Including development, nature and conditions of learning, motivation, individual differences in home and school adjustment and evaluation and test construction. Prerequisites: **Psychology 201** and **301**.

306 Mental Retardation

The identification, classification and etiology of mental retardation; methods of diagnosis and treatment. Required for certification as a teacher of the mentally handicapped.

307 Individual Differences

A study of human behavior with emphasis on the differences within and among individuals who are considered normal as well as those who are not.

310 Behavior Modification

The study of the application of learning principles, techniques and procedures to the treatment of human psychological problems in a wide range of settings.

333 Humanistic Psychology

Exploration of viewpoints in psychology referred to as "humanistic" or "third force," as contrasted with "psychoanalytic" and "behavioristic." Consideration will be given to philosophical, theoretical, experimental and experiential approaches.

351 Advanced Experimental Design

Continuation of **Psychology 251**. Study of principles and procedures of systematic investigation in psychology. Prerequisite: **Psychology 251**; **Mathematics 215** recommended.

361 Perception

The role of perception in human behavior especially as it is related to the learning process. History and theory when appropriate to the area studied. Laboratory. Prerequisite: **Psychology 201** and **251** or permission of instructor.

362 Environmental Psychology

A study of the relationships between the physical environment, natural and man-made and the behavior of man. The course focuses on the perceptual, cognitive and motivational aspects of the man-environment interaction. Prerequisite: **Psychology 201** or permission of instructor.

363 Learning

The process and the principles of learning carefully examined. Special attention is given to the empirical analysis of the variables influencing learning.

364 Developmental Psychology

A survey of development from conception to death. Evaluation of research and theory in biogenetic growth processes, perceptual, cognitive and personal development. **Psychology 364** does not satisfy the requirement for teacher certification.

365 Cognition

Study of methodology and research findings concerning human and animal information processing. Includes a review of literature pertinent to subject and task variables as they relate to attention, memory and decision behavior during thinking.

399 Independent Study

Independent study in relation to a problem that the student has encountered in previous study. Prerequisite: Approval of instructor. One to five hours credit. Not more than 10 hours may be counted towards a major.

402 Social Resources for the Mentally Handicapped

Problems of adjustment of mentally handicapped children, techniques useful in helping these children and their parents to deal with this handicap and community agencies designed to assist them.

405 History and Systems

A systematic historical coverage of the theoretical foundations of psychology. The contributions of the major schools of psychology as well as the influence of related areas will be emphasized.

410 Principles of Psychological Tests and Measurements

Experiences with a variety of commonly used measurement devices, supplemented by an overview of the history and theory of tests and test construction.

420 Personality Theories

Major personality theories; the development, structure and dynamics of human personality.

430 Physiological Psychology

A study of that complex of bodily structures, processes and mechanisms which may be related to various aspects of the organism's interactions with the environment. Emphasis is placed on neurophysiology as a correlate of learning and memory, motivation and emotion, sleep and attention and sensory processes.

450 Survey of Clinical Psychology

This course surveys the basic functional aspects of clinical

psychology. Attention is paid to the historical evolution of the field, the types of problems usually dealt with in this profession, the techniques and methods used in the practice of clinical psychology and the varying roles of the clinician in today's society. Prerequisites: **Psychology 201, 303, 420** or permission of the instructor.

490 Seminar in (Selected Topics)

Consideration of selected topics not ordinarily dealt with in other courses. Topics to be determined by faculty interest and student demands. Consult quarterly timetable for specific topics. Repeatable to 10 credits towards a psychology major.

498 Applied Psychology Training

Thirty hours a week of learning, utilizing and evaluating psychological techniques in clinical service settings is provided for 10 hours of credit. Readings, a daily log, weekly tutorials with the course coordinator and a final integrative paper are required. Prerequisite: Permission of the instructor. Students cannot apply more than 10 credit hours (singly or combined) of **Psychology 399** and **498** toward the major in psychology.

499 Senior Seminar

Research, investigation and class discussions conducted in a seminar format. Prerequisites: **Psychology 201** and **251**. **Psychology 351** is strongly recommended.

BEHAVIORAL SCIENCE

330 Social Psychology

Relation of the individual to the social environment with emphasis on personality development and role behavior. Analysis of interpersonal behavior with reference to problems of conformity and influence.

422 Behavioral Science Senior Seminar

Independent research and investigation from an interdisciplinary perspective conducted in a seminar format. A joint offering of the Anthropology-Sociology and Psychology Departments. Limited to seniors with majors in behavioral science. Prerequisite: Consent of instructor.

SCHOOL OF PUBLIC SERVICE

The School of Public Service offers three major programs each leading to a bachelor of science degree in:

1. Public Service
2. Criminal Justice
3. Community Affairs
4. Legal Administration

Each of these majors is designed to prepare students for a career in public service and administration, in criminal justice and police administration, in urban affairs, in para-legal services and for graduate study.

REQUIREMENTS FOR THE B.S. DEGREE

In order to complete the requirements for graduation with a B.S. degree in public service, criminal justice, community affairs or legal administration, the following minimum course requirements must be met:

Professional Distribution	40 hours
Major Program	70 hours
Cognates and Electives	70 hours
	<hr/>
	180 hours

Students with an associate of arts or science degree from Michigan community and public junior colleges qualify for exemption from distribution requirements in the School of Public Service. Professional distribution courses required by the School of Public Service will be waived. Many of the courses taken at other colleges in public safety, public administration, or urban affairs are transferable for full credit and may be considered towards the requirements of the bachelor of science degree.

The majors in the School of Public Service are eligible to be considered for grants, loans, and scholarships provided through funds received from the Department of Justice, Law Enforcement Assistance Administration (LEAA), Law Enforcement Educational Program (LEEP) in addition to any other sources available at Grand Valley State Colleges.

MAJOR PROGRAMS

A student in the School of Public Service is required to take a minimum of 70 hours in at least one of the following major programs as outlined under the programs' requirements:

1. Public Administration and Municipal Government
2. Police Administration and Criminal Justice
3. Community Affairs

Students in the School of Public Service can fulfill part of their elective course requirements by completing courses offered by the School of Public Service. Students may major in one program and minor in another, both of which are within the School of Public Service (e.g., a major in criminal justice and a minor in public administration, community affairs or legal administration; or a major in community affairs and a minor in criminal justice or public administration, etc.). However, students are encouraged to take courses outside the major pro-

grams or declare a second major or minor in a related field of study. Recommended areas of study for a second minor or double major include: history, political science, sociology, Spanish language, business administration, economics and psychology.

It is the College of Arts and Sciences' policy that courses counted towards a student's declared major or minor program cannot be counted towards any other declared major or minor program. However, some of the courses taken to fulfill the professional distribution requirement may be counted towards the major's requirements.

PROFESSIONAL DISTRIBUTION REQUIREMENTS

(40 credit hours)

Any five hours in English composition; any five hours in social sciences (economics, business, political science, psychology, sociology or Latin American studies); any 10 hours in arts (art, foreign language skill courses, music, theatre or physical education); any 10 hours in the humanities (history, history of science, philosophy or foreign literature courses); and any 10 hours in sciences and mathematics (biology, chemistry, environmental sciences, geology, health sciences, mathematics or physics).

MAJOR PROGRAM REQUIREMENTS

1. B.S. in Public Service

Public service majors must take the following 10 courses (50 credit hours): **SPS 201, 222, 301, 401 and 260 or Political Science 203; SPS 224, 321, 323 and 497**; and one of the following, **Mathematics 255 or 215 or SPS 310**.

In addition, the majors must select four of the following courses, not more than two of which could be taken outside the School of Public Service (20 credit hours): **SPS 256, 260, 309, 310, 336, 360, 410, 496, 399 or 499; Economics or 340 or 370; Business 434; and Political Science 205 or 309**.

2. B.S. in Criminal Justice

Criminal Justice majors must take the following 10 courses (50 credit hours): **SPS 201 or 222, 260 or Political Science 203, SPS 310 or Mathematics 255 or 215 or Sociology 304 or SPS 310, 401, 250, 252, 242, 354 or 451, 342, 350 or 351, and 256 or 356 or 240**.

In addition, the major must take four courses to be

selected from the following: **SPS 240, 242, 256, 260, 282, 300, 309, 310, 336, 341, 342, 350, 351, 354, 356, 360, 410, 399 or 499, 495, 496 or 497; Sociology 381; and Psychology 303.**

3. B.S. in Community Affairs

Majors in community affairs must take the following 10 courses (50 credit hours):

A. The following eight courses (40 credit hours): **SPS 201, 222, 260, 301, 401, 360, 496, SPS 310 or Mathematics 195 or 215 or Sociology 304.**

B. Two courses from the following (10 credit hours): **SPS 300, 262, 362, Sociology 351 or Political Science 205.**

C. In addition the major must select four of the following courses, not more than two of which could be taken outside the School of Public Service (20 credit hours): **SPS 262, 362, 224, 256, 309, 336, 410, 399 or 499, 495 or 497; Economics 335 or 370; Political Science 203 or 205; History 327 or 275; and Sociology 280, 382, 351, 380, 294, 394 or 395.**

4. B.S. in Legal Administration

Legal administration majors must take the following six core courses (30 credit hours): **SPS 280, 282, 380, 382, 384 and 386.**

All CAS majors in legal administration must also take the following three general SPS courses (15 credit hours): **SPS 201 or 222, 301 and 401.**

In addition the major must take five courses in either of two fields of concentration: criminal law or commercial law. (25 credit hours):

A. Criminal law: **SPS 250, 252, 256, 354 and 356 or 240 (Chemistry 205).**

B. Commercial law: **Business 329; three of the following: Economics 211, Business 220, 221 or 330; and either SPS 336 or Business 326 or Economics 422.**

MINOR PROGRAM REQUIREMENTS

1. Minor in Public Service

A student choosing public service as a minor is required to complete at least 35 hours in the School of Public Service including: **SPS 201, 222, 250, 360, 496 or 497** and two other courses in public service.

2. Minor in Public Administration

A student choosing public administration as a minor is required to complete at least 35 hours in the School of Public Service including: **SPS 222, 224, 321, 323, 497** and two of the following: **SPS 201, 260, 309, 310, 496** and **410**.

3. Minor in Criminal Justice

A student choosing criminal justice as a minor is required to complete at least 35 hours in the School of Public Service including: **SPS 242, 250, 256, 342, 252, or 354** and two of the following: **SPS 252, 309, 341, 350, 351, 356, 451, 497** and **410**.

4. Minor in Urban Affairs

A student choosing urban affairs as a minor is required to complete at least 35 hours in the School of Public Service including: **SPS 201, 260, 300, 360, 496 or 497** and two of the following: **SPS 262, 309, 310, 36, 351, 356, 363** and **410; 222, Political Science 205; History 275 or 327; and Economics 335 or 370**.

5. Minor in Legal Administration

A student choosing legal administration as a minor is required to complete at least 35 hours in the School of Public Service including: **SPS 252, 280, 282, 380, 382, 384** and **386**.

SUMMER POLICE ACADEMY*

The School of Public Service is planning to offer a 256-hour course on specialized police topics during the summer for approximately six and one-half weeks, 8 a.m. to 5 a.m., five days per week. This is the mandatory training that every police officer must complete under Michigan Law (Act #203, Michigan Public Acts, 1965) to be certified as a full police officer by the Michigan Law Enforcement Officers Training Council. Major areas covered are: 54 hours in the legal field, such as laws of arrest, confessions, search and seizure, court functions, laws of evidence, criminal and juvenile law, criminal investigation, drug violations and criminalistics; 113 hours in general police courses, such as firearms, first aid, patrol techniques, civil disorders, arrest and detention and physical train-

*Grand Valley State Colleges has approved the program. Approval by M.L.E.O.T.C was still pending at the time this catalog went to press.

ing and defense tactics; 28 additional hours in motor vehicle and traffic subjects, such as accident investigation, licensing and driving under the influence of alcohol or drugs; and 26 hours in special subjects, such as human relations, courtesy and ethics, resources and handling abnormal situations.

The program begins in early summer and can be completed in the first five-week session of the summer term. It can be combined with college work, such as internships.

Each student will be qualified for employment in law enforcement if otherwise physically and mentally qualified for such a position. Such employment presumes the completion of the work and M.L.E.O.T.C certification. The cost is approximately \$175 to \$200 for the entire course including all instruction, firearms, training costs and an insurance policy (about \$10) that is mandatory for all enrollees.

SUMMER FOREIGN STUDY

The School of Public Service has proposed a summer (five-week) foreign study of courts, prosecution, law enforcement, corrections, comparative administration and comparative developmental systems in England and Western Europe combining with SPS courses from 5 to 15 hours of college credit. Housing will be provided at a university, possibly Lancaster, with field trips to such places as Glasgow, Liverpool, Leeds, Carlisle and London.

INTERNSHIPS

The goals of the required internships are: to expose the students to future employers, to provide the interns with an opportunity to apply their academic training to real situations and to provide the employers with the opportunity of observing the interns for future employment. It has been noticed that after graduation the interns find jobs where they have interned.

Two internships are required of all students majoring in any of the four major programs offered by the School of Public Service, one in the junior year and the other in the senior year. There are two requisites for each of the two internships. The first is to attend a seminar (**SPS 301** and **SPS 401**) which meets once a week in the evening and the second is to acquire practical experience. The participants are placed in agencies whose activities are directly related to the major emphasis for each internship. The intern is required to work on a full-time basis (30-40 hours per week) for the length of the term (10

weeks) and is expected to abide by the rules and regulations of the agency. The internship may or may not be for pay. No pay is guaranteed and no pay for the internship may be the rule more than the exception. For both requisites the intern earns five credit hours for each internship, 10 credits for the two internships which are counted towards the 70 hours required for the major.

The students who are working on a full-time basis in agencies whose activities are directly related to the major programs of study and who are working in a capacity acceptable by the director of the school, may use their jobs for the second requisite. However, in all cases attending the seminar is a must. (i.e., examples: policemen; city, county, or state officials; working in agencies in related activities to their majors).

COURSES OF INSTRUCTION

Each course carries five hours credit except **SPS 399**.

201 Introduction to Public Service

Introduction to the study of the agencies involved in public services stressing the different aspects and the multi-disciplinary nature of this field of study, and the relationships among the different functions. Case studies will be used to demonstrate the way public administration, law enforcement agencies and urban affairs experts are all involved in implementing public policies.

222 Introduction to Public Administration: The Bureaucracy Problem

An analysis of the structure and functions of the executive branch and American bureaucracy. The topics will include, though not limited to: the cultural and historical influences on public administration, theories of organization, personnel administration, financial administration, administrative responsibility and the responsiveness of the executive branch to people and congressional review. Special emphasis will be upon some bureaucratic problems in administrative units on the national, state and local levels.

224 The Administrative State and Public Policy

A study of the processes of making public policy, the bureaucratization of society (regulation, supervision and control); the administration of public policy and the effectiveness of systems of control. Specific, contemporary policies will be used as case studies, e.g., the American economy, welfare programs and the intergovernmental relations.

240 Introduction to Forensic Sciences

This course traces the introduction of scientific principles into the field of criminal investigation and identification. Topics to be discussed will include: the role of fingerprinting, voice prints and physical characteristics in identification; microscopic and spectroscopic examinations of fibers, paper and print; chemical

analysis of paints, metals and other materials; examinations of body fluids; and identification of drugs. Lectures, discussions, laboratory demonstrations and visits to police laboratories.

242 Police Administration and Organization

An analytical description of principles of police administration and organization; functions and activities of police departments as a part of the law enforcement and criminal justice systems; administration of staff units (personnel, budget, training and laboratory). Emphasis will be upon developing the ability to apply these principles in given situations.

250 Introduction to Criminal Justice

The basic goal of this course is to provide an understanding of the structure and functioning of the administration of criminal justice in the United States, a comprehension of the theoretical and practical roles and relationships of legislative, judicial and administrative agencies in the formulation of the policies guiding the operation of our system of criminal justice and an appreciation of the principal problem areas in coping with deviant behavior in our modern society and available alternative solutions. The ultimate result should be a more cohesive concept of criminal justice for the intrinsically career-oriented parochial aspirant in law enforcement, corrections or law and a dynamic perspective of the components and processes of this system for the extrinsic concerns of those in other disciplines.

252 Introduction to Criminal Law

The basic goal of this course is to provide an understanding of the nature and variety of substantive criminal law; a comprehension of the sources, specific and general elements and limitations of modern criminal laws; and an appreciation of the role of substantive criminal law in the definition and control of deviant behavior in contemporary society. The ultimate result should be increased knowledge of the development and formulation of criminal law and a greater awareness of the relationship between these substantive rules of conduct and the eternal conflict of individual liberty and social conformity.

256 Constitutional Rights and Civil Liberties

This course seeks to develop and understanding of individual liberties in the United States, an appreciation of the methods and effectiveness of protection of these fundamental rights and a comprehension of the role of these basic freedoms in defining the nature and scope of law enforcement as an essential element in the interaction between components in the administration of criminal justice. The ultimate goal is an increased awareness of, and respect for, the importance of individual rights and requisite maturity of judgment for effective professional performance and citizen participation.

260 Urban Administration

A study of the roles and functions of the urban and metropolitan administrators, particularly the urban manager. Consideration will be given to the organization of city governments in the United States, and how political and administrative bodies relate to each other. Emphasis will be on selected topics such as comprehensive planning, community control and urban redevelopment, which have been a major concern to American city administrators. Topics will be related to problems and activities in the Grand Rapids metropolitan area.

262 Introduction to Community Affairs

This course is designed to introduce students to the concept that community affairs is a viable field for social and political change. Case studies, research findings, strategies and problems are discussed in terms of their implication for making communities responsive to human needs and more equitable in their contribution to improving the human conditions. Emphasis is on preparing individuals with skills in community organization and planning. Lectures will be supplemented by discussions with community organizers, films and field visits.

280 Introduction to Legal Analysis

Lawyers, in the course of becoming lawyers, are taught a particular way of thinking and writing which is a valuable tool in decision making and communication of ideas. This course will attempt to teach those methods using the case-brief method and open class argumentation.

282 Introduction to Law

Introduction to law provides a brief introduction to the structure and functioning of legal systems in the United States, a survey of the major fields of substantive American law and equity; real and personal property, contracts, torts, criminal law, domestic relations, corporations, negotiable instruments, probate and labor law and discussion of current problems and developments in substantive law, (e.g., "no-fault").

300 The Urban School

An interdisciplinary investigation of the problems of public schools in large urban centers. Emphasis on social and economic factors influencing the urban school, the special problems of blacks and other main disadvantaged groups, and educational trends. Lectures supplemented by discussions with urban educators, case studies, research findings, films and field visits.

301 Seminar: Public Service Internship I

Seminar related to practical training in a government agency, department, office, bureau or related projects and/or in a police department or any agency related to criminal justice or urban affairs. This seminar will permit students, in public service, to apply their knowledge and critical skills to community and governmental problems. The topics discussed in the seminar will be directly related to the areas in which the students are taking their internships. Prerequisite: Junior or senior status and approval of the instructor.

309 Grantsmanship and Project Evaluation

The course deals specifically with applications to federal government agencies, but much of the content is equally appropriate for requests to private foundations, industry and state agencies. It is also orientated to proposals dealing with training, demonstration and service programs rather than research activities. Seminar with individual and group projects based on the sequential steps needed for successfully writing a proposal.

310 Research Methods and Applications

A study of major research methods, emphasizing survey research and the application of basic statistical analysis. Focus will be on the use of scientific analysis to explain and predict.

Common descriptive and explanatory statistics will be explained primarily in terms of their use and interpretation on social science research. Examples from applications to the fields of economics, political science, public administration, criminal justice and urban programs. No prior knowledge of statistics is required.

321 Personnel Administration and Civil Service

A study of managing the human resources of man's largest and most difficult undertaking—Government. The course will include an analysis of public personnel functions (recruitment, training, employe relations, remuneration, conduct and organization). Some special problems will be discussed, especially collective bargaining and hiring of minority groups. A number of case studies will be used.

323 Developmental and Comparative Administration

An examination of certain models for comparative purposes; theories of development; relation of administrative structures to political, economic, and cultural systems. A study of the methods to improve the quality of public service and the functioning of certain programs. An analysis of the methods used in measuring and upgrading the efficiency of the bureaucracies. Case studies from the United States, Middle East, Latin America and Asia.

336 Labor Law and Collective Bargaining

A study of labor relations and collective bargaining in theory and in practice. Topic studies will include, though not limited to: frequently used terms; the task force reports on collective bargaining; the right to organize and the rights of public employes; standards of conduct for employe organizations and the code of fair labor practices; bargaining units and majority status determination; advisory arbitration of grievances; case studies from public/private organizations; collective bargaining and labor relations; and current and developing issues in labor management relations.

341 Comparative Law Enforcement Systems

A comparative study of different police, legal, criminal justice and law enforcement administrative systems within the United States and comparing the American systems with other countries (developed and developing societies). A part of the course will be devoted to the study of the systems in the state of Michigan, (local, county, state).

342 Police-Community Relations

The role of police in responding to, and influencing, community opinion. Survey of the mechanisms and processes which promote and also which prevent police-community cooperation. Course objective is to sensitize students to the techniques and procedures that may contribute to a favorable image of the police in the community. A second objective is to increase receptivity on the part of the students to the feelings and discontent of those segments of the community that are presently most affected by police practices and vice versa.

350 Juvenile Justice

Study of administration of juvenile justice in the United States, including procedures and roles of law enforcement, court, pro-

bation and correctional agencies and social philosophy underlying the system. Juvenile officers, judges and court workers will give guest lectures and field trips to juvenile facilities are planned.

351 Correction, Probation and Parole

Introductory survey to the philosophy, theory and practice involved in the treatment of convicted offenders; appraisal of treatment and past correctional practices; the role of probation and parole officers. Case studies from Michigan and the United States will be used.

354 Court Administration and Procedures

Detailed examination of pre-trial procedures, police preparation and witness stand participation with special emphasis on the administrative aspects of criminal justice more than on legal or technical problems, police role and cooperation with bench and law.

356 Law and Civil Disobedience

This is a study of the nature and role of law, dissent and civil disobedience in contemporary American society within the context of the confrontation and interaction between the traditional institutional forces of law and order and the status quo on one hand, and the constitutional protection of freedom of expression and action by individuals and groups acting as proponents of change of instrumentalities of social protest on the other. Case studies will be used.

360 Minorities (Race and Sex) and the Public Service

A consideration of the problems which the minorities (blacks, women, Spanish-speaking Americans and Indians) face as the clients of public agencies. An investigation of the effects of representative bureaucracies on minority clients. An examination of minorities' employment and promotion in public agencies, including evaluation of personnel practices and problems. Case studies will be used.

362 Administration of Social Services

Study of social service agencies as social systems and how they are influenced by bureaucratic and organizational theory and policy formation. Provides the structure and principle concepts and methods of planning and administration of social welfare services; emphasis is on leadership, policy and decision making and program organization as it responds to client needs. Specific administrative functions and agencies serving social services will be studied.

380 Investigative Techniques and Presentations

A course designed to introduce para-professionals to the skills of gathering data and/or evidence and to the skills of presenting that data or evidence in a clear, ethical and interesting manner. Skills taught will include photography and presentation of photos and slides, simple cartography and presentation of maps, basic design skills for the presentation of statistical data and presentation of expert testimony. Investigative theory, method and ethics will be studied to provide the parameters for the use of these skills. (Offered by WJC 1974-75.)

382 Interview Methods and Procedures

A preparation for internships in the service professions and the

behaviorial sciences. Specifically, how to use the face to face situation as a growth experience for the student and as a helping tool for the client. Exercises in interviewing will be conducted in class and opportunities for practice will take place outside of class. We will study how the one-to-one relationship may be used to define a problem and to work toward its solution. (Offered by WJC 1974-75.)

384 Legal Procedures

Legal procedures provides a brief introduction to the nature and role of the adversary approach to resolution of legal disputes; followed by a survey of the principles of civil, criminal and appellate procedures in the state and federal jurisdictions, with emphasis upon the Michigan and federal court rules. The course will include visitation of state and federal courts and public and private law offices.

386 Legal Research and Writing

Legal research and writing provides a brief introduction to organization and content of a law library and the principles and elements of drafting legal documents and preparing trial and appellate briefs; graduated practical exercises in legal research, draftsmanship and brief writing; critical analysis and evaluation of the ability to find pertinent legal references; and effectiveness of organization and presentation of legal argumentation.

399 Independent Readings in Public Service

Further exploration of problems in public service encountered in a previous study in the areas of public administration, criminal justice, police administration, urban affairs, legal administration and women's studies. Independent supervised readings on selected topics which are not dealt with in depth in another course. Credit and topics are arranged with an appropriate staff member. One to five credit hours. Approval of instructor is required before registration.

401 Seminar: Public Service Internship II

Seminar related to practical training, as a part of the Public Service Program, in a government department, agency, office, bureau or related projects. Topics to be decided upon by the participants in the seminar and faculty involved. Class reports, book reviews and term paper. Prerequisites: Junior or senior status and approval of the instructor.

410 Seminar: The Mass Media and Government Service

The purpose of this course is to permit students who are interested in pursuing careers in government service or politics to learn how both print and electronic media function and operate; how the media affect the operations of public offices and officials; how those operations may be improved for the mutual benefit of public offices, the public itself and the media; the functions of public relations officials in government; the role of the media as conduits for bringing to the public information on its elected and appointed officials, as well as the media's role as mediator between public servants and the public. Students are expected to have a working knowledge of the several layers of government and how they function and are interrelated, some facility in writing and a willingness to engage in open discussion.

451 Administration of Correctional Institutions

A study of correctional institutions as an important component of the criminal justice system. Topics to be discussed will include, though not limited to: the history and philosophy behind the institutions, the social function and state's responsibilities, the functioning of the institution, procedures and administration, personnel organization, budgeting and controls. Some emphasis on evaluating the efficiency of the administrative practices in correctional institutions and their social and psychological impact. Case studies and visits to facilities.

495 Seminar: Issues in Criminal Justice

Consideration of special subjects in criminal justice, e.g., decriminalization of narcotics, liquor, sex and gambling offenses and police-minority relations and punishment vs. rehabilitation and penal reform. Topics to be announced at least one term in advance.

496 Seminar: Issues in Urban Affairs

In-depth consideration of special subjects in urban affairs, e.g., problems of the aged, welfare, minorities, medicare and medicaid, poverty, regionalism, mass transit systems, pollution and other problems. Topics to be announced at least one term in advance. Research papers, readings and discussions.

497 Seminar: Issues in Public Administration

Consideration of special subjects in public administration and municipal government, e.g., collective bargaining, management/employee relations, college administration and governance, consumerism, intergovernmental organization, Watergate, impact on the government efficiency and other topics. Topics to be announced at least one term in advance. Research papers, readings and discussions.

499 Independent Interdisciplinary Research

An independent research of interdisciplinary nature based on the knowledge acquired in other courses or on the experience acquired during the internship period and the courses taken in the programs. The research would normally fall in the area of major emphasis selected by the student, e.g., public administration, criminal justice, urban affairs, legal administration or women's studies, though drawing on more than one academic discipline. Prerequisite: Approval of instructor.

THEATRE

REQUIREMENTS FOR MAJOR AND MINOR PROGRAM

A student seeking either the B.A. or B.S. degree in theatre must complete 55 hours of theatre credit. All majors must complete **Theatre 211, 221 and 311; World Literature 101 and English 212.**

At an appropriate time, in consultation with an adviser, the theatre major will select one of the following three areas of emphasis and fulfill, in addition, the following requirements:

Performance: **Theatre 251 or 255, 271, 399 and 451.**

Education: **Theatre 251 or 255, 271, 361 and 451.**

Research (for those intending graduate study): **Theatre 399, 499** and 10 hours of cognate courses from the following: **English 371 and 380** (when the topic is dramatic literature) and **Spanish 430.**

A student choosing theatre as a minor program must complete 30 hours in the Theatre Department. Up to 10 hours in the literature of the theatre, from courses in various literature areas, may be used to satisfy part of the requirement.

COURSES OF INSTRUCTION

All courses carry five hours of credit, except where noted.

101 Introduction to the Theatre

Introduction to and practicum in theatre arts. Includes attendance at theatrical productions, evaluated through discussion or written critiques. Lab requirements in technical work helping build scenery, costumes, or serving on running crews for college productions. May include limited performance or technical work in brief scenes from plays of various periods. Recommended for distribution.

201 Speech

Function and principles of oral communication. The speaker, speech and audience are examined in a broad social context. Preparation and presentation of various types of speeches, in and out of class, provides material for applying standards of criticism and analysis of individual performance. The purpose of these experiences is to develop in each student the ability to speak, listen and function with maximum effectiveness in a changing society. Acceptable for distribution.

211 Early History

A study of the urge toward dramatic representation, the development of distinctive theatrical forms and the varying significance of theatrical experience from primitive ritual to the closing of the English theatres in the 17th century. Acceptable for distribution.

221 Modern History

A study of the increasing complexity of theatrical production, the emergence of the director, trends toward illusion and anti-illusion and their implications for modern theatre. Recommended for distribution.

230-242 Theatre Lab

A series of performance units with variable credit involving all aspects of theatrical expression under production pressure. Enrollment may be in any subdivision in acting, design, technical work, lighting, costume, make-up, etc. Recommended for distribution.

251 Problems in Acting

Problems in classic acting. Emphasis on period movement, voice training, acting styles and theory. Lab and performance required. Acceptable for distribution.

255 Acting Workshop

An organic approach to acting, drawing material from various fields and recent experimental theatrical training programs. Recommended for distribution.

261 Oral Interpretation

Performance of and discussion about forms and techniques of oral interpretation. Performance will be evaluated by performer, members of class and professor conducting class. Some voice lab work may be included. Recommended for distribution.

271 Stage Craft

Introduction to the materials and techniques of mounting a production; practice in building and painting scenery and designing lighting. Recommended for distribution.

281 Makeup

An introduction to the art of designing and executing theatrical makeup. The final project will be the design for an entire play and the execution of at least three makeups. Acceptable for distribution.

311 Theory

A study of critical and aesthetic theories of theatre as a performing art, with special emphasis on contemporary source materials from all art forms. Prerequisite: **Theatre 101** or permission of instructor. Acceptable for distribution.

351 Dance

Study of basic creative dance techniques, including modern and jazz idioms. Application to theatrical and concert situations, both contemporary and stylistic. Studio sessions, guest performers, lecturers and films.

355 Reader's Theatre

Practicum in directing and acting in a reader's theatre production. Students will also become acquainted with various forms of literature particularly well suited to and adaptable for reader's theatre. Skills in selecting and cutting literature will be developed when students write scripts for performance of a final project. Some critical analysis assignments included. Recommended for distribution.

361 Theatre Arts for Children

Theory and practice in children's theatre and creative dramatics. Contact with children, as audience, artist and creative dramatics leader. Recommended for distribution.

371 Set Design

An introduction to the nature, function and art of designing sets for the theatre. Practice composition and rendering. Prerequisite: **Theatre 271**. Acceptable for distribution.

381 Costuming

An introductory course in the development of construction skills utilizing a variety of materials. Experience with fabric in terms of color, texture, line, etc. Lectures, demonstrations and discussions in a broad spectrum approach not limited exclusively to theatre application. Recommended for distribution.

385 Advanced Costume Design

Lecture, discussion and applied activity in the examination of the history of costume. Emphasis also on production training in the specialized field of costume design, its research methods, patterns and techniques.

399 Special Problems

Independent work in problems of theatre history or practice encountered in previous study. For juniors and seniors. Prerequisite: Three courses in theatre above the 100-level and approval of adviser and instructor. One to five hours credit.

451 Directing

Theory and practice in the interpretation and production of plays through lectures and demonstrations, culminating in a project. Prerequisites: **Theatre 251** and **271**.

471 Lighting

The study of theories and practices of lighting various types of productions based on a thorough foundation in lighting sources, instruments, and their accessories, color, control equipment and theatre layout. One major design project required. Acceptable for distribution.

499 Independent Research

Scholarly library research project. Seniors majoring in theatre.

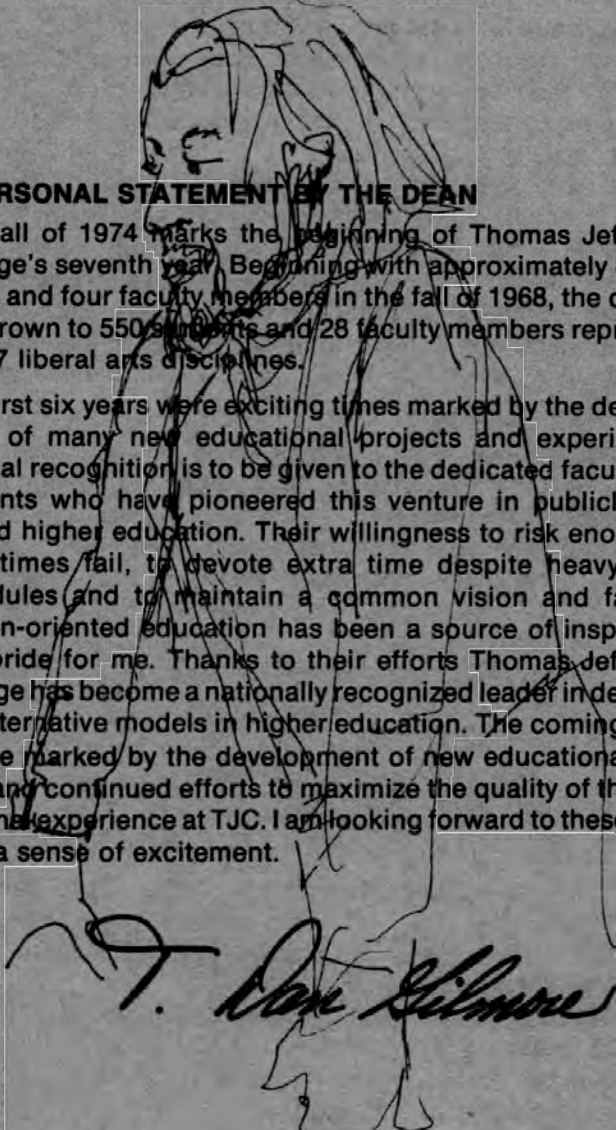




"It is the quality of its people that makes the quality of a university. You may have your buildings, you may create your committees and boards and regulations, you may pile up your machinery of discipline and perfect your methods of instruction, you may spend money till no one can approach you; yet you will add nothing but one more trivial specimen to the common herd of American colleges, unless you send into all this organization some breath of life, by inoculating it with a few people, at least, who are real geniuses. And if you once have the geniuses, you can easily dispense with most of the organization. Like a contagious disease, almost, spiritual life passes from person to person by contact. Education in the long run is an affair between the individual student and his opportunities. Methods of which we talk so much, play but a minor part. Offer the opportunities, leave the student to his natural reaction on them, and he will work out his personal destiny, be it a high one or a low one. Above all things, offer the opportunities of higher personal contact . . . But we are only beginning in this country, with our extraordinary American reliance on organization to see that the alpha and omega in a university is the tone of it and that this tone is set by human personalities exclusively."

W. James

(Suggested by Tom Cunningham)



A PERSONAL STATEMENT BY THE DEAN

The fall of 1974 marks the beginning of Thomas Jefferson College's seventh year. Beginning with approximately 80 students and four faculty members in the fall of 1968, the college has grown to 550 students and 28 faculty members representing 17 liberal arts disciplines.

The first six years were exciting times marked by the development of many new educational projects and experiments. Special recognition is to be given to the dedicated faculty and students who have pioneered this venture in publicly supported higher education. Their willingness to risk enough to sometimes fail, to devote extra time despite heavy work schedules and to maintain a common vision and faith in person-oriented education has been a source of inspiration and pride for me. Thanks to their efforts Thomas Jefferson College has become a nationally recognized leader in developing alternative models in higher education. The coming years will be marked by the development of new educational projects and continued efforts to maximize the quality of the educational experience at TJC. I am looking forward to these years with a sense of excitement.

T. Don Silmore

GOALS OF THOMAS JEFFERSON COLLEGE

PREAMBLE

One of the deepest needs of our technologically sophisticated and rapidly changing nation is not for people well prepared to carry out specific vocations but for people with great creative resilience who can successfully cope with kaleidoscopic change in their world. The central task of education at TJC is to develop and strengthen this creative capacity in its students. We are opposed to any educational method which views individuals as "complete" once they have mastered a body of factual material. We view college education to be truly a "leading out" of the individual's expressions of such basic human attributes as creativity, thinking, self motivation, independence and a sense of personal and social responsibility. These, as living skills, will ensure continued personal development and hence a sustained value to society regardless of your eventual vocational choice.

The purpose of education at TJC is to bring students into contact with themselves, their personal and academic needs, their capacities, their values, their aims in life, and to help them integrate these elements into an effective whole by providing the necessary opportunities and resources.

GOALS

To provide the opportunity to obtain a truly interdisciplinary education, and to encourage students to do so.

To provide students with opportunities to maximize their creative potential.

To develop an ability to integrate individual needs for self-expression with socially valuable work.

To promote a capacity for objective intellectual analysis.

To promote the mastery of skills and a capacity to deal with new ideas.

To minimize the use of arbitrary power or aversive control in or out of the classroom.

To foster the ability in students to see themselves in context as part of a larger social and environmental whole.

To provide a framework in which students are encouraged to become increasingly self-reliant.

To provide a positive environment for students to develop self-esteem, self-knowledge and identification with other human beings.

To expose students to cultures different from their own.

To assist students in thinking out and acting on the issues of

their own existence as the source of direction in their education.

To try enough to sometimes fail.

To be a community with outstanding faculty to help achieve all these goals.

COLLEGE PROFILE

Opened in September, 1968, as the School of General Studies, Thomas Jefferson College (TJC) developed in accord with Grand Valley's stated commitment to decentralization. It is anticipated that TJC will remain one of the smaller colleges of the Grand Valley cluster. The fall, 1974, enrollment is expected to be 600.

Thomas Jefferson College is a fully accredited four-year liberal arts college with person-oriented approaches in learning. It is designed for students who are as interested in exploring their personal and academic potentials as in specializing in a given subject. Less emphasis is placed on preparing students to carry out specific vocations than on preparing them to live creative and productive lives. Students have both the freedom and the responsibility of designing a personally relevant curriculum, guided and counselled by faculty members.

The Thomas Jefferson College program as a whole has the following general characteristics:

- Faculty members at TJC are selected specifically for their ability and interest in teaching on the undergraduate level. Besides being trained in specific academic areas, TJC faculty have multidisciplinary and interdisciplinary interests and are able to teach effectively in several areas.
- The faculty of TJC is dedicated to working with students on an individual and person-oriented basis. Faculty members trust students to make their own decisions and, more importantly, believe students are capable of assuming responsibility for the consequences of these decisions.
- At TJC there is as much emphasis on personal growth (self-esteem, assertiveness, self-confidence, creativity) as there is on academic preparation. There is a firm belief that the two go hand-in-hand and both are essential to the truly educated person.
- There is heavy emphasis on experimentation and evaluation at all levels. This emphasis is based on the belief that the college as an institution must be an organically evolving system rather than a static and arbitrary set of requirements.

- There are no core curricula or prerequisites at TJC. Students working with faculty tutors are responsible for structuring their plan of study according to their educational objectives. Some students do this on a term-by-term basis while others develop a comprehensive, highly structured plan of study.
- Students have equal power with the faculty and dean in all matters related to the governance of the college.
- Heavy emphasis is placed on field work. Students are encouraged to spend at least one full term during their time at TJC serving as an apprentice in a social service agency or experiencing another culture in depth.

TJC FACULTY

TJC faculty are selected on the basis of five criteria: academic and/or professional backgrounds, interdisciplinary and multidisciplinary interests, compatibility with educational philosophy and goals of the college, teaching ability and ability to sustain productive student-faculty contact in and out of the classroom. Approximately one-third of the faculty are trained in one of the performing arts. The other faculty are distributed among the physical and life sciences, social sciences and humanities.

TJC faculty members tend to be aware of contemporary experimentation in the field of higher education and receive strong peer and institutional support for experimentation in their approaches to teaching.

A faculty development program including regularly scheduled workshops, faculty exchange programs, team teaching and rigorous faculty evaluation demonstrates the faculty's concern with providing personally meaningful and significant learning experiences to the TJC student.

STUDENTS

As a result of an continuing institutional evaluation program it is possible to make certain broad generalities about the values, aptitudes and attitudes of TJC students.

- TJC students tend to show significantly higher creative and academic potential when compared with norms of students attending other liberal arts colleges across the nation (results of Alpha test of creativity).

- The following data comparing TJC students with national norms on four-year colleges was recently supplied by the American Council of Education. The only data included here is where TJC students differed markedly from national norms.

	TJC	National
• Plan to earn Ph.D.	25%	14%
• Chose TJC because it offers special education program	89%	32%
• Probable career choice		
Artist (including performer)	16%	4%
Undecided	36%	13%
(These were the two highest categories)		
• Major emphasis of studies		
Arts (fine and performing)	20%	7%
Humanities	12%	4%
Psychology	17%	4%
Social Work	10%	2%
Farmer	7%	2%
(The next highest area was education—7% compared with 16% nationally)		
• Reasons for making a career choice		
Independence	68%	39%
Avoid pressure	40%	17%
Work with ideas	80%	51%
Intrinsic interest	81%	72%
(It's interesting to note that "working with people" was lower for TJC than nationally—57% compared to 65%)		
• Current religious preference		
Jewish	9%	4%
Roman Catholic	9%	32%
Unitarian-Universalist	7%	1%
Other	29%	4%
• Essential educational objectives		
Achieve in a performing art	48%	22%
Be authority in field	37%	64%
Influence social values	44%	33%
Have administrative responsibility	3%	26%
Be financially successful	13%	52%
Be successful in own business	19%	59%
Be involved in environmental clean-up	46%	34%
Develop philosophy of life	92%	73%

- The following excerpts are from an evaluation report submitted to TJC by Dr. Harold Hodgkinson, president of the American Association of Higher Education and Research

Educator, Center for Studies of Higher Education, University of California, Berkeley.

- TJC students seem exceptionally friendly and in charge of themselves. Some, of course, seem anxious about what they're doing, but relatively few possess that traumatic, romantic, paranoid quality of the early "experimental" college of the 30's.
- It must be said that there is a lot of very good individual work being done, both in class and out of class in independent study options. Classes are small and faculty generally take advantage of small size to really get at each individual student and find out what is going on. I was very impressed with the quality of individual faculty efforts. Faculty members seem to care about the material and are very prepared in their classes.
- Compared to other campuses at Grand Valley, students in Thomas Jefferson are exceedingly nonvocational, overly academic, noncollegiate and particularly nonconformist. Education for the TJC student is a highly individualistic process. The student must get involved with the learning before it is meaningful. The institution is old enough now to have a "second generation" of students, many of whom decry the current scene and look back to the good old days. There seems to be a stratification between local students . . . and the students who come from the eastern states. The easterners tend to see the locals as somewhat naive, but this doesn't seem to be a source of intense personal friction.
- I talked with about 40 students during my stay, and was impressed with the lack of laziness and goof-off tendencies one occasionally finds in experimenting colleges. Virtually every student I spoke to had some fairly clear idea of what it was he or she was in college to do, and saw various activities as being related to that end. Students that were quite impressive were articulate, energetic, intelligent and willing to learn.
- The Myers-Briggs Type Indicator was given to 151 TJC students. Briefly, it measures individuals on four dimensions: extroversion or introversion; sensing or intuition; thinking or feeling; and judgment or perception. Of the 16 possible personality types, 64 percent of TJC students fall into only two categories, while 18 percent of the populations of other liberal arts colleges fall into these two categories. The two categories are the Introverted/

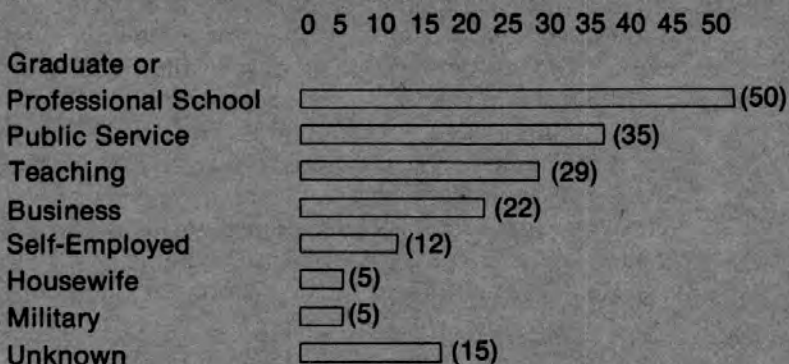
Intuitive/Feeling/Perceptive type and the Extroverted/Intuitive/Feeling/Perceptive type. Dr. Myers' summary of these personality types is as follows:

- The INFP type is twice as good when working at a job he believes in, since his feeling for it puts added energy behind his efforts. He wants his work to contribute to something that matters to him, perhaps to human understanding or happiness or health, or perhaps to the perfecting of some product or undertaking. He wants to have a purpose beyond his paycheck, no matter how big the check. He is a perfectionist wherever his feeling is engaged, and is usually happiest at some individual work involving personal values. With high ability he may be good in literature, art, science or psychology. He particularly likes to concentrate on a project and dislikes all details not relevant to any deep interest. He is marked by insight and long-range vision, curious about new ideas, interested in books and language. He is likely to have a gift of expression, especially in writing. He is ingenious and persuasive on the subject of his enthusiasms, which are quiet but deep-rooted.
- The ENFP Type is the enthusiastic innovator. He is always seeing new possibilities — new ways of doing things, or quite new and fascinating things that might be done — and he goes all out in pursuit of them. He has a lot of imagination and initiative for originating projects and a lot of impulsive energy for carrying them out. He is wholly confident of the worth of his inspirations, tireless with the problems involved, and ingenious with the difficulties. He gets so interested in the current project that he thinks of little else. He gets other people interested too. Being a perceptive type, he aims to understand people rather than to judge them; often, by putting his mind to it, he achieves an uncanny knowledge of what makes them tick, and uses this to win support for his project. He adapts to other people in the way he presents his objective, but never to the point of giving up. His faith in his intuition makes him too independent and individualistic to be a conformist, but he keeps a lively circle of contacts through his versatility and his easy interest in almost everything. He is enthusiastic, concerned with people and skillful in handling them. He has remarkable insight into their possibilities and interest in their develop-

ment. He may be an inspired and inspiring teacher, scientist, artist, advertising man, salesman or almost anything it interests him to be.

PLACEMENT AFTER GRADUATION

During its first six years of existence Thomas Jefferson College graduates have distinguished themselves in a variety of activities. The following is a summary of the placement of TJC graduates through the summer of 1973.



Representative graduate or professional schools attended by TJC graduates:

- Yale School of Law
- University of Michigan Law School
- University of West Florida
- University of Pennsylvania
- Wayne State University
- University of Buffalo
- George Marshall Law School
- Western Michigan University
- Michigan State University
- SUNY at Buffalo
- Carl Jung Institute, Switzerland

ORGANIZATIONAL STRUCTURE AND GOVERNANCE

As a result of Grand Valley's reorganization during the 1969-70 academic year, each of the cluster colleges gained an amount of autonomy which is probably unparalleled at other state-supported institutions of higher education.

Students and faculty at TJC are free to work out their own policies regulating personnel, grading, curriculum, method of

governance, development and spending. Policy decisions do not have to be ratified by an all-college senate or similar governing body. These freedoms, especially those regarding personnel and curriculum, act to insure the unique identity of the college. New projects and ideas may be initiated quickly, sometimes within hours, and if the experiments prove unsuccessful they may be dropped just as quickly. This capacity to change rapidly and continuously seems to lie at the heart of experimental education. It also seems to encourage the generation of creative solutions to the problems facing higher education.

Students share equally with the faculty and the dean in all policy decisions related to Thomas Jefferson College. Depending on the students' preference, the Town Meeting may operate with full student participation or by electing representatives. A policy decision is considered final when any two of these governing bodies — the Dean, the Faculty Meeting or the Town Meeting — agree. Hence, the students and faculty may overrule the dean, the dean and the students may overrule the faculty, etc. Students constitute 50 percent of the membership of the Curriculum, Admissions and Academic Affairs Committees. For decisions regarding promotion, tenure, retention and hiring the students and faculty have separate committees which have mutual veto power. That is, both committees must approve a decision before a recommendation is passed on to the dean. Membership on student committees is obtained through election in the Town Meeting. Students also have membership on all of the all-GVSC committees.

ADULT EDUCATION

During the past six years Thomas Jefferson College has become increasingly popular to students who for one reason or another are unable to attend classes on a regular basis (housewives, senior citizens and office workers for example). Certain elements of the TJC curriculum—independent projects, special studies and examinations—seem to be ideally suited for such people in that each of these curriculum modes can be pursued on an independent basis. A housewife, for example, may be permitted to carry on her present activities and responsibilities, and at the same time participate as much as she wishes in the life of TJC. We believe that this chance to pursue higher education off-campus provides opportunities for certain individuals not usually found in a college.

BACCALAUREATE DEGREE

The four-year program at Thomas Jefferson College leads to a bachelor of philosophy (B.Ph.) degree. This degree is recognized by the academic community as reflecting baccalaureate level studies of an interdisciplinary or multidisciplinary nature. In order to qualify for the degree the student must present at least 180 credits of satisfactory work and be enrolled in Thomas Jefferson College for at least 60 credits before graduation. If students begin college work at TJC or transfer in with less than 90 credits, they must complete at least 60 percent of their remaining credit in TJC learning experiences. If they transfer in with more than 90 credits, they must complete at least 75 percent of their remaining credit in TJC learning experiences. In addition, they must present during the term in which they graduate a narrative summary of their collegiate experiences, which may include non-credit experiences, and group these experiences in educationally significant clusters.

Two standard interdisciplinary distributions recommended are:

- Four to seven areas defined by the student with at least 15 credits in each area and no more than 40 credits allowed undistributed.
- Four to seven areas defined by the student with at least 20 credits in any area, with no limit on the maximum number of credits in any area.

Each B.Ph. degree program must have the endorsement of the student's tutor and approval of the faculty. General areas of study available include physics, astronomy, mathematics, drama, social psychology, general psychology, educational psychology, group processes, sociology, religiology, Semitic languages, political science, literature, linguistics, sinology, mythology, music, poetry, creative writing, botany, ecology, economics, geology, women's studies, anthropology, archaeology and dance.

TEACHER CERTIFICATION

Students desiring certification as elementary or secondary teachers are able to complete their certification requirements while completing their B.Ph. degree program in TJC. TJC requirements for teacher certification follow the requirements of the Educational Studies Institute with the major and minor programs approved by the State Board of Education.

EVALUATION

Thomas Jefferson College has no competitive grading system. As work is completed it is judged to be either complete or incomplete. If the work is judged incomplete the grade remains on an informal transcript until the work is satisfactorily completed. If the work is never completed the incomplete grade remains, never reverting to a failure. Only completed work is included on the formal transcript. Students have the opportunity to have written evaluations on course work included as part of their permanent transcript. Such evaluations are initiated by the student and contain a self-evaluation along with an evaluation by the faculty member.

Upon graduation or transfer, students have the opportunity to remove evaluations or request additional evaluations. On leaving TJC, students may elect to have these evaluations included as part of their permanent transcript. No attempt will be made to assign grades.

A part of a formal transcript for a student transferring out of TJC might look something like the following:

SAMPLE TRANSCRIPT

(NAME)

Credits registered

Credits complete

Cumulative credits completed

TERM

157

15

45

Biology 101

TJC Seminar: Social Psychology

Explored various areas of social psychology through reading Roger Brown's *Social Psychology* and discussion, including: social behavior in animals, roles and stereotypes, intelligence, socialization, prejudice, attitude change and collective behavior.

Diller

No Special Study Archeo Field Tech

(Name) studied and participated in archeological diggings of Late Woodland sites at Deer Park and Stroven's Field near Lamont. The student dug, sifted and helped identify various artifacts. These were later taken to the lab, cleaned and cataloged.

Flanders

If the student had so elected, the transcript would have been accompanied by a supplementary series of self and teacher evaluations.

There are numerous colleges in the nation which are programmed similar to TJC. The experience of students from these institutions and from students who have graduated from TJC has demonstrated that transcripts such as the sample shown here are honored by most colleges, universities, graduate and professional schools.

Students wishing to transfer to other colleges within the Grand Valley cluster may apply to the deans of those colleges to do so.

ACADEMIC GOOD STANDING

Students are suspended from Thomas Jefferson College if after they have attempted 45 credits since entering TJC they have earned less than 60 percent of those credits. Such suspension shall be in effect until 60 percent of the credit attempted is completed. Students are warned of possible suspension if they have earned less than 75 percent of the credits attempted.

Following notice of suspension students may appeal the decision to the dean of TJC, or may consult their tutor or the assistant dean concerning the amount of credits earned or the amount to be made up. The warning does not constitute probation and it is not noted on the students' official transcripts. Suspension is noted only if it prevents the student from registering in a particular term.

CURRICULUM

The curriculum at TJC is characterized by responsive stability. TJC offerings represent much of the traditional liberal arts content as well as more topical courses and courses designed to meet specific needs and interests of individual students. Each spring TJC students and faculty generate a core curriculum for the coming year. This core consisting of approximately 80 seminars represents about one-half the total offerings for any given year. The remaining seminars and individual tutorials are generated once each term for the following term. Thus, the core curriculum allows for advanced planning and sequencing of courses, while the remainder allows for maximum flexibility and responsiveness to more immediate needs and interests.

TJC seminars may be suggested by either students or faculty. The method for suggesting a seminar is to fill out a proposal form describing the seminar and post it in the appropriate place. Proposals may be posted at any time. These proposals are signed and dated by anyone interested. Once sufficient interest is expressed, the seminar is usually scheduled for the next quarter.

MODES OF LEARNING

Students may elect to organize their learning experiences in a variety of ways. This is made possible by the seven modes of learning offered at TJC. These modes may be divided roughly into two categories—studies done on a group basis and studies done on an independent basis. Group modes of study include seminars, group special studies, unit studies, floating seminars and proseminars. Independent studies include special studies and field studies. Students may elect any or all of these modes of learning in planning a personally relevant four-year course of study.

The normal credit load for a term is 15 credits. To enroll for more than 17 credits requires special permission from the dean of TJC.

SEMINARS

Seminars are group studies which range from exploratory studies to highly structured advanced courses. Seminars are organized when a student or faculty member proposes a subject which attracts a sufficient number of interested students. Proposals are considered by the Academic Affairs/Curriculum Committee well before the time of registration for the term involved. Seminars during 1973-1974 included Philosophy of Death, Improvisational Theatre, Cosmology, Advanced Indian Music, Feminist Theatre, States of Consciousness, Organic Gardening, Topics in Literature, Modern Physics and Taoism and about 50 others. It is the responsibility of the Curriculum Committee to insure that there are a substantial number of specifically interdisciplinary and cross-cultural seminars offered each year. Seminars studying creativity and promoting creative behavior are offered on a regular basis. Each seminar study normally carries five credits.

GROUP SPECIAL STUDIES

Group special studies are normally proposed by a small group of students who wish to pursue a specialized area of study in

depth. Such studies function in the same manner as seminars. However, the interest and academic levels of the participants tend to be more homogenous. Such studies are usually offered for five credits and enrollment is on a permission-only basis. Examples of group special studies offered in 1973-1974 include Choreography, Music Composition, A Study of Twentieth Century Christian Mysticism, Introductory Chinese and Transit Surveying in Archaeology.

UNIT STUDIES

Unit studies involve experiences of short duration carrying low credit that can be taken individually but added up to form a study of seminar status. Unit studies may begin at any time during the term and result directly from spontaneous proposals by students and faculty. Unit studies are usually of short-term duration—one or two hours, a week, a full-day workshop or several discussion meetings. Illustrations of unit studies include four one-hour lectures on Eliot's *Wasteland*, a two-day workshop on transactional analysis, an objective examination in taxonomy and a two-hour a week, four-week course in the use of the transit. Unit studies usually carry one-half to 3 credits depending on the nature of the study.

FLOATING SEMINAR

The floating seminar affords the student the opportunity to develop a term's program during the term, and permits assignment of credit for work after the term is finished rather than assigning credit prior to the academic experience. Thus, it is possible for a student who wishes to explore a number of academic experiences as they occur to "time" the experiences on an individual basis. The student in a floating seminar may attend a regularly scheduled seminar, examination or group special study for a whole term, working for a particular amount of credit by doing a particular amount of work. The student may also select specific experiences from certain seminars, workshops or special study-like experiences to work toward a particular integration of experiences. All credit for the floating seminar must be earned in experiences on campus with Thomas Jefferson College faculty. Students are urged to discuss their plans regarding a floating seminar term proposal with their tutors and potential instructors or supervisors. Approximately 60 to 70 students elect a floating seminar during any given term.

PROSEMINARS

Proseminars are offered on a demand basis by individual TJC faculty. These seminars combine individual research projects in the faculty member's area of expertise. In addition, all students working with a particular faculty member meet regularly to share research experiences, report results of research and critically analyze other studies. Examples of proseminars offered in 1973-1974 include Education, Theatre Production, Cultural Anthropology, Politics, Humanities, Art Critique and Music. Proseminars usually carry 5 credits.

SPECIAL STUDIES

Special studies are individually contracted studies between students, their tutors and a supervisor of the special study. Such studies usually carry 5 credits. The contract proposal is initiated by the student and conditions of the contract are negotiated with the student's tutor and supervisor. Credit is awarded once the student satisfies the conditions of the contract. Special studies require weekly one-hour meetings with the supervisor of the study. Examples of special studies offered in the 1973-1974 year include Readings in Humanistic Psychology, Study of the Works of Plato, News Writing, Bio-Energetics in the Human Body, Silversmithing and Extensive Song Writing.

FIELD STUDIES

Field studies at TJC are off-campus learning experiences codirected by an on-site supervisor who must be approved by the TJC Academic Affairs/Curriculum Committee, and the TJC director of field studies. Usually a field study is carried as a full-time academic load carrying between 12 and 17 credits. Field study options available to students include intercultural experiences, social service apprenticeships and internships, academic exchange projects and intensive research projects. A few examples of each are given below.

Intercultural Experiences

- A study of Mexican rural life while living in Mexico.
- A study of Immanuel Kant while living and traveling in Europe.
- A study of the French-Canadian Separatist Movement while living in Montreal.

Social Service Internships and Apprenticeships

- Doing volunteer work at the Mary Free Bed Hospital.

- Coordinating a college work-study program at the Grand Rapids Urban Corps.
- Presentation of a sex education series at the Kent County Jail.
- Working as a counselor trainee for Ionia State Prison.

Academic Exchange Project

- A study of art and art history at L'Atelier Helene Perrier, Paris.
- A study of experimental psychology at the University of Michigan.

Intensive Research Project

- A study of an IBM Simulation System.
- An inside study of the House of Commons in England.

The field study proposal form must be filled out accurately and completely before registration. Proposals should normally carry working titles and proposals that are concrete and specific and should show credit and the qualifications of the supervisor. Study proposals seriously lacking these qualities are returned to the tutor.

Students should first work with their tutors on the general outlines of the field study. They should then go to the field studies coordinator who will work with them in providing an on-site supervisor and assist in securing the professional credentials and/or supporting documents for approval as a supervisor if the study is within the United States. The supervisor will act as teacher/counselor and verify that the student has met the conditions of the contract.

In cases where studies are done in foreign countries, students must be briefed and cleared by GVSC's International Studies Institute prior to the study. The International Studies Office will be responsible for arranging for on-site supervisors and making sure that the student is psychologically and physically prepared for the intercultural experience. The supervisor must be approved before the study can be approved for registration. The study proposal signed by the tutor and the field studies coordinator, the supporting documents and a statement from the International Studies Institute (if applicable) must be turned in to 163 or 164 Huron before registration in order for the study to be approved for registration.

Minimally the requirements for credit for a field study will be: (1) weekly letters to the on-campus tutor; (2) a daily journal turned in at the end of the term to the tutor; (3) a major research

project or paper turned in at the end of the term (or several smaller projects); (4) evaluation by the campus tutor and on-site supervisor.

CORE CURRICULUM 1974-75

Fall 1974 Seminars

Cosmology (Andersen)
 Pacifism/Non-Violence (Andersen)
 Meteorology (Andersen)
 Elementary School Curriculum (Aranoff)
 Childhood in Fiction and Biography (Aranoff)
 Philosophies of Education (Aranoff)
 Origins of Modern Architecture (Birtwistle)
 Theatre: A First Course for the Curious (Birtwistle)
 Painting and Drawing (Cadieux)
 Art Exploration (Cadieux)
 Art From 1969 to the Present (Cadieux)
 Chemical Bases of the World Around Us (Corneille)
 Photography as a Model For Perception (Corneille)
 Geographical Exploration of Michigan (Corneille)
 Parapsychology II (Cutler)
 Yiddish (Davis)
 The Novel: Form and Content (Davis)
 History of the English Language (Davis)
 Psychotherapy (Diller)
 Interpersonal Communication (Diller)
 Introduction to Psychology (Diller)
 Practicum in Social Service (Efron)
 Coed Volleyball (Efron)
 Models of Reality (Efron)
 Utopias and Social Movements (Efron)
 Classical Guitar: Beginning (Fierens)
 Classical Guitar: Advanced (Fierens)
 Adv. Psych History (Gilmore)
 Human Consciousness: Structure and Functions (Gostnell)
 Inside Firesign Theatre (Gostnell)
 Ideas in Experimental Psychology (Gostnell)
 Alternative Futures for Education and Learning (Haggard)
 The Inward Journey (Haggard)
 Science versus/and/or Religion (Haggard and Warren)
 Prophetic Movement in Israel (Haggard)
 Indian Portraits (Harrison, E.)
 Culture of Poverty (Harrison, E.)
 Language and Culture (Harrison, E.)

- Human Evolution (Harrison, W.)
Depression Through War Years (1930-1945) (Harrison, W.)
Origin and Development of the American Indian
(Harrison, W.)
Traditional China (Heuer)
Introductory Chinese (Heuer)
History and Politics of the Poor in America (Heuer)
Psychopathology Through Literature (Kinzie)
Arthur Koestler (Klein)
TV and Creativity (Klein)
Beginning Dance Technique and Choreography (Loizeaux)
Intermediate Dance Technique (Loizeaux)
Intermediate Choreography and Performing (Loizeaux)
Ancient History - From Sumer to the Fall of Troy (Mage)
Yoga (Mage)
Human Nutrition (Mage and Wilson)
Improvisational Theatre (Moyer)
Psychic Integration (Rapaille)
The Community Experience (Rapaille)
Integrative Psychology (Rapaille)
The Commune Experiment (Rapaille)
Philosophy of Death (Rodin)
How to Read a Book (Rodin)
Society on Film (Rodin)
Materials of Music I (Schechtman)
Chamber Music Improvisation (Schechtman)
Ancient Western Philosophy (Smith)
Science and Ethics in the Twentieth Century (Smith)
Women in Myth and Legend (Smith)
The Windmill as a Variation on Stonehenge (Van Syoc and
Klein)
Drawing from Nature (Van Syoc)
Aging (Van Syoc)
Elements of Botany (Warren)
Outdoor Data Gathering (Warren)
Special Projects in Paleontology (Warren)
Phenomena of Solitas (Wilson)
Non-Verbal Communication (Wilson)
Piano (Zelnik)
Intermediate Basics of Music (Zelnik)
Alexander Solzhenitsyn (Efron, P.)
Women Speak (Karosi)
Saying What You Mean (Karosi)
Visible Singing - Tone Eurythmy (Garaets)
Ballet (Baum)

The Process of Music (Schechtman)
 City/Country (Efron, R. and Efron, P.)
 T'ai Chi (Staff)
 First Aid (Cobb and Van Antwerp)
 Yoga 'Seshin' (Gilmore and Malamud)
 Classical Hebrew (Haggard)
 Transit Surveying in Archaeology (Harrison, W.)
 Solar Heating (Kelin)
 Jefferson Documentary (Kelin and Vay Syoc)
 School Program (Moyer)
 Composition (Schechtman)
 Jazz Ensemble (Zelnik)
 Proseminar in Education (Aranoff)
 Proseminar in Theatre Production (Birtwistle)
 Proseminar in Art Critique (Cadioux)
 Proseminar in Cultural Anthropology (Harrison, E.)
 Proseminar in Politics (Heuer)
 Proseminar in Humanistic Studies (Rodin)
 Proseminar in Music (Schechtman)
 Proseminar in Life Sciences (Wilson)
 Proseminar in Humanities (Mage)

Partial List of TJC Seminars Tentatively Scheduled for Winter, 1975

Theory of Arithmetic (Andersen)
 Supervised Work With Children (Aranoff)
 Improvisational Theatre Workshop (Birtwistle)
 The Novel Experiments (Davis)
 Social Psychology (Diller)
 Practicum in Social Services (Efron)
 Human Evolution (Gestnell)
 Beyond Belief (Haggard)
 Social Anthropology (Harrison, E.)
 Prehistoric Man (Harrison, W.)
 Contemporary China (Heuer)
 TV For Creativity (Klein)
 Introduction to Linguistics (Klein)
 Intermediate Dance Technique (Loizeaux)
 Ancient History: Hellas and the Ascent of Rome (Mage)
 Theatre Arts for Children (Moyer)
 Introduction to Film Appreciation (Rodin)
 Exploration of the Inner Space (Rapaille)
 Composition (Schechtman)
 Modern Western Philosophy (Smith)
 Designing from Nature (Second Sequence) (Van Syoc)

Outdoor Data Gathering (Interpretation) (Warren)
Male Identity (Wilson)
Eighteenth Century Counterpoint (Zelnic)
Creative Writing: Poetry

**Partial List of TJC Seminars Tentatively Scheduled for
Spring, 1975.**

Astronomy (Andersen)
Elementary Social Studies (Aranoff)
Contemporary Theatre (Birtwistle)
The Novel: Now (Davis)
Theories of Personality (Diller)
Practicum in Social Services (Efron)
Psychology of Love (Gostnell)
Psycholinguistics (Gostnell; Klein)
Animal Communication (Gostnell)
Creative Insecurity (Haggard)
Myth and Ritual (Harrison, E.)
Origin and Development of Oriental Civilization (Harrison, W.)
Traumatic Figures in History (Heuer)
TV for Creativity (Klein)
Psycholinguists (Klein; Gostnell)
Intermediate Choreography (Loizeaux)
Ancient History: Rome (Mage)
Advanced Improvisation (Moyer)
The Brothers Karamazov (Rodin)
Anti-Psychiatric Movement (Rapaille)
Composition (Schechtman)
Philosophy in the Twentieth Century (Smith)
Painting From Nature (Third Sequence) (Van Syoc)
Outdoor Data Gathering (Results and Field
Experience) (Warren)
Phenology (Biology) (Wilson)
Musical Currents in the Early Twentieth Century
(1890-1945) (Zelnic)
Creative Writing: Poetry

ADMISSIONS

Thomas Jefferson College seeks to admit students who demonstrate high academic and creative potential; who have interests compatible with the resources available to TJC; who demonstrate personal initiative and responsible use of freedom in the design and pursuit of their academic program and who are able to function productively without the extrinsic rewards of a competitive grading system. It is recognized that

these qualities may not be directly correlated with grades earned at prior institutions and that such qualities may be found in students who have not excelled in prior institutions, as well as in students who have been academically outstanding.

It is also recognized that a lively curiosity concerning various issues or areas of study and an intense enthusiasm for education can result in a personal commitment that will carry a student a long way towards the goal of an undergraduate degree. Further, since most of the course offerings of the college are conducted either as independent studies or group studies, TJC seeks students who will diligently pursue course work on their own with a minimum of external prompting and contribute substantially to the progress of a group engaged in a learning situation.

The procedure for admission to Thomas Jefferson College provides the opportunity for applicants to demonstrate that they possess the qualities described above. For additional information please refer to the admissions section in this catalog.

PERFORMING ARTS SCHOLARSHIPS

In addition to the general financial aid program, tuition scholarships are available on a competitive basis for students wishing to pursue studies in the performing arts (dance, music, theatre, visual arts and creative writing). Information on the application process may be obtained by writing the Administrative Assistant, Thomas Jefferson College.

SPECIAL PROJECTS NATIONAL POETRY FESTIVAL

The first biannual National Poetry Festival was held in the summer of 1971, the second in the summer of 1973. These festivals mark TJC's continuing emphasis on the performing and creative arts. Each festival brought together more than 100 people from all parts of the nation for nine days of poetry workshops, poetry readings, multi-media events and discussion sessions. Approximately 40 guest poets attended, ranging from nationally known literary figures such as Robert Bly, Robert Creeley, Paul Blackburn, Gregory Corso, Sonia Sanchez, Allen Ginsberg, Diane Wakoski, Theodore Enslin,

Robert Duncan, Rochelle Owens, Edward Dorn, Kenneth Rexroth and Michael McClure to younger or lesser-known published poets and editors. The unique feature of the festivals has been a significant representation of black poets and participants. Numerous magazines and presses were represented by their editors and more than sixty small-press publications and magazines were included in a special exhibit at the Zumberge Library, with selected titles for sale at the campus bookstore. Both festivals have attracted national recognition and acclaim. A major publication covering the second poetry festival is currently being prepared, and Grand Valley's educational television station has produced a series of six shows on poetry featuring the nationally known poets participating in the festival.

NEW MEXICO FIELD STUDY

The New Mexico Field Study Program consists of a summer term of field experience in northwestern New Mexico for approximately 20 students. This program involves the archaeological excavation of selected prehistoric Pueblo and early-history Navajo sites. Students also have the opportunity to visit modern Indian pueblos to interact with the people. A third major activity for the group involves a detailed study of diverse physical environments and ecological analyses of processes occurring in and between them. The group is housed in a field camp located on one of the newest ranches of the area. Sidetrips of two and three days' duration are made to various well-known centers of archaeological activity such as Chaco Canyon and Mesa Verde.

COMMUNITY ARTS CENTER

The Community Arts Center, located in downtown Grand Rapids, grew out of two successful years of contemporary theatrical productions at Stage 3, TJC's downtown community theatre. It is hoped that the Community Arts Center will provide the basis for the development of an inner-city branch of Thomas Jefferson College. The Community Arts Center consists of two parts, Stage 3 and the school program.

Stage 3 was founded in December, 1971. The purpose of the theatre is to provide a place where people from the college and the community can create artistic work and learn about it and each other. The performing seasons consist of contemporary

dance, music and drama performances by college students, community people and resident professional artists. Current staff for the Stage 3 program includes two faculty directors, a staff designer and several paid student assistants.

The school program, started in the fall of 1973, is based on two pilot projects carried out and thoroughly evaluated in 1972-1973. The purpose of the school program is to provide Grand Rapids elementary school children with a series of significant contacts with live theatre in the classroom. The elementary students not only observe theatrical productions, but learn improvisational techniques which will allow them to participate in the development of such productions. This year it is expected that the school program will reach 6,000 elementary school children on a regular basis. Staff for the school program includes a director, four resident artists as performers and a staff person as coordinator of the classroom instruction project. It is anticipated that TJC's active programs in dance and music will be added to the Stage 3 and school programs of the Community Arts Center.

TEACHING-LEARNING RESOURCE CENTER

The Teaching-Learning Resource Center of Education is located in downtown Grand Rapids in the same building as the school program and the Community Arts Center. Development of the Teaching-Learning Center stemmed from the belief that children learn best when those most centrally concerned with their education are also experiencing the rewards, frustrations and excitement generated when approaching new ideas, tasks and skills. Thus, the center is devoted to introducing new ways of working with children in experimental programs and workshops which challenge teachers, parents, administrators and interested college students to become learners and, consequently, more effective teachers. Because of the importance of having potential teachers aware and actively involved in the years of their preparation for teaching, undergraduate students participate fully in the organization and operation of the center. Particular preference is given to those who have shown a continuing concern and interest in innovative education in primary schools. Those students are involved in the physical preparation of the center, soliciting and creating materials and, in general, creating an environment which is both attractive and stimulating. The purpose of the center is to offer on-going workshops in every curriculum area for potential teachers and persons already teaching in the inner-city area.

Talented people from both the academic and the broader community are involved in bringing their experiences in the arts and sciences to share with other learners. The support for teachers, student teachers, parents and other interested individuals offered by the center is analogous to the kind of support it is hoped these people can bring to the children.

MASTER EVALUATOR PROJECT

TJC is deeply involved in providing training in painting and musical composition. The students are gifted and productive. Art students have sponsored and created shows of their own work in the Grand Rapids area, and several composition students have given public performances of their music in New York and in Spokane, Wash.

The visiting master evaluator project adds an important dimension to the existing TJC program, and to the arts in general at GVSC. The purpose of this project is to create an on-going program in which well-known painters, sculptors and composers who are faculty members of graduate schools in the fine arts visit TJC.

During a three-day visit each evaluator observes, criticizes and evaluates TJC programs in painting, sculpture, music theory and composition. They also carefully criticize and evaluate students' work (these master evaluators will serve as potential references for students applying to graduate schools for work in the fine arts) via personal contact. These guests broaden the programs at TJC by providing students the opportunity to get to know, to be criticized by, and to work with, people whom they might have previously only heard about.

Currently, the TJC faculty are working on the development of an innovative program in the sciences. Such a program would be interdisciplinary in nature and place heavy emphasis on field studies as opposed to traditional laboratory work. It is anticipated that this program will be developed by the fall of 1974.

NETWORK FOR ALTERNATIVE UNDERGRADUATE AND TEACHER EDUCATION (NAUTE)

Thomas Jefferson College is a member of an informal network of innovative colleges consisting of the University of Wisconsin; Johnston College, University of the Redlands; The Evergreen State College; Thomas Jefferson College; School of Education, University of Massachusetts; Prescott College;

Campus-Free College; and the Center for Teaching and Learning, University of North Dakota. This network was organized by the Study Commission on Higher Education for the express purposes of dissemination of information and educational resources by means of student, faculty and administrator exchange programs. The mechanisms for implementing such exchanges are under study and should be developed by the fall of 1974.

DISTINGUISHED RESIDENTS PROJECT

TJC reserves a portion of the total faculty salary budget to support in-residence professionals of national and/or international reputation. Examples of people who have been (or will be) in residence at Thomas Jefferson include:

- R. Rangaramanuja Ayyangar, authority on South Indian Carnatic music — in residence for four terms.
- Guillermo Fierens, internationally acclaimed classical guitarist — in residence two terms.
- Baba Ram Dass, authority on Hindu religious practices — in residence one week.
- The Theophanic Ensemble of Spokane Symphony — in residence one week.
- Gia Fu Feng and Jane English, authors and authorities on T'ai Chi and Taoism — in residence for one term.
- Tom Lillard of the Open Theatre — in residence for one term.
- Gilbert Rapaille, psychiatrist, author, authority of R.D. Laing and creative processes — in residence three terms.

TJC ADVANCE

In recent years, Thomas Jefferson College has held two advances (usually known as retreats) per year. These advances usually last for three to four days at a wooded area off campus. The attendance of each advance averages about 200 students and faculty members, as well as spouses and children. Activities include information sessions, encounter group sessions, non-verbal games, folk dancing, hiking, swimming, boating, yoga, dancing, experimental theatre, musical happenings and food experiences. The fall advance, held before the beginning of the fall term gives members of the TJC community the opportunity to come together in a non-academic situation and to re-examine expectations and hopes for the year. The spring advance tends to be more of a celebration than orientation.

ANTICIPATED FUTURE PROJECTS

Plans for a number of projects are being developed and discussed.

- The initiation of a TJC Forum — a weekly three-hour meeting of the entire TJC community for faculty lectures, student recitals and performances, panel discussions and professional performances and lectures.
- The further development of the TJC dance and music programs to include resident professionals and repertory companies.
- The establishment of a laboratory for studies in the social sciences.
- The development of an unique life and physical sciences program emphasizing field work and interdisciplinary studies.
- Creating mechanisms for greater field study opportunities in the arts in the New York City area.
- Developing greater internship possibilities in the social service vocations in the Western Michigan area.

TJC PUBLICATIONS

GAZETTE

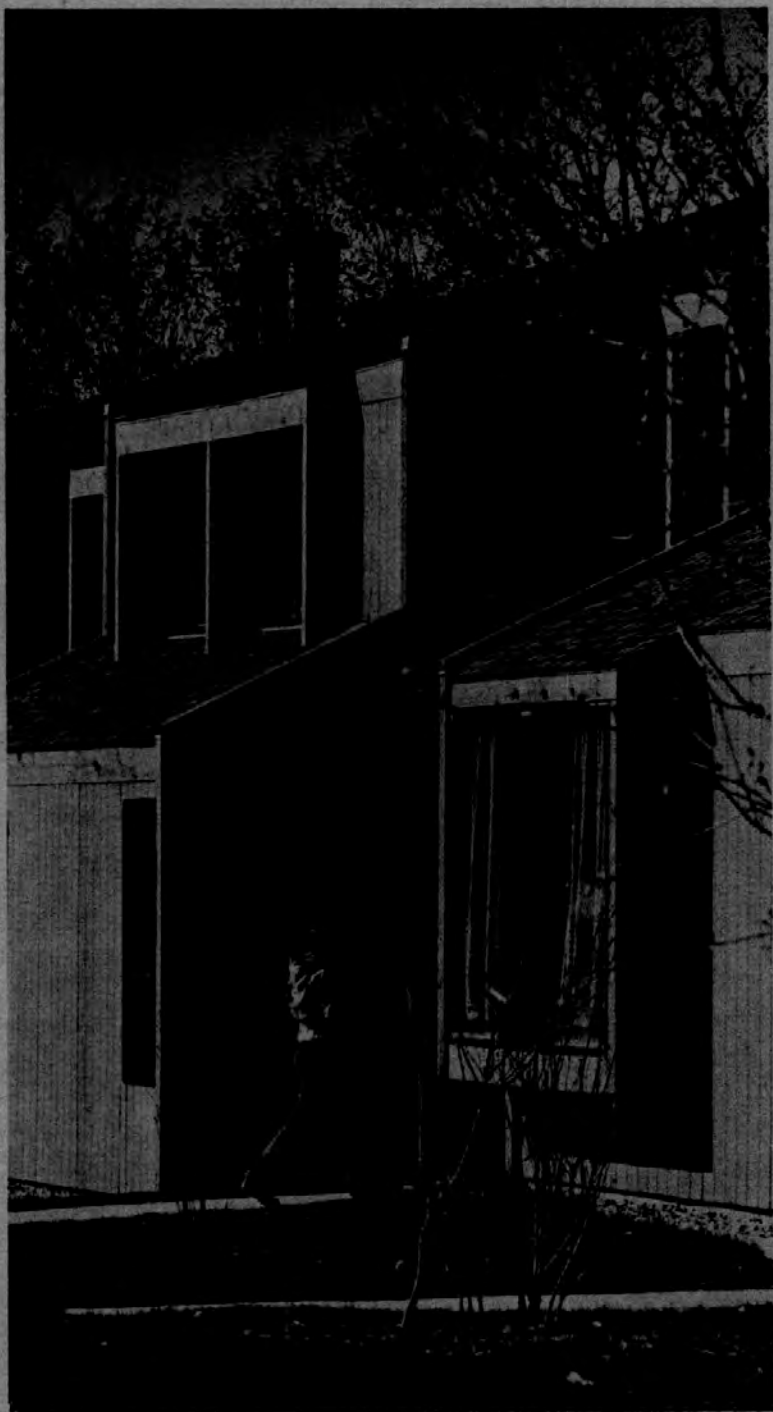
The TJC Gazette is a daily publication. Its sole purpose is to inform the TJC community of the daily happenings of the college. It is probably the best means of keeping informed of important events at TJC.

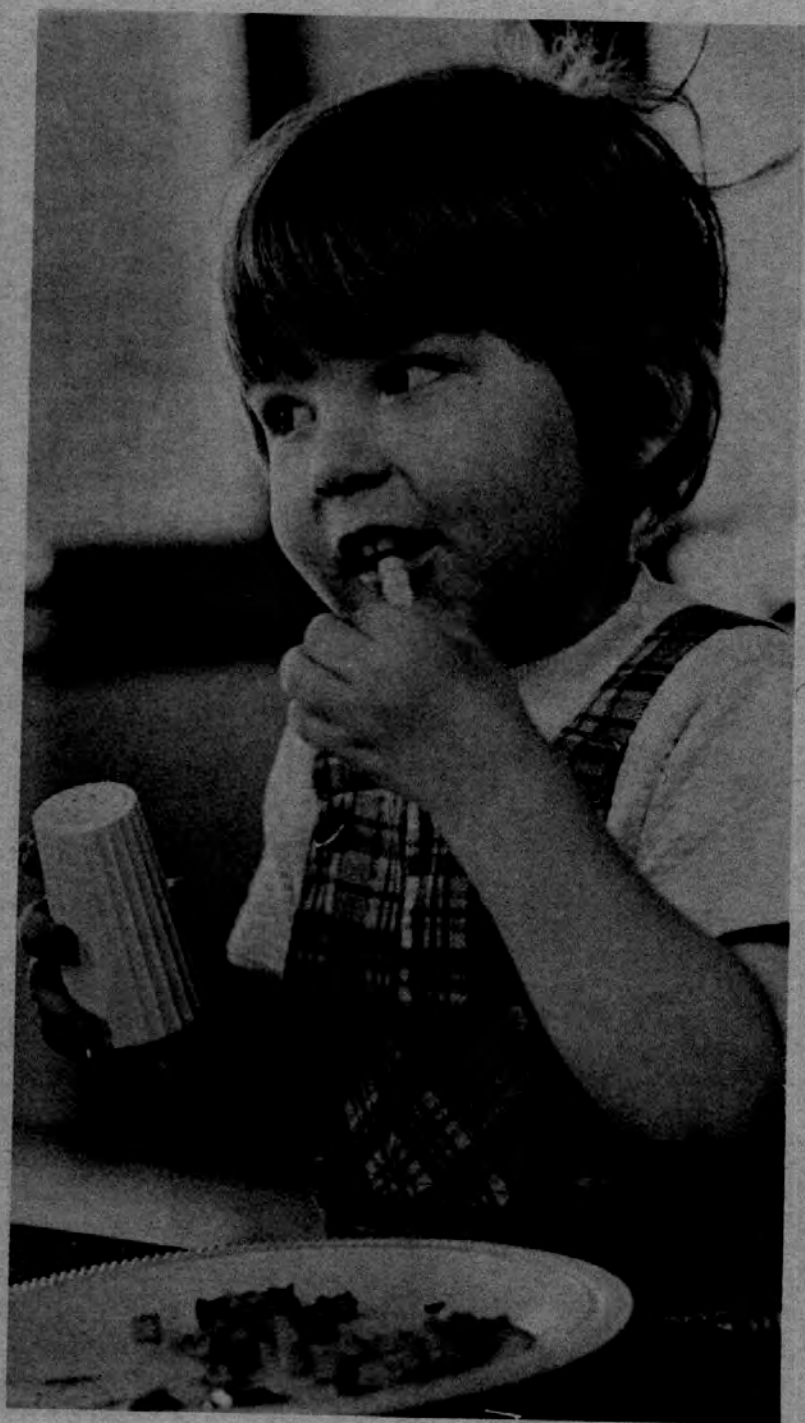
THE NEWSLETTER

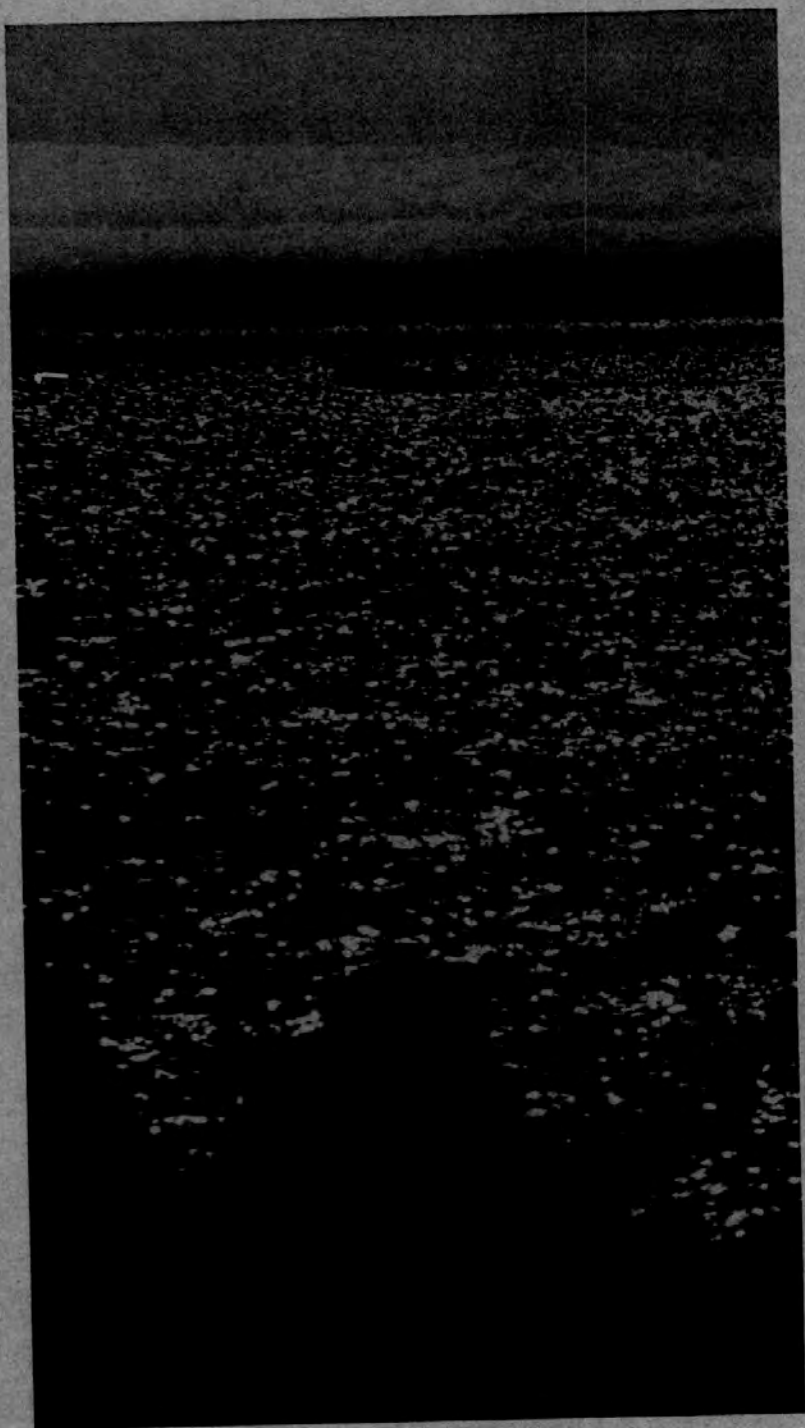
The Newsletter is published biweekly and is distributed to all TJC students, faculty and others across the country who are interested in following the progress of the college. The Newsletter contains such items as notes on graduates and special projects, summaries of institutional research and reports of innovative projects at other educational institutions.











William James College



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INTRODUCTION

William James College is the third baccalaureate degree granting college in the Grand Valley cluster. The intellectual focus of William James College includes not only traditional literary, philosophical and scientific views of man, but also a perspective on the problems of our age derived from contemporary behavioral sciences. Students and faculty work together at William James College to create a new sort of liberal education which can enable people to fulfill themselves both in their living and in their working. We want to find ways to bring together our careers and our personal lives, our practical experience and our ideals. We hope not only to prepare our students for the future job market, but to enable them to create new types of jobs.

WILLIAM JAMES COLLEGE: PRINCIPLES AND OBJECTIVES

When William James College was designed in 1970-71, it was intended that the philosophy of William James—the 19th century physician, psychologist, physiologist, philosopher and teacher—would shape the pedagogical and curricular goals of the college. The final report from the planning task force notes that William James, the man, was justly associated with a pragmatic approach to social, technical and economic areas, with a pluralistic attitude toward the physical and social sciences he pursued, and with an urbane humanism in his personal life.

Present understanding of the goals and objectives of William James College—as recommended by the planning task force in March, 1971—are expressed in a "Statement of Principles and Objectives" adopted by the WJC Council in May, 1973. The "operative principles" are:

WJC aims to be person-centered, fostering intellectual and personal growth within a community of learners.

WJC aims to be future-oriented, connecting our programs and activities with humanity's projected needs.

WJC aims to be career-directed, with programs and activities designed to enable persons to do personally satisfying and socially useful work, as well as to enable those who wish, to move on to advanced study.

In addition to the three operating principles, it is important to note that William James College does not make the traditional distinction between "career education" and "liberal arts education." Rather, we believe that career-oriented subjects can be studied and taught in a liberally educative manner. We believe that one's career, one's vocation—the way one acts for good or ill in the public world or in organizations and institutions—is one of the critical determinants, perhaps the most critical determinant, of personal identity and potentiality for personal growth. We think a person's potential is largely a function of the public contexts in which that person acts and the public responsibilities which he or she assumes.

The recommendations of the planning task force, the three operating principles, and WJC's attempt to integrate "liberal arts education" and "career education" have led to the following specific objectives, which have been actualized in the curriculum and in the administrative structure in the ways described below.

In light of James' pluralism, WJC aims as a college to be transdisciplinary. This means retaining a non-departmental form of organization, so that problems rather than disciplines can become the focus of the educational enterprise; creating programs rather than majors in departments; embodying in the Synoptic Program the pluralistic, transdisciplinary standpoint; associating neither courses nor faculty with any one program; and making the actual concentrations in programs the constructs of individual students according to their individual aims and goals.

In light of James' pragmatism, WJC aims as a college to recognize the legitimacy and necessity of learning experiences which normally occur outside the schools and the classroom. This is accomplished by awarding academic credit for internships and independent studies as modes of learning, welcoming students and faculty with other than the usual academic qualifications and attempting to transform the classroom itself into a place of active efforts to pose and solve problems in our own and surrounding communities.

As a community of learners, WJC recognizes the legitimacy of the teacher's role as a model learner, and the relevancy of the entire human dimension of students and teachers to the learning process. WJC seeks modes of governance and the evolution of structures, programs and curricula which will include students as well as teachers in the responsible decision-making processes.

STRUCTURE AND CURRICULUM

The flexible structure of William James College is intended to facilitate the person-centered, career-directed, future-oriented education to which we are committed.

We are, perhaps, most concerned with persons as individuals—students, faculty and staff. From the time you enter you have a personal faculty adviser with whom you design your own program. And similarly, this direct contact with teachers is expanded and developed through meetings in small classes and tutorials. Everyone here is on a first-name basis. In our classes, as in our council meetings, we try to reach decisions by consensus of faculty and students. Some of our classes are team-taught by both groups. And students join faculty and staff in hiring new faculty, as well as in voting on other community issues.

William James College offers programs rather than traditional majors. A program is a group of courses, independent studies and internships which you, with the aid of your faculty adviser, design to suit your own purposes in life and work. Students at William James College may earn credit in four concentration programs: Administration and Information Management, Arts and Media, Environmental Studies and Social Relations. These programs were selected after an investigation of what sort of careers are going to be needed in the next 10 years. We are trying hard to aim our programs towards those areas where job opportunities will be opening up. We want our graduates to have the specific skills that will give them entry into expanding work areas or permit them to enter graduate or professional schools. And if you look at the courses listed in the last section of this catalog, you will see that William James students will be prepared not only for the future job market but even to create new types of jobs, using their work to help build a society in which all of us can come closer to realizing our human potential.

Many of William James' courses are *problem-oriented* rather than subject-oriented. They are *transdisciplinary* in character, bringing the insights and skills of many disciplines to focus on whatever problem is at hand. We offer very few "survey" courses at William James. We are interested in problem-solving. Our courses relate theory to practice, and try to relate both theory and practice to what is important in the student's own life. Wherever possible, students in WJC courses do real work—photographs, films, tapes, designs, maps, models and technical reports—individually and in groups. Often these projects serve community needs and provide the student with firsthand experience in actual field conditions.

Our *independent study* and *internship* programs augment classroom experiences by getting students involved in study and work situations away from the classroom and campus. Our internship program helps the student get practical work experience for academic credit in government, social agencies, industry, business and the media. Currently students are working at local schools, television stations, newspapers, mental health clinics, community service agencies, environmental protection agencies and a variety of other such places.

William James collaborates with the Educational Studies Institute to provide State of Michigan certification as an elementary or secondary school teacher.

ADMISSIONS

For specific information please refer to the admissions section in this catalog.

DEGREE OPPORTUNITIES

Students may elect to become candidates for the bachelor of science degree in one or more of the four fields of concentration.

REQUIREMENTS FOR GRADUATION

In order to qualify for the B.S. degree a student in William James College must have earned 180 quarter hours of credit distributed as follows:

1. At least 45 hours in the Synoptic Program. You and your adviser design your Synoptic Program subject to the approval of the coordinator of that program.
2. At least 45 hours in the concentration program(s) in which the degree is awarded. You and your adviser design your concentration program subject to the approval of the coordinator of the program.
3. At least 60 hours in William James College.

You must also demonstrate your ability to write with clarity (this is usually demonstrated by completing a writing course successfully or being certified by the staff of such a course).

SYSTEM OF GRADING

During the first meetings of each course the faculty member(s), students or both as a team define the criteria that will be used to evaluate the performance of students in that course.

CREDIT is awarded when the student satisfies the requirements of the course.

INCOMPLETE is given when the student has not yet satisfied the requirements of the course but has the possibility of doing so. An incomplete not completed after one additional term automatically becomes NO CREDIT unless extended by mutual agreement between the student and faculty member involved.

NO CREDIT is given at the end of a course if the student has no possibility of satisfying the requirements of the course, or when an incomplete is terminated.

The student's external transcript is a record of accomplishment and therefore shows only that work which has been satisfactorily completed. It does not show those courses for which no credit has been awarded or which are incomplete.

Instructors are encouraged to provide oral and written evaluations of student's work, both during the term and at the end of a course. A teacher's copy of such evaluations enables that teacher later to testify to the abilities of students desiring admission to graduate and professional schools and for job placement.

Students are encouraged to maintain a portfolio of their work in William James College in the WJC files, including course summaries and evaluations, samples of the student's work, a formal resume, a personal statement and letters or statements of recommendation. Such portfolios can be used to supplement what the GVSC transcript will tell potential employers or graduate and professional schools about the student.

ACADEMIC GOOD STANDING

Your work will be evaluated by the Academic Review Committee after you have attempted 45 hours credit as a William James College student, and at the end of each term thereafter. You must have completed successfully two-thirds of the credits attempted or you will be placed on academic probation and will receive additional academic counseling. You must successfully complete one-half of credits attempted or you may be dismissed. A student who has been dismissed may not register for the term immediately following dismissal nor until the student has shown the committee sufficient evidence to justify readmission.

TRANSFER CREDIT POLICY

William James College intends to be as liberal as it justifiably can be in accepting transfer credit. Normally all accredited work completed elsewhere will count towards a WJC degree. While there may not be an exact correspondence between courses in other colleges and those in WJC, work completed at another four-year college or a junior college can be applied to the student's WJC concentration program. It should be noted that the WJC method of designing programs allows the transferring student considerable flexibility in planning a program.

Each transfer student and his or her adviser will evaluate the student's credits to see which courses are needed to complete

the student's WJC concentration program, and which to augment the synoptic courses already taken. At least 60 hours must be earned after enrollment in William James College to qualify for a WJC degree.

PROGRAMS

By and large, the group of courses and related experiences which you designate as your Synoptic Program should be chosen to help you live a self-fulfilling life, and to orient yourself in a world of persons, meanings and values, including the value of work. The group which you designate as your concentration program should be chosen to enable you to do self-fulfilling work, to orient yourself in the world of jobs in a personally meaningful, socially useful and competent way.

A program in William James College, therefore, is not a sequence or group of courses in the same subject or discipline required of anyone and everyone in that field. On the contrary, almost every WJC course could fit in more than one program. Almost every WJC student will need to learn more than one discipline in order to pursue his or her concentration. WJC students may count courses and work experiences from outside WJC in their concentration and Synoptic programs. This means that WJC students are free to draw upon any or all the resources of WJC and GVSC to satisfy their educational needs. It is certainly quite unlikely that any two students in William James College will ever follow identical programs.

ADMINISTRATION AND INFORMATION MANAGEMENT PROGRAM

The Administration and Information Management Program (AIM) includes two tracks: one emphasizes the management of information (gathering, organizing, analyzing and utilizing information tools and techniques) and includes computer science, accounting, quantitative methods, finance, managerial decision-making and economics; the other emphasizes the management of people and includes organization theory, law and managerial processes.

The AIM program is designed to provide students with an appreciation of the varieties of situations to which managerial tools may be applied; to equip them with these tools; to facilitate their understanding of the psychological, sociological and economic variables which both produce managerial styles and determine their effectiveness; and to explore with them the

current pressures which are likely to produce the managerial techniques and contexts of the near future. The program is intended to serve both those students whose emphasis is on managerial or computer careers and those students in other concentrations who can profit from managerial or computer sophistication.

The AIM program is designed to prepare graduates for careers in management, administration and computer operations in both business and public service. It is also integrated with, and complementary to, the other WJC career concentrations. Managerial and computer skills are useful in the social service agency as well as in the business firm; in the TV studio as well as in the financial institution; in the direction of the Sierra Club as well as in the management of the law firm. We believe that the study of management, like any other academic pursuit, requires a continuing effort to see problems from a variety of perspectives, to treat them with a variety of analytic techniques and, whenever possible, to test what has been learned in a real world context. The AIM program is intended to achieve these goals.

The program's curriculum is divided into access/skills courses which are to be offered two or more times a year, concentration courses offered once a year and courses in special topics which are offered at least once every two years. These courses, which constitute our regular curriculum, are listed below. In addition to them, occasional once-only courses may be taught by faculty (permanent or temporary) with special skills or interests which we believe are likely to prove useful for our students. Finally, special student interests are met by internships or independent study arrangements in which students contract to work with a particular faculty member on subject-matter or work experience not covered by our regular curriculum.

Access/Skills Courses

- 80 Accounting for Today**
- 234 Perspectives in Economics**
- 42 The Managerial Process**
Thinking Quantitatively
- 18 Applied Statistics**
- 236 Programming with BASIC**
- 22 COBOL-Business Computer Programming**
- 34 FORTRAN Programming**

Concentration Courses

- 221 Accounting for Today - Intermediate Level
- 51 Thinking Legally
- 183 Theory of the Firm
Economic Bases of Social Problems
- 235 Marketing
- 139 Legal Environment of Business
- 193 Financing Profit-seeking Institutions
Government Regulation of Business
Personnel Policy
- 280 Organization Theory and Problems
- 286 Systems Concepts
- 129 Algebraic Modeling
- 176 Information Structures
- 292 Data Base Design and Implementation
- 224 Computer Systems and Programming I
Information Systems Analysis

Special Topics

- Public Budget Preparation and Administration
- 155 Labor Relations and Collective Bargaining
- 230 Future Relations among Workers and Managers
Labor Economics and Labor Unions
- 319 Environmental Economics
The Political Economy of Education
- 310 Small Business Management
- 58 Operations Analysis and Simulation
Topics in Operations Research
- 224 Computer Systems and Programming II

ARTS AND MEDIA PROGRAM

William James College aims to encourage creative, productive participation in designing, making and expressing things that serve people's needs. In the Arts and Media curriculum there is a rough division between courses devoted to introducing and developing basic skills competence or "literacy" in a particular art or medium and those courses which draw on already developed competencies in the attempt to solve practical problems in the life of our own community and the world which surrounds us. Initially, the Arts and Media Program is developing in a career-oriented sense the following areas:

1. **Design.** Aimed at developing literacy in two- and three-dimensional design and problem-solving ability in graphic design, environmental design and aspects of industrial design.

2. **Media Arts.** Aimed at developing literacy in video, radio, film and print and developing problem-solving ability for personal development or in career areas where the media are needed to bring projects to completion.
3. **Language Arts.** Aimed at improving competency in spoken and written expression, and in developing problem-solving ability for personal development or in career areas where verbal expression is needed to bring projects to completion.
4. **Arts of Living.** Aimed at providing students with a perspective on the relationships between the arts and media and society, and at providing familiarity with skills which enrich us as cultural and social beings. Domestic and leisure arts, architecture, drama and music as they apply to the media may be among the later additions to the Arts and Media Program.

While journalism is not listed as a division of the Arts and Media Program, students interested in pursuing journalism careers should note that courses aimed at developing literacy and problem-solving ability in the art of journalism and its manifestations appear in both the Language Arts and Media Arts divisions.

WJC does not expect to elaborate its offerings heavily in journalism or in broadcast television, with the exception of graphics and film for television, but rather to provide entry-level skills in these areas. WJC bases this plan on the advice of consultants who point out that experience is much more crucial than course work for gaining employment in these highly competitive fields. CATV, radio and environmental and industrial design will be more heavily developed.

William James students are now preparing themselves for careers in news writing for broadcast and print media; in public relations; in the growing field of cable TV and the many uses of the video porta-pak; in graphic design for television; in film making for instruction, business and industry; in the design of environments for ecologically sound living; and in writing for publication.

Wherever possible these and other goals of our students are fulfilled by their obtaining work, which William James will credit, where they can practice the skills they want to learn on the job; or by means of courses that do real projects, not just exercises.

Unless otherwise noted, Arts and Media courses are offered at least once a year. Literacy or basic skills courses usually are offered in the fall quarter. Courses without asterisks are either basic skills courses or problem courses which require no specific previous experience. Courses with asterisks either belong to a sequence of courses which develop skills or require previous experience, prerequisites or permission of the instructor.

Part I: Design

- 188 Introduction to Drawing
- 182 Introduction to Two-Dimensional Design
- 44 Introduction to Three-Dimensional Design
- 67 Cartography
- 267 Perspective Drawing
- 179 Calligraphy
- 308 The Function of Art on our Personal Lives
(Topics in the Critical Appreciation of
the Arts and Media)
- 107 Non-Verbal Communication
- 55 Posters, Politics and Propaganda*
- 256 Conceptual Drawing in Color*
- 136 Color and Design*
- 268 Problems in Conceptualized
Three-Dimensional Design*
- 291 Drawing Problems
- 299 Advanced Three-Dimensional Design*
- 316 Advanced Problems in Two-Dimensional
Design*
- 137 Graphics for Television*
- 108 Problem Solving in Environmental Design*

Part II: Media Arts

- 305 Introductory Photography
- 200 Basic Darkroom Techniques
- 175 Introduction to Film
- 185 Beginning Video
- 211 TV Production: Theory and Practice
- 135 Understanding Media (at least every other year)
- 168 Audio Information I
- 99 News
- 276 Being a Reporter: Workshop in
Practical Journalism
- 252 Advanced Darkroom Techniques*
- 254 Creative Photography*
- 259 Film Production/Film Audience*

- 297 **Advanced Filmmaker's Workshop**
- 222 **Advanced Video***
- 161 **Basic Electronics and Video Repair***
- 265 **TV as An Art Form***
- 137 **Graphics for Television***
- 239 **Audio Information II: Production***
- 311 **Audio Information III: Advanced Production***

Part III: Language Arts

- 16 **Argument and Analysis**
- 17 **Symbols, Language and Linguistics**
- 28 **Creative Writing**
- 37 **Interpretation of Verbal Materials**
- 101 **Instant Research: How to Find Out**
- 145 **Oral Communication**
- 99 **News**
- 186 **Group Thinking and Public Discussion**
- 149 **Reading as Experience**
- 63 **Creating an Experience-Based Catalog**
- 124 **Writing for Publication* (every other year)**
- 33 **Creativity (every other year)**
- 253 **Uptight About Writing**
- 290 **Technical Report Writing***
- 278 **Introduction to Public Relations
(every other year)**

NOTE: A course which applies to all three of the above areas and which is to be given every term is **288 Portfolio Seminar**. This course should be taken within a term or two of graduation. It is geared toward students concentrating in the Arts and Media program, and is especially important for students emphasizing design.

ENVIRONMENTAL STUDIES PROGRAM

GENERAL DESCRIPTION OF PROGRAM

The course offerings of the Environmental Studies Program are grounded in four basic premises:

1. The quality of the man-environment relationship must be a central concern of society. At the present, the continuous existence of that relationship—and thus society itself—is threatened. From this recognition comes a sense of "mission," an attempt to educate for social change and political action.
2. The man-environment relationship is incredibly complex. To be effective in bringing about change, our students

must understand how complex systems behave. They must also be generalists. Environmental problems cross all traditional disciplinary lines—biological and physical sciences, sociology, political science, psychology, economics.

3. Environmental questions are often questions of ethics and values. Our teaching must clarify existing values, examine the implications of different value systems, and promote a perspective of the human species dependent upon, and in relationship to, the rest of the ecosphere.
4. The man-environment relationship, and society itself, is rapidly changing. We need flexible, resourceful problem solvers, confidently grounded in a consistent value system and capable of dealing with a changing world and a continually shifting job market.

Concern for effective political and social action is expressed both in course content and in teaching styles. Courses reach beyond the classroom to incorporate community-based projects, off-campus field trips and community resource people. The effectiveness of individual action at the local level is emphasized. For example, William James students, concerned about the proposed location of the college's new classroom building, prepared a report on the potential environmental disruption to the site, causing the Board of Control to reassess and change its plans.

The Environmental Studies Program draws upon a multidisciplinary full-time staff: a pollution chemist, a geologist, an ecologist, computer specialists, a geographer, economists, a lawyer, sociologists, a human resources consultant, a planner and an experimental psychologist. Many of the topic and project courses are team taught, bringing the perspectives of several disciplines.

Environmental problems involve value judgments. An emphasis upon the individual student and upon classroom involvement in discussions challenges students to consider where they stand on environmental issues and how they may have come to hold those positions. Much of the environmental work WJC students will do involves public values education (e.g. environmental education, legislative aide for environmental issues and media work). Courses are being developed which deal with the skills of values clarification and change (e.g. **WJC 152, Methods and Materials in Public Environmental Education**). A proposal has been submitted to the State of

Michigan which will permit WJC to prepare and certify teachers of environmental studies at the primary and secondary levels. State approval is expected in 1974. An environmental awareness course for public educational TV, "Man Builds - Man Destroys," has been prepared by the staff of the Environmental Studies Program. Students participated by preparing multimedia coverage (16mm film, taped interviews and 35mm slides) of local environmental issues.

Because the environmental situation changes so rapidly, the Environmental Studies Program has developed a flexible curriculum in which a substantial number of courses are new each term. Some of these courses have been offered as an "Environmental Topics" series—for example, Environmental Topics: The Energy Crisis; Environmental Topics: Noise; and Environmental Topics: Food. Using practitioners from the community as part-time adjunct staff to teach more specialized courses (e.g. Environmental Law, Water Pollution Control and Management) is another way the program tries to provide a flexible, up-to-date curriculum.

Environmental courses which involve real projects and "hands-on" experience are an important part of the curriculum. Ideally in these courses, students learn the skills of problem solving—how to determine root causes, how to evaluate options and how to develop implementation sequences—skills which are equally useful in attacking environmental problems or in plotting one's own vocational strategy. Project courses, together with internships, comprise much of the advanced course work done by our students. Some of the past project courses have included: "IMPACT," where students gathered information needed to prepare an impact statement for the GVSC campus; "Environmental Topics: Nuclear Energy as a Source of Electrical Power," where the class prepared an informational brochure later printed by an environmental action group; and "Urban Quarter," a term spent studying and working within the political and social structures of the city of Grand Rapids.

ENVIRONMENTAL STUDIES CURRICULUM

The courses listed below form the "core" of the Environmental Studies curriculum. They are offered once a year. In addition to these are the project courses, independent studies and internships which have been described above.

Broad Overview

7 Environmental Awareness

- 141 Environmental Politics
- 220 Environmental Law
- 319 Environmental Economics

Physical Environment

- 23 Resources and Man
- 172 Environmental Geology and Geologic Hazards
- 229 Physical Environment
- 296 Elements of Physical Geography

Chemical Environment

- 49 Finding Pollution
- 52 Elements in the Air Environment
- 85 Elements in the Water Environment
- 122 Lab Analysis of Environmental Pollutants

Biological Environment

- 46 Ecology
- 89 Man and Nature
- 133 Ponds and Streams
- 4 Organic Gardening

Planning

- 78 Introduction to Planning
- 218 Planning Problems and Study Design
- 273 Planning Research: Survey and Field Work
- 243 NEPA, Section 102: Environmental Impact Statements
- 82 Impact

Specialized Skills

- 315 Surveying
- 67 Cartography
- 114 Air Photo Interpretation
- 152 Methods and Materials of Public Environmental Education

Computer Modeling and Data Interpretation

- 18 Applied Statistics
- 34 Fortran Programming
- 261 Computer Modeling and Environmental Problem Solving
- 251 Interpreting Soft Data: Non-parametric Statistics

CAREERS OPEN TO STUDENTS OF ENVIRONMENTAL STUDIES

WJC sees itself educating environmentalists capable of effective work in several existing employment areas:

Planning, both urban and regional. It would appear that jobs in this area will increase as more governmental units, particularly those on a local scale, perceive the need for land use regulation and planned development.

Appropriate courses:

- 7 Environmental Awareness
- 78 Introduction to Planning
- 218 Planning Problems and Study Design
- 273 Planning Research: Survey and Field Work
- 243 NEPA, Section 102
- 82 Impact
- 67 Cartography
- 319 Environmental Economics
- 141 Environmental Politics
- 229 The Physical Environment
- 172 Environmental Geology and Geologic Hazards
- 296 Elements of Physical Geography
- 46 Ecology

Environmental generalists and resource people. These broadly trained people can perform a variety of jobs: with governmental regulatory agencies, with consulting firms, preparing environmental impact statements or as legislative aides researching environmental legislation. This training also supplements other WJC career skills producing environmental lawyers or environmental journalists.

Appropriate courses:

- 7 Environmental Awareness
- 23 Resources and Man
- 229 Physical Environment
- 46 Ecology
- 319 Environmental Economics
- 49 Finding Pollution
- 89 Man and Nature
- 141 Environmental Politics
- 243 NEPA, Section 102
- 82 Impact

For those considering agency work, courses in the AIM program such as **42 The Managerial Process** and **10 Individuals in Organizations** are recommended.

Environmental technicians. These people will perform the laboratory and field work for environmental health departments, waste water treatment plants and other environmental monitoring agencies. On-the-job internships figure heavily in

the practical aspects of their training.

Appropriate courses:

- 7 Environmental Awareness
- 52 Elements in the Air Environment
- 85 Elements in the Water Environment
- 122 Lab Analysis of Environmental Pollutants
- 46 Ecology
- 133 Ponds and Streams
- 34 FORTRAN Programming
- 18 Applied Statistics
- 315 Surveying
- 229 Physical Environment

Environmental educators. The skills learned in environmental education courses can also be used for employment in outdoor recreation (nature centers, camping programs) or in public relations for environmental organizations.

Appropriate courses:

- 7 Environmental Awareness
- 23 Resources and Man
- 46 Ecology
- 89 Man and Nature
- 133 Ponds and Streams
- 229 Physical Environment
- 49 Finding Pollution
- 172 Environmental Geology
- 296 Elements of Physical Geography
- 152 Methods and Materials of Public Environmental Education

SOCIAL RELATIONS PROGRAM

The Social Relations Program emphasizes a knowledge and understanding of the social system and cultural patterns of our time and how these affect both individuals and groups. In this context, the Social Relations Program seeks to enable students to work effectively in existing social agencies and institutions for the sake of a more just and humane world, and to take responsibility for creating just and humane social institutions in the future.

The four basic areas which are dealt with in the Social Relations Program are:

1. Individual growth and self-integration

2. The dynamics of relationships between individuals and social groups
3. The nature of social groups
4. The dynamics of relationships between social groups

In the Social Relations Program, concepts from anthropology, biology, physiology, child development, economics, history, psychology, social work, sociology and other disciplines are freely blended and drawn upon in an effort to find solutions to pressing contemporary problems.

Graduates of the Social Relations Program should be able to qualify for jobs calling for interaction with other people and an understanding of human behavior, especially in the social welfare, health and human relations fields. The kinds of positions our students are aiming toward include counseling, urban affairs, para-professional mental health work, public relations, social work, labor relations, child care, correctional work, community organization, recreation and public administration. They will be working in private agencies, in business, in non-profit institutions such as hospitals and in federal, state and local governments.

Seven areas of the social relations curriculum have been developed.

These include:

1. Discussions each quarter which consider the shape of the social world, the needs of our students and the resources at hand. These discussions precede the construction of our curriculum for the next quarter.
2. A body of core courses which are offered on a recurrent basis. These courses are indicated by the terms "thinking" or "perspectives," and are core in the sense that they aim at introducing students to fundamental intellectual modes of understanding the world. These courses are:

- 187 Perspectives in Social Relations**
- 68 Sociological Perspectives
Thinking Politically**
- 257 Thinking Psychologically**
- 234 Perspectives in Economics**
- 91 Thinking Philosophically**
- 26 Perspectives on the Social Sciences**
- 245 Thinking Historically**

3. A body of recurring courses which focus on skills and

topics which are basic to approaching a number of social problems and issues. These courses include:

- 145 **Oral Communication**
 - 186 **Group Process and Public Discussion**
 - 96 **How to Listen . . . and Hear!**
 - 70 **Clinical Approaches**
 - 190 **Introduction to Survey Research**
 - 56 **Social Research, Evaluation and Methods**
 - 11 **Biology of Human Behavior**
 - 242 **Humanistic Psychology**
 - 93 **Mind, Self and Others**
 - 215 **Psychology of Women**
 - 54 **American Character and Social Structure**
 - 225 **America as Seen by Non-Anglos**
 - 95 **Wealth, Poverty and Power: Social Stratification and Life Chances**
 - Ethical Problems and Perspectives**
 - 69 **Work, Jobs and Leisure: History of Work**
 - Macro-Economics**
 - 18 **Statistics**
 - 130 **Foundations of Social Theory**
 - 61 **American Political Traditions**
 - 216 **Contemporary Minority Issues**
 - 230 **Future Relations Among Workers and Managers**
 - 203 **Practicum in Social Justice**
 - 155 **Labor Economics**
 - 160 **Political Economy of Education**
 - 263 **Applied Psychology**
4. Courses which focus on particular social problems and issues. The following are examples of this sort of course:
- 9 **Analysis of Contemporary Social Problems**
 - 232 **Racism**
 - 43 **Madness**
 - 27 **Death and Dying**
 - 61 **Assessing the Dream: What is currently at stake in the American Political Tradition**
 - 113 **Equitable Access: Jobs and Housing**
 - 216 **Contemporary Minority Issues**
 - 95 **Wealth, Poverty and Power: Social Stratification and Life Chances**
 - 225 **America as Seen by Non-Anglos**
 - 250 **Revolutionary Women**
 - 230 **Future Relations Among Workers and Managers**
 - 217 **Social Ethics: King and Alinsky**

233 Experimental Ethics: Human Guinea Pigs

5. Courses which focus primarily on individual growth and self-integration. These courses are useful to students concentrating in the Social Relations Program, as well as to students in the college generally. The following are examples of this sort of course:

81 Life Styles**57 Personal Dynamics and Effective Living****88 The Individual and Identity**

6. Advanced and/or specialized courses. These courses require consent of the instructor as a prerequisite for admission to the course. The following are examples of this sort of course:

223 Prison Education**249 Practicum and Seminar for BiLingual Instruction Aides****258 Behavior Disorders****263 Applied Psychology****214 Psychological Tests and Testing****160 Political Economy of Education****155 Labor Economics****203 Practicum in Social Justice**

7. Internships are available to students each quarter as a way of integrating study about, and participation in, the social world.

INTERNSHIP PROGRAM

An integral part of most every student's course of study at William James College is the Internship Program. Internships are generally designed to provide a student with some practical, career-related experience with a firm or agency whose objectives are similar to the career goals of the student. In many instances internships provide the student with the chance for training in specific skills that is impossible or impractical for the student to receive on campus. Often, but not always, an internship is undertaken after a student has done a year or so of on-campus classroom work. The decision to participate in an internship is usually arrived at after discussions between the student, the adviser and the internship coordinator.

Internship positions can be self-generated (i.e., a student contacts an agency or business to see if they are willing to super-

wise an intern, or a student may already be working in a place which offers a valuable internship experience), but most frequently are generated by faculty members. All available positions are coordinated and listed with the internship coordinator. When a student has an interest in a particular internship position, the student should consult with his or her adviser to see if the position will be beneficial to the student's program and to check that the student has any necessary skills. At this point, the student should select a faculty sponsor for the internship (not necessarily the student's adviser). This person will assure the academic integrity of the internship experience and provide the campus liaison between the student and the job supervisor. Following a successful interview between the job supervisor and the student, the student can register for the internship.

Credit for internships is granted under WJC course No. 77, usually at the rate of one credit for every three hours per week in the internship. This credit will be granted only when the student, the faculty sponsor and job supervisor have completed evaluations of the internship experience.

Internship positions are available in all program areas. Some are on campus, some in Grand Rapids, Grand Haven, Holland or other cities and states. A student and his or her adviser are the ones that determine if a particular internship experience will complement the student's academic program, but students should bear in mind that internship positions are not intended to simply provide them with a chance to make money—in fact most of them are non-paying.

SYNOPTIC PROGRAM

The Synoptic Program is the standpoint from which everything can be seen whole and together. While the concentration programs use combinations of disciplines to focus upon careers in the arts, the social world and the environment, the Synoptic Program provides an overview (which is what "synoptic" means). The Synoptic Program attempts to provide, for the individual student at William James, a broader vision. At William James we pursue the ideal of broader vision with particular attention to the student's place in the world of public action and interaction. Our hope is that through their participation in the Synoptic Program students will have a perspective on those institutions they will work in which will enable them to lead personally meaningful lives and to be effective agents for humanization in the world.

Synoptic Programs of Individual Students

The Synoptic programs of individual students are tailored to the individual needs of students, and emerge out of a close and continuous advisory process aimed at placing the vocational part of each student's life in a comprehensive personal and human context. The program does not impose on students any general "liberal arts" requirements of subject or skill areas. This is because a student, adviser and coordinator's discussion of each student's needs must be entirely particular and concrete. Since the Synoptic programs of individual students arise out of the integrity of these discussions and the particular needs which they reveal, most courses which appear in the William James College curriculum could be considered Synoptic for some students. As a rough measure of whether a particular individual's course of study gives promise of placing the vocational part of life in a comprehensive personal and human context, students and faculty are urged to ask the following question about Synoptic program agreements:

1. Is the student developing those skills which are basic to any human vocation (including the ability to direct one's own education)?
2. Is the student becoming aware of the fundamental assumptions and presuppositions of disciplines and programs so that he or she can relate these to one another and assess their human worth?
3. Is the student developing critical self-awareness and an ability to examine his or her own life, especially so as to be able to place his or her vocation in a public context?
4. Is the student developing increased awareness of recurrent themes and concerns in the life of humanity?
5. Is the student increasing his or her acquaintance with the lives and thought of persons, past and present, who have had a comprehensive vision of life?

Curriculum

To support students in attempting to answer the first question about Synoptic program agreements, the William James College curriculum includes the following basic skills courses in areas which underlie all concentrations. Also listed here are two courses specifically designed to enable students to participate more effectively in the process of planning their own educations. **Living and Learning at William James College** is particularly recommended to all students who are new to William James; **Vocations: Self-Actualization and Public Identity**

is actually a series of seminar-workshops occurring throughout a student's William James career.

- 159 **Living and Learning at William James College**
- Vocations: Self-Actualization and Public Identity**
- 149 **Reading as Experience: a Writing Course**
- 253 **Uptight about Writing: A Workshop**
- 37 **Interpretation of Verbal Materials**
- 145 **Oral Communication**
- 16 **Argument and Analysis**
- 186 **Group Thinking and Public Discussion**
- 101 **Instant Research**
- 96 **How to Listen . . . and Hear!**
- 190 **Introduction to Survey Research**
- 236 **Programming with Basic**
- 22 **COBOL - Business Computer Programming**
- 34 **FORTRAN Programming**
- 18 **Applied Statistics**
- Thinking Quantitatively**
- 307 **Thinking Logically**

To support students in attempting to answer the second question about Synoptic program agreements, the William James College curriculum includes the following courses in perspectives and concepts which are fundamental to critical thinking about the concentration programs in the college, and to living and working in the modern world.

- 257 **Thinking Psychologically**
- 91 **Thinking Philosophically**
- 51 **Thinking Legally**
- Thinking Quantitatively**
- 307 **Thinking Logically**
- 245 **Thinking Historically**
- Thinking Politically**
- Thinking Anthropologically**
- Cultures**
- 234 **Perspectives in Economics**
- 68 **The Sociological Perspective**
- 26 **Perspectives on the Social Sciences**
- Perspectives in Social Relations**
- 187 **Systems Concepts**
- 183 **Theory of The Firm**
- 183 **Organization Theory and Problems**
- 7 **Environmental Awareness**
- 156 **Environmental Design Awareness**

- 135 **Understanding Media**
- 308 **The Function of Art in our Personal Lives**
(Topics in the Arts and Media)
- 33 **Creativity**
- 17 **Symbols, Language and Linguistics**

To support students in attempting to answer the third question about Synoptic program agreements, the William James College curriculum includes a number of self-development courses (listed in the Social Relations Program) and a number of courses which place the vocational part of life in a personal and human context (listed in the descriptions of other programs).

To support students in attempting to answer the fourth question about Synoptic program agreements, many thematic courses are included in the William James College curriculum annually. Again, students will find these courses listed in the descriptions of other programs.

To support students in attempting to answer the fifth question about Synoptic program agreements, the William James College curriculum includes the following courses about persons whose thought or action has expressed a comprehensive vision of life:

- James and Dewey**
- 234 **Perspectives in Economics (Smith, Marx, Keynes)**
- 130 **Foundations of Social Theory (Marx, Weber, Freud)**
- 240 **B. F. Skinner and His Critics**
- 248 **Shakespeare Our Contemporary**
- 86 **Humanistic Religion (Dewey, James, Whitehead, Arendt)**

Synoptic Lecture Course

Another support for students in attempting to answer the fifth question is the **Synoptic Lecture Course**. In this course, the community first decides upon a distinguished person from outside the college who has a vision of life addressed to our vital concerns, and then creates, once or twice a year, a format in which the community can engage in personal discussion with our guest and with his or her interpreters. In the past we have offered the following Synoptic Lecture Courses:

WJC 1 William James: Our Contemporary

A consideration of William James' works and their influence in present day psychology, sociology, philosophy and comparative religions. Stu-

dents registering for Synoptic Lecture Course registered for the conference, the lectures and one discussion session. Lecturers included Jerome Kagan, Maurice Natanson, Gardner Murphy, David Elkind, Robert Bellah, William Charlesworth, John E. Smith, Paul Weiss and Martin Marty. Offered fall 71.

WJC 25 The Works of Piaget

A study of the life and theories of Jean Piaget. Discussion classes (weeks 1-6, 9-10) considered his writings and the writings of others in early child development. The conference (weeks 7-8) consisted of lectures by scholars in the field and various informal meetings. Offered spring 72.

WJC 117 Alternative Education

Seventeen WJC courses took up some aspect or issue of the problem of creating educational alternatives, and all shared (along with the William James Community as a whole) the Synoptic Convocation (March 30) and the Conference on Alternative Education (May 21-25). The Conference on Alternative Education was an opportunity for the inquiries going on in the course sections to come into dialogue with one another, and for persons and resources from the larger community of concern with alternative education to enter that dialogue. Offered spring 73.

In conclusion, we should mention a few ways in which the Synoptic Program as a forum for discussion and as an ideal against which to measure ourselves, has had a pervasive effect in the life of the college. The open and public Synoptic Program meeting is always a place where it is legitimate to discuss teaching and learning and the vocation of the college itself. Far from being confined in their teaching to the areas of their specialization, members of the faculty are asked to contribute to as many programs as they reasonably can. And finally, the whole college, through its council, remains the place where decisions are ultimately made about programs, curricula and courses so that individual and community needs can be integrated with such vision of human wholeness as we can together achieve.

DESCRIPTIONS OF COURSES REPEATED EACH YEAR

The following courses are taught every year at William James College. Please read carefully the descriptions of each of WJC's five programs (Administration & Information Management, Arts & Media, Environmental Studies, Social Relations, Synoptic) to see which courses are appropriate to the program you are interested in.

WJC 7 Environmental Awareness

An introductory course intended for those who would like to know what environmental studies is all about, or who think they might want to eventually work in some environmental area. The goals of the class will be: (1) to develop a sense of the human species functioning in and

dependent upon the life support system of the earth; (2) to examine our own values and responsibilities to the natural environment; (3) to identify some environmental problems, the kinds of effective solutions possible and the kinds of things now being done. We will emphasize local environmental issues and will use community people from environmental groups and agencies as resources.

WJC 9 Social Problems

Investigation of such social problems as delinquency, drug use, sexual deviance, racial conflicts, suicide, homicide, mental illness and organized crime. Although the particular problems will vary from term to term, the course will expose students to classical sociological explanations such as the theories of anomie, interaction processes, functional analysis, secondary deviance and frustration-aggression.

WJC 11 Biology of Human Behavior

An interdisciplinary examination of human behavior within the context of the evolutionary processes. Biological, psychological, sociological and socio-cultural aspects of human behavior are considered.

WJC 16 Argument and Analysis

This course is designed for students who are competent writers. The main aim of the course is to assist students in mastering argumentative and analytical exposition and criticism. It is held in small sections, and students hold regular tutorials with their instructor.

WJC 17 Symbols, Language and Linguistics

This course is designed as a study of man's tendency to see reality through language, concentrating on the symbolic nature of language, the relationship of language to thought and the importance of language both as a socializing and as an individualizing force.

WJC 18 Applied Statistics

Practice use of a family of "canned" computer programs to solve a wide variety of statistics problems. No previous knowledge of computers or statistics required.

WJC 22 COBOL - Business Computer Programming

Practical skills to increase employment prospects in commercial and administrative positions. COBOL computer language, writing and the testing of programs. Application such as using the computer to write payroll checks is studied. This course is *not* highly mathematical; a year of algebra is the prerequisite.

WJC 23 Resources and Man

Are we in danger of running out of resources? Will resources be adequate to support third world development using the U.S.-European model? How many resources (and how much) do we use, do we need? These questions and others in an overall evaluation of the known resource supplied and their relation to existing and projected demand. Emphasis will be on an examination of our current use patterns and their success in meeting long-term needs.

WJC 26 Perspectives in the Social Sciences

What do scientists in the various disciplines examine, analyze, etc? What is the task for the historian, sociologist, psychologist, etc? What unique

perspectives do they bring to an analysis of social reality? Various texts in each discipline enumerate their similarities and differences in the use of methods and concepts.

WJC 27 Death and Dying

In this course we will examine various ways that people deal with death. More specifically, our concern is with the institutional and professional means used to communicate and define the role of the dying patient.

WJC 28 Creative Writing

Practice in the art of writing imaginatively. Relevant issues in aesthetics, psychology and the study of language will be considered. Workshop format.

WJC 29 Organic Gardening

The theory and practice of organic gardening. Organic concepts of gardening and farming will be studied in the classroom and practiced in a small garden.

WJC 33 Creativity

Expression, thought and self in the creative process, particularly in the arts.

WJC 34 FORTRAN Programming

An introduction to writing computer programs in the FORTRAN computer language. A practical course. Emphasis upon techniques for sorting data (since over half of the computer time used is spent in sorting data). Emphasis upon the construction, use of data bases and the use of the disk memory.

WJC 37 Interpretation of Verbal Materials

Practice in the art of reading (and listening) with understanding. Stress will be put on interpretation as an activity, common to writer (or speaker) and interpreter. Various texts will be interpreted.

WJC 42 The Managerial Process

Anyone seeking to guide an organization whether it be big or small, profit or non-profit, needs to be aware of some rather fundamental concepts of management and the functions of a manager. These principles and functions will be sought in a non-traditional manner.

WJC 43 Madness

This course will examine what is meant when it is asserted that someone is "mentally ill," and whether there is such a thing as mental illness. Also to be examined are the institutionalized effects upon a patient housed in a mental hospital, and what type of socialization and commitment to values psychiatrists maintain. The objectives of the class are subject to revision according to the interests and aims of the participants.

WJC 44 Introduction to Three-Dimensional Design

This course will concentrate on learning to think spatially using abstract problems dealing with the arrangement and breakdown of areas.

WJC 46 Ecology

The relationships of organisms with the physical environment and with each other. Intended as an introduction to ecology for those with little or

no science background; however, the emphasis will be on the study of ecology as an on-going experimental science.

WJC 49 Finding Pollution

An introduction to the methods of monitoring air and water for environmental pollutants. This course will include field work in the Grand River and the Grand Rapids area.

WJC 51 Thinking Legally

Lawyers in the course of becoming lawyers are taught a particular way of thinking and writing which is a valuable tool in decision-making and communication of ideas. This course will attempt to teach those methods using the case-brief method and open class argumentation.

WJC 52 Elements in the Air Environment

This course will examine the causes and effects of air pollution and the underlying chemistry. An examination of some local problems will provide a focus for the class. Particular attention will be paid to the pollutants for which national air pollution standards have been set. Students intending to pursue a career in the area of environmental monitoring or environmental technology are advised to take this course to provide a background in chemistry. (An understanding of elementary algebra is necessary. This can be achieved at the start of the course in a one hour independent study if the student wants. See instructor.)

WJC 54 American Character and Social Structure

Among topics to be examined in this course concerning the sources of inequalities among men, are how power, wealth, value and status are distributed, the consequences of stratification for the various classes and groups in the United States; and, more specifically, the course will examine the effect of stratification on the aged, mentally ill, women, blacks, students, etc. The objectives of the class are subject to revision according to the interests and aims of the participants.

WJC 55 Posters, Politics and Propaganda

A commercial art course dealing with political and propaganda poster design, including their symbols and specific motifs. Prerequisite: Permission of the instructor.

WJC 56 Evaluation of Social Research Methods

This course will focus on methods being employed by social scientists to study human behavior in our present era of change of traditions and questioning of entrenched approaches. The research process, data collection, measurement and scaling and analysis of data will be examined within the social sciences. Some coursework in the social sciences and/or statistics is recommended as a preparation for this course.

WJC 57 Personal Dynamics and Effective Living

This course will deal with man's physical and psychological nature as an energy system. Motivational concepts which serve as driving forces to the system and effective management of these drives or motivational concepts will be considered. Examples of topics to be considered are: blockage of needs, conflict, frustration resulting in anger, the anger motivator as constructive or destructive to the purpose of self-discovery in terms of identity and the effects anger may have on physical, emotional and social competencies.

WJC 58 Operations Analysis and Simulation

Using the computer to model "real world" problems. No overlap between this course and "The Impending Doom." Generating random numbers, feedback systems, queuing theory and inventory control. Some lectures will be based on J. W. Forrester's *Principles of Systems* and A. A. B. Pritsker's *Simulation with GASP II*, but these books are not required. The GASP simulation program will be used on our IBM 1130. Prerequisite: Ability to do FORTRAN programming.

WJC 61 Assessing the Dream: What is Currently at Stake in the American Political Tradition?

An examination of the major themes which comprise the American political tradition and discussion as to what is at stake in the contemporary situation. Participants will be expected to read and discuss the basic readings, and to submit a paper/exam that seeks to deal with the question of the course in relation to contemporary events.

WJC 63 Creating an Experience-Based Catalog

For members of WJC desiring to control their own essential needs. Participants would seek out and compile information on major contact points for advice, funds or whatever else seemed important to their particular goals and seemed worth sharing with others. Like the *Whole Earth Catalog*, the class catalog would consist exclusively of process information.

WJC 67 Cartography

An introduction to the techniques and purposes of map-making. The course will include critical evaluation of a wide variety of maps, map design and aesthetics and cartographic techniques. Students will learn cartographic skills by drafting a series of maps.

WJC 68 The Sociological Perspective

An introduction to the basic concepts of sociology and the ways in which sociologists view the world. Emphasis will be on the relation of sociology to the life of the individual. Classes will focus on discussion of the texts. The major text will be Peter Berger, *Sociology: A Biographical Approach*. There will also be a supplementary reader representing different points of view within sociology.

WJC 69 History of Work

A historical analysis of medieval, early industrial and modern patterns and theories of employment choice, work satisfaction, job milieu, division of labor, control of work situation, technological responses, status, aspiration and acquiescence; experimental work communities.

WJC 70 Clinical Approaches

This course will deal with the attitude and behavior of the therapist as these are closely related to therapy outcomes; it will deal with typical and atypical situations illustrated via videotapes and demonstration (live) groups. Prerequisite: Advanced status or consent of the instructor.

WJC 78 An Introduction to City and Regional Planning

A basic course on rural and urban land use trends and problems. Emphasis will be placed upon the interrelationship of unguided rural non-

farm development and the growing problems of community and regional development and financing.

WJC 80 Accounting for Today

A basic WJC course developing knowledge which is prerequisite to many other courses in financial understanding to be offered in the future. Assets, liabilities, capital, the journal, ledger, trial balance, adjusted trial balance and post-closing trial balance. Recording transactions using double entry system. Students will not be asked to do long tedious arithmetic work as this part of the accounting procedure will be done by the computer—the same as is now commonly done in business and industry.

WJC 81 Life Styles

An examination of contemporary conventional and alternative styles of life in the United States. The course will consider such topics as student life styles, sex role differences, varieties of marriage and family styles and deviant life styles. This class will be discussion-centered.

WJC 82 Impact

The class will design, collect data, assemble and publish an environmental impact statement according to the existing guidelines of state and federal laws. It is intended that the class will consist of a multidisciplinary group of both students and staff. Prerequisite: **243 NEPA, Section 102** and permission of instructor.

WJC 85 Elements in the Water Environment

Mercury, lead, zinc, chromium, detergents, NTA; these are but a few of the many chemicals fouling our waters. Why are they a problem; where do they come from; how do they interact with the water environment; what methods of control are available? These questions will be analyzed as part of a discussion of the chemistry of water pollution. Projects dealing with the cause, effect and possible cleanup of some current water pollution problems will form the basis for evaluation in this course. Students interested in a career in environmental monitoring, pollution analysis and waste water analysis will find this course provides the necessary background for a laboratory course in the spring. This course is open to any student who has had a general high school or college chemistry course, or with the permission of the instructor.

WJC 86 Humanistic Religion

Selected readings from four modern religious humanists—Hannah Arendt, William James, Alan Watts and H. N. Wieman, and discussion of their implications for our contemporary situation. Topics for discussion will include: the religious function of life which is common to all human beings; appeals which we can make to one another across the boundaries of our particular tribes, cults, nations, churches, etc. as human beings; and the senses in which humanistic religion might be an important resource for dealing with contemporary crises.

WJC 88 The Individual and Identity

A psychological, sociological and literary examination of the concept of personal identity. The class will be discussion-centered and extensive reading will be required. Major readings: E. Erikson, *Identity, Youth, and Crisis*; C. Wilson, *The Outsider*; Alan Watts, *The Book: On the Taboo*

Against Knowing Who You Are. Other reading will include selecting one or more novels from a list of seven available.

WJC 89 Man in Nature

This course will apply the concepts of ecology to human populations. Population genetics, population growth and control, density effects and energy flow in human societies will be considered. Other topics to be covered will include the environmental determinants of human evolution and culture, man as an agent of environmental change, and the human body as a small ecosystem with its associated bacteria, fungi and parasites. This course will meet the need for a human ecology course for students interested in Environmental Studies. It is also recommended for those wishing to acquire some biological background for a Social Relations concentration.

WJC 91 Thinking Philosophically

The working assumption of this course is that every person is a philosopher of some kind whether or not he or she knows it. That is, everything one believes, asserts, argues or acts on presupposes what is meaningful; assumes that is real; presumes what one ought to do; implies what is consistent or inconsistent with the rest of what one believes, asserts, argues, or acts on; and may make a claim on the belief of others. To think philosophically is to become critically aware of one's presuppositions, assumptions, presumptions and implications and of the claims made upon one's belief, in order to free oneself from accepting them blindly. In this course participants will practice the art of thinking philosophically.

WJC 93 Mind, Self and Others

An interactionist's perspective on basic issues in social psychology. Can we as human beings ever fully understand what is going on in someone else's head? What is the self and what is the relationship to the other? How are we to understand what is really "there" for the other person? The course will focus on the works of Mead, Thomas, Schutz and Goffman, as well as using literature and film to enhance our understanding of some of the basic issues.

WJC 95 Wealth, Poverty and Power: Social Stratification and Life Chances

Who are the super-rich and the permanent poor among us? This course will examine the distribution of wealth in the United States. It will explore the kind of power that accompanies wealth. It will ask if it is possible for the poor to participate in the decision-making process. Are there leverages to power that could be made available to the poor?

WJC 96 How to Listen . . . and Hear!

A preparation for internships in the service professions and the behavioral sciences. Specifically, how to use the face to face situation as a growth experience for the student and as a helping tool for the client. Exercises in interviewing will be conducted in class and opportunities for practice will take place outside of class. We will study how the one-to-one relationship may be used to define a problem and to work toward its solution.

WJC 99 News

An investigation of news as a social phenomenon as well as workshop

practice in news gathering, writing and analysis for the print and electronic media. We will discuss the origins, selection and interpretation of news; the power of the media; and freedom of and repression of the press. There will be exercises in finding and writing news copy, features and editorials centering around a specific community problem.

WJC 101 Instant Research: How to Find Out

Our consultants, most emphatically from journalism, have urged a course to provide these skills: (1) recognizing what information is necessary to cope with a particular problem (topics, themes), (2) knowing where the sources of information are (where to get the data) and (3) gathering and selecting information quickly and efficiently into a report or presentation of a problem so that action can be taken. These skills are crucial in business, social agencies, news rooms of papers and television stations, environmental action groups and your other college courses. Students will do work for their other courses in this course. It will be a project course with tutorials. The students singly and in groups will seek concrete information that they and others, students, staff members and people outside the college, really need.

WJC 107 Non-Verbal Communication

A graphic design course which is an introduction to advertising design. Course will include projects in corporate identification, symbols, logos and other related items.

WJC 108 Problem Solving in Environmental Design

The One Room Dwelling - Students to work in groups of five to solve a specific problem in space design. Each group required to build a model showing their design solution. Knowledge of 3-D design would be very helpful in this course.

WJC 113 Equitable Access: Jobs and Housing

What is the relationship between the location of jobs and the location of housing for the job-holders? Do our existing housing patterns and transportation systems inhibit the movement of the less skilled into jobs for which they are qualified? The basic purpose of this course is field investigation and analysis of the existing jobs, housing and transportation in Grand Rapids and the development of proposed solutions to any problems found to exist. The information developed by the class will serve as the foundation of a published report on the distribution of jobs and housing in the Grand Rapids area. Classroom discussion will revolve around the philosophic and historical background of the problems which are found to exist in Grand Rapids and elsewhere, in an effort to understand how the dynamics of urban development have contributed to problems of social inequality. This course will be useful to students interested in planning and related careers, and to those concerned with more equitable solutions to problems of both the welfare recipient and the working poor.

WJC 114 Air Photo Interpretation

This is a basic skills course. Techniques in using air photos will be taught. The major emphasis will be on practice in interpretation of the photographic image. The skill is useful and time saving in planning, in assessment of resources for management purposes and, increasingly, in environmental monitoring.

WJC 122 Lab Analysis of Environmental Pollutants

This course will introduce the student to basic lab techniques and procedures used in the chemical analysis of various polluting compounds. The chemical procedures used in the HACH kit, as well as other standard volumetric and colorimetric analysis will be investigated. This course will cooperate with the **Ponds and Streams** course in the analysis of several local bodies of water. As such, the course will be project and problem-oriented. At least one trip on the Angus will be included to collect samples from Lake Michigan for analysis. Air pollution samples from the Hi-Vol sampler will also be analyzed to assess the types and amounts of contaminants in our local air. A prior classroom (not lab) course in chemistry is recommended. Students who have not taken **Elements in the Water Environment** should get permission from the instructor before registering for this course.

WJC 124 Writing For Publication

Prose writing skills which one uses in writing news items, feature stories, editorials, investigatory reporting, short stories or entire books are the subject for this course. Emphasis on creative revision.

WJC 130 Foundations of Social Theory

An introduction to classical thinkers in the social sciences. This course covers the works of Marx, Weber, Freud and others through the reading of selected books and class discussion.

WJC 133 Ponds and Streams

A laboratory and field course. The group will sample a variety of nearby sites, learning the associated animals and plants and investigating how they respond to chemical and thermal pollution. The same sites will be sampled by lab analysis of environmental pollutants, allowing a correlation of biological and chemical data. The course work will involve some readings and discussion, and a few laboratory exercises, but primarily will deal with the collection of information on the survey sites and the preparation of a class publication using that information.

WJC 135 Understanding Media

Contemporary means of communication and consciousness. A study of how power is wielded in the media and how the media permeate our lives. We will discuss communication in preliterate societies; the origins of writing and its commercial, political, intellectual and entertainment functions; the development of print-media, both of limited and mass circulation; the development of electronic media—telegraph, radio, television, phonograph, film, telephone, tape and computer; cultural communications innovations such as rock concerts, be-ins and mass protest rallies. We will do some content analysis and message-effectiveness studies.

WJC 136 Color and Design

An in-depth exploration of color theory as it applies to design (i.e. fabrics, wallpaper, wrapping paper, etc.).

WJC 137 Graphics for Television

Advanced course in graphic design, specifically preparing art work for television. Prerequisite: Non-verbal communication or equivalent.

WJC 139 Legal Environment of Business

Using the legal case-study method, this course will first explore the general role of law in the community and secondly, at length and in detail, the areas of law which intimately affect the business community and, to a lesser extent, one's personal life. The legal case-study method relies on "brief" writing and class recitation and argumentation. The course will attempt to provide the manager with the knowledge of when an attorney is needed and with the basic principles of contracts, sales, partnerships and agency.

WJC 141 Environmental Politics

Can contemporary political and economic institutions cope with environmental problems and basic human needs? We will examine federal, state and local government dynamics, the response of the courts, bureaucratic failure, location of power, profit-seeking corporations, "free" markets and private property. A look at alternatives to these traditional areas will place special emphasis on Naderism, ecotague, consumerism and "dropping out."

WJC 145 Oral Communication

A speech course designed for WJC students both to deal with their own personal communication problems and to make them more effective change agents. In addition to studying communication theory and strategies, each student may, in consultation with the instructors, pursue a problem or task related to the campus or the larger community life. The strategic use of all available communications media will be encouraged in effecting the desired change. Attention will be given to individual communication problems, tactics of speech preparation and delivery and methods for measuring change. Variable credit 2-5.

WJC 149 Reading as Experience: A Writing Course

Many people believe that writing is an inadequate way of communicating their ideas, often because they do not actually succeed in communicating with others when they write. The frustration of not being understood may also underlie the belief that you can't really tell from the words what a writer means—a belief that denies its believers access to precisely the skills they need to become better writers. To have satisfying writing experiences requires having satisfying reading experiences. That is, writers must develop an ability to take a reader's standpoint on what they write. In this course we will practice the art of close reading as an aid to writing, in order to explore the ways in which writing is an attempt to structure not only a meaning or statement, but also the experience of that meaning or statement.

WJC 152 Methods and Materials for Public Environmental Education

The class will examine the content of programs for environmental education: curricula, films, projects for K-12, materials for public (e.g., nature centers) and adult education. We will use resource people, both environmentalists and educators, to explore the objectives, techniques, economics and development of environmental education. In addition, the group will consider some very general questions: How are environmental studies programs different from general science programs? What is the potential of environmental education for social change? What shape

would that change ideally take? What will be the future environments in which our students will live? How best can we prepare students to relate to those environments?

WJC 155 Labor Relations and Collective Bargaining

A study of the collective bargaining process which will include material on: preparation for negotiation, the negotiator, conducting negotiations, grievances and elements of a contract. Taught by a labor relations practitioner. Methodology: lecture, simulation and guest speakers.

WJC 156 Environmental Design Awareness

A series of readings, lectures, films and field trips to increase the student's awareness of how environmental design affects our lives. A joint WJC - Herman Miller Co. design course.

WJC 159 Living and Learning at William James College: The Philosophy of Liberal Education

The problems and possibilities of education at William James College will be studied in relation to (1) classical statements of the ideal of liberal education and (2) serious interpretations of contemporary society. This study will be conducted in small group discussions and in all-college plenary sessions. The small groups will be able to draw from a resource base which includes materials on the ideal of liberal education and the state of contemporary society. Plenary sessions will deal with issues, problems, and possibilities of William James College in relation to larger concerns with liberal education and contemporary society.

Out of this resource base of philosophical and sociological materials each student will be asked to assemble his or her own looseleaf reader which reflect's the student's own integration of the three problems of the course—liberal education, contemporary society and William James College. Each small group section will take as its starting point the educational concerns of its members as a group and as individuals. In addition to the resource base and the plenary sessions these small group sections will be supported by the availability of the entire William James College Community for discussions of particular texts, problems and issues.

This course is strongly recommended to all new students at William James College. It is also recommended to all returning students who wish to understand the philosophical and sociological context of their college education more completely.

WJC 160 Political Economy of Education

An exploration of contemporary media-related, behaviorist, humanist, nationalist and Marxist criticism of American education in the context of the more general unresolved political and economic questions with which our society is faced. The class will consider both the implications of various prescriptions that have been made for American higher education and the likelihood of any of them coming to fruition. Its primary purpose will be to give people preparing for careers in teaching a broader context with which to consider their prospective roles.

WJC 161 Basic Electronics and Video Repair

Students enrolling in this course will gain the skills necessary for the repair and maintenance of electronic hardware. Special emphasis will be placed on gaining the knowledge necessary for doing minor repairs on half-inch video equipment. Participants will create a handbook on video

repair, technology and general application. One previous course in community video is required or permission of the instructor.

WJC 168 Audio Information - Radio

Introduction to hard and software of radio. Gathering, writing and producing information.

WJC 172 Environmental Geology and Geologic Hazards

Environmental problems and geologic hazards will be studied in all degrees of development—from those yet to happen to those which have taken their toll of property and life. Emphasis will be placed on the identification of the characteristics of potential geologic hazards and environmental problems and the techniques and methods that have been used to overcome such hazards and problems. Problems to be touched upon include field techniques and the collection of some basic geomorphological data; earth resources with particular attention to earth materials needed for construction; problems associated with the disposal of solid and liquid waste; environmental aspects of mine reclamation; landslide problems; ground subsidence; slope stability; and problems associated with earthquakes. One Saturday field trip will be required. No prerequisites are necessary for the course.

WJC 175 Introduction to Film

Techniques of shooting and cutting silent 16mm film, with limited discussion of techniques of sound. Student production teams will be expected to develop exercises in documentary news, narrative-drama or educational films. Major emphasis on scripting with some practical production experience.

WJC 176 Information Structures

An introduction to nonnumeric uses of computers. Emphasis will be placed on the data structures required and languages available for non-numeric data manipulations. Structures such as strings, lists, trees, stacks and networks will be discussed. Programming skill in FORTRAN is necessary.

WJC 179 Calligraphy

The art of fine penmanship; lettering in a variety of decorative styles. Illuminated manuscripts. Students must be *right-handed* or they will need permission of the instructor.

WJC 182 Two-Dimensional Design

Formal problems in basic aesthetic relationships in a variety of media. (For beginning as well as advanced students.) Six hours independent work.

WJC 183 Theory of the Firm

How does a market and a market society work? How does a firm make decisions within this context? Why do we have monopolies, oligopolies and other market imperfections? This course will attempt to dissect these questions using microeconomic tools.

WJC 185 Beginning Video

This course will provide basic learning skills for those wishing to involve themselves with the evolution of community-originated video. Emphasis will be placed on acquiring the fundamental knowledge necessary for

taping and editing with half-inch video equipment. In addition, students may learn about the larger moral and philosophical questions related to video, including the developments in "home-spun" video and cable TV. Students signing up for this course should have *no* previous video experience.

WJC 186 Group Thinking and Public Discussion

Much of our problem solving is done in groups. The importance of skills in leading and participating in discussion is widely recognized. Such skills seem to be an integral part of the workings of a democratic society. Increasingly we rely on public discussion, forums and radio-TV formats to stimulate public interest and influence public opinion and policy. This course will deal with principles of analysis and reasoning and methods and types of group discussion. There will be practice in organizing, evaluating, leading and participating in committees, panels and forums.

WJC 187 Social Relations

This course will introduce and develop frames of reference which will give the student a general view of behavior in contemporary society. Exposure will be given to the basic concepts, theories, goals and faculty relating to the William James Social Relations Program.

WJC 188 Introduction to Drawing (Black and White)

Visual language development using a variety of dry media. Drawing through a stretching of visual expression. Six hours independent time.

WJC 190 Introduction to Survey Research

This course will introduce the student to the techniques of questionnaire design, the structured interview and some ways of handling the information produced by the interview through exposure to sampling theory and ways of handling measures of central tendency, dispersion and the probable reliability of the data.

WJC 193 Financing Profit Seeking Institutions

Beyond accounting - to decision-making: acquisition and allocation of financial resources. The role of information in internal control and external reporting. Adam Smith's view of free-flowing capital finding its most efficient use and the highest rate of return implicitly, and naively assumed free, easy and equal access to information. Readings, cases, decision-making projects. (Some previous management skills helpful and basic accounting skills needed.)

WJC 200 Film Making: Basic Darkroom Techniques

A practical course in the essentials of black and white film development, contact printing and the making and developing of photographic enlargements, including the creative use of cropping, dodging and burning-in to improve print composition. Student must own or have access to a camera.

WJC 203 Practicum in Social Justice

Students will work out of OEO Legal Aid offices in Grand Rapids. Orientation will be provided by Legal Aid staff. Seminars in society's use of law will be held with instructor. Students will serve as assistants to lawyers handling cases in the area of domestic problems, tenant-landlord relations, welfare and social security rights, civil rights, etc. The knowledge of

laws and codes gained will be incorporated in a student-prepared manual. Participation is required for two quarters. May be taken for 10 to 15 credits. 10 credits earned by 20 hours of service plus readings and seminar. 15 credits earned by 35 to 40 hours with *released time* for manual preparation and seminars. Registration by permission of the instructor.

WJC 211 Television Production: Theory and Practice

Basic studio and control room techniques utilizing closed circuit equipment. Students participate in and direct a number of programs and commercial exercises designed to provide experience in a variety of studio and control room positions. Each student will produce and direct a final program project of his or her own choosing within specified limits. This course requires no prior training or experience in television production techniques.

WJC 214 Psychological Tests and Testing

Course will deal with theory and practice of testing. Theoretical concepts such as norms, reliability, validity, standardization and interpretation, and tests such as WISC, WAIS, MMPI, Strong, Edwards, Stanford Achievement test and aptitude tests will be discussed. This course is for advanced students interested in clinical, educational or service aspects of psychology. An appreciation of the need for professionalism, confidentiality, maturity in attitude toward clients, sensitivity and interest in client welfare is necessary.

WJC 215 Psychology of Women

When we speak of women, whom do we mean? Women are usually represented as someone would like them to be—or not to be. This course will study women in the past, and how they are changing in the present. More or less traditional Freudian, Neo-Freudian, Jungian and other approaches will be looked at along with more recent passionate outcries of the women's liberation movement and the academic contributions of new psychological research. Some input from anthropology, sociology and literature may add perspective to personal experience and exploration in class discussions.

WJC 216 Contemporary Minority Issues

An examination of important themes and movements in America that affect minorities today. Discussions, guest speakers and tape recordings of famous speeches will be utilized to do an intense investigation of discrepancies that exist in the areas of housing, education, employment, and the political system in America.

WJC 217 Social Ethics: King and Alinsky

A biographical study of the thought and action of two major political figures of the 1960's—Martin Luther King and Saul D. Alinsky. We will examine these figures primarily in relation to the civil rights movement, the community organization movement and the inter-relations between these two movements. In this examination we will seek to understand the political climate of the 1960's, the difference between those times and our own and the viability of the vision of King and Alinsky under contemporary conditions.

WJC 218 Planning Problems and Study Design

After a brief survey of alternative planning philosophies, a number of local

problems will be identified for investigation. Alternative study programs, intended to provide solutions, will be prepared and evaluated. Class members will then select topics for individual and group investigation. Work will be reviewed by other class members, the instructor and others familiar with the problems. While the course **Introduction to Planning** would be useful, it is not a prerequisite for this course.

WJC 220 Environmental Law

This course will begin with a survey of civil and criminal laws as they relate to environmental topics. Common law remedies for environmental problems will be examined and then two specific subject areas will be explored to indicate the modern development of environmental law. First, the changing land use regulations at the state and federal levels will be investigated along with the limit placed on governmental regulation of land use by an individual's constitutional rights. Secondly, modern administrative law will be examined as it relates to the operations of the Atomic Energy Commission.

WJC 221 Accounting for Today II

Continuation of **Accounting for Today I** covering financial position, earnings, cost systems, budgeting and tax accounting from a users point of view. For students who have not had **Accounting for Today I**, enrollment is by permission of the instructor. Prerequisite skills are an understanding of recording and reporting, cost of goods sold, inventorying and depreciation.

WJC 222 Advanced Video

Advanced video will provide a means of support for those students wishing to further develop their video skills. Advanced students will also provide instruction to beginning video students in the philosophy and technical implementation of half-inch video equipment. Variable credit 1-5. Students taking the course for 4 or 5 credits will have supervisory responsibilities. Prerequisite: one previous video course or the equivalent.

WJC 224 Computer Systems and Programming

This is the first of a two-term sequence. The course will explore the development of systems to control a computer (operating systems). An understanding of both computer hardware and software will be gained, first by studying an assembly language, followed by a study of the tasks of an operating system and finally by comparing several existing systems. Knowledge of either FORTRAN or COBOL is required.

WJC 225 America as Seen by Non-Anglos

A look at the history of protests and problems of non-Anglo Americans, comparing common areas of various minority groups—their problems and protests. An attempt to gain an understanding of current problems shared by minorities.

WJC 229 The Physical Environment

A study of the principles and processes governing the physical environment of our planet. Aspects of the planet studied will include the atmosphere, the hydrosphere and the lithosphere. This course will be of value to students looking for a basic understanding of the world around them. It has been designed for people diversifying their Synoptic Program and for

people wanting to complete a solid base in their Environmental Studies concentration.

WJC 230 Future Relations Among Workers and Managers

Young workers have different job-related needs than their parents and grandparents. Value changes in society are being reflected in demands by young workers for job satisfaction and participation in work-related decisions. Traditional institutional rewards and punishments may have to be replaced with new relations among workers and managers centered around participatory decision models and a restructuring of jobs. How do existing forms of worker participation in Europe and America affect worker satisfaction and productivity? Can work be humanized? Can we contribute to individual growth by enriching jobs according to Herzberg's theories?

WJC 232 Racism

This course will examine the problem of institutional racism in American society by focusing on two specific areas, sports and music.

WJC 233 Experimental Ethics: Human Guinea Pigs

What are the ethics of experiments which use human subjects? Emphasis in this course will be on subjects who are institutionalized: prisoners, mental patients, the elderly, etc.

WJC 234 Perspectives in Economics

Who gets what? How? Why? How did we get to where we are? How have other economic systems gotten to where they are? Where are we likely to be going? In pursuing the answers to these questions we will briefly develop the economic perspectives of Adam Smith and the neo-classicists, Karl Marx and the neo-Marxists and John Maynard Keynes and the neo-Keynsians. In so doing we will explore the analysis of market dynamics, economic growth, inflation and depression, imperialism and environmental crisis.

WJC 235 Marketing

A basic look at marketing management, to include analyzing opportunities, organizing market activity, planning marketing programs and controlling the marketing effort.

WJC 236 Computer Programming—Basic

This introduction to the computer uses the new computer terminals now located at William James College. It will provide a gentle introduction for the computer "innocent" and/or an access course for further study. Not for students who have previously studied *any* computer language.

WJC 239 Audio Information: Production

The second in a sequence of three radio courses. We will expand our abilities to gather and write information and use audio equipment to produce documentaries, exposes, news and commentaries and interviews. Students will select project topics, editing, mixing, script writing and peer evaluations. **WJC 168 Audio Information: Radio** or experience at a radio station including a working knowledge of equipment is required. Interested students who missed (or avoided) the fall introduction should meet with the instructor *before* registering.

WJC 240 B.F. Skinner and His Critics

B.F. Skinner is an important and very controversial experimental psychologist whose work has profound implications for behavioral science, education, community planning and politics. He has been accused of a disrespect for human freedom and dignity and has, in turn, accused his critics of using concepts like freedom and dignity to avoid facing the real issues which confront us as scientists and as a threatened species. This course will deal with both his nontechnical work (*Walden Two*, *Science and Human Behavior*, *Beyond Freedom and Dignity* and selected essays from *Cumulative Record*) and the reactions of his critics (Joseph Wood Krutch, Noam Chomsky, Chris Argyris and Carl Rogers).

WJC 242 Humanistic Psychology

The course will focus on two major contemporary trends in humanistic psychology: (1) The "existential" approach to counseling and therapy and (2) research into the nature of human consciousness. Discussion of selected readings in these two areas.

WJC 243 NEPA - Section 102: Environmental Impact Statements I

"The impact of (Section 102) . . . I am convinced, would be so wide-sweeping as to involve every branch of the government, every committee of Congress, every agency, and every program of the nation."—Congressman Harsha. In spite of such precautionary language, the National Environmental Policy Act (NEPA) of 1969 was passed and signed into law by President Nixon on January 1, 1970, amid a flurry of environmental self-righteousness. Section 102 of NEPA set down the most far-reaching environmental legislation ever passed in this country. It requires an environmental statement assessing the impact on the environment of any federally authorized action. This course will look at the history, legal background and the administration of NEPA - Section 102. We will also analyze some current "Impact" statements as to their structure and content. We will discuss ways to gather data for, and generate, impact statements. Most career opportunities in the environmental field presuppose competence in writing and/or analysis of impact statements. (This course is critical for *all* students in the Environmental Studies area. In addition, students in management areas or some aspects of social relations may find it very helpful.)

WJC 245 Thinking Historically

What is history? Who is it written by and for whom? Who is left out? In what senses is history an art or a science? In what sense can it be objective scholarship? In what senses must it be biased and propagandistic? What does critical thinking in history mean? What does historical theory mean? What keys to history have been proposed? How can they be evaluated?

WJC 248 Shakespeare

This introduction to Shakespeare will involve the class in three activities: reading Shakespearean plays, viewing film versions of the plays and writing reviews of the film versions seen. The plays we will work with are *The Taming of the Shrew*, *A Midsummer Night's Dream*, *Othello*, *Hamlet* and *The Tempest*. The assumption of the course is that design principles operate in film and in film reviews just as they do in a literary

work. Therefore, we will be doing a lot of close analysis of short segments of the plays we read, the films we see and the reviews we write.

WJC 250 Revolutionary Women

A study of women who have tried to analyze society in a fundamental way and to transform it in a fundamental way. Preceded by a look at isolated cases of protest against women's traditional role before 1800, the course will go on to examine the participation of women in movements for social reform and revolution in the 19th and 20th centuries.

WJC 251 Interpreting "Soft" Data - Nonparametric Statistics

"Soft" data result from measuring such things as student performance in schools, emotional states and worker performance on the job. The numbers in which such data are expressed produce an appearance of accuracy which can be misleading. In fact, these numbers may not even be "hard" enough to permit operations like addition, let alone more sophisticated calculations. It is usually possible, however, to interpret and generalize from such data using the techniques of nonparametric statistics. This course will enable you to recognize "soft" numbers and work with them in a meaningful way.

WJC 252 Advanced Darkroom Techniques

This course is designed as a logical extension and growth of **WJC 200 Film Making: Basic Darkroom Techniques**. Beyond the basics, students will have an opportunity to explore the characteristics and potentialities of different types of film, filter effects, developer manipulation, printing papers and special effects with an eye to the further improvement of photographic conception, composition and rendering. Emphasis will be placed on those techniques that will enhance the ability of the individual student to identify and develop his or her own personal photographic style. **Basic Darkroom Techniques I** or previous darkroom experience is required.

WJC 253 Uptight About Writing: A Skill-Oriented Course

This workshop is for students who are already confronting the frustrations of writing internship documents, project reports, *Home James*, the *Lantern* or whatever. Special emphasis will be placed on learning the skills of writing with clarity, meeting deadlines and general self-editing. Some work will be done on creating portfolios and resumé writing. This workshop will provide an intensive experience with practical writing problems. Students are advised to consult one of the instructors before registering as this experience is only for students who are serious about learning the skills described.

WJC 254 Creative Photography

Students already familiar to a certain extent (limited or otherwise) with picture taking and darkroom techniques will have an opportunity to take, develop and print photographs emphasizing the natural aesthetic potentialities of the environment. Class time will be devoted to discussion and critique of the class's photographic efforts, with emphasis upon original intent, field conditions and problems, composition and darkroom handling of the final photographic enlargements. At least some degree of familiarity with picture taking and darkroom techniques is required.

WJC 256 Conceptual Drawing in Color

The second in consecutive order of basic drawing courses. This class deals with color in basic media in drawing, color as it applies to emotional interpretation, color for visual realism and color for its own sake. New media and techniques will be explored. **WJC 188, Drawing in Black and White**, a similar elementary drawing course or permission of the instructor is required.

WJC 257 Theories of Personality

This course will be an overview of how different schools within clinical psychology (behavioral, psychoanalytic, phenomenological, etc.) approach theoretical questions of personality development and psychopathology. Extensive Reading.

WJC 258 Behavior Disorders: Perspectives and Trends

The etiology and nature of nonnormative behavior will be considered. Commonly diagnosed syndromes and their social significance will be examined in light of intrapersonal dynamics and biological factors. Research findings concerning the effectiveness of corrective approaches will also be considered. Not an introductory level course. Admission by consent of the instructor.

WJC 259 Film Production/Film Audience

Practical experiments in the relationship between audience and filmmaker, using documentary and/or other film forms. Further development of film skills (16mm), particularly double system editing. This is a continuation of **WJC 175 Introduction to Film Production**. Either **WJC 175** or permission of the instructor is required, i.e. basic film production knowledge—shots, lenses, etc.

WJC 261 Computer Modeling and Environmental Problem Solving

The course will introduce some of the ideas of systems analysis. We will look at some examples of environmental models and ask some general questions: Why model? What makes a good model? How do you go about building one? What can a model tell you and what can't it do. This will be an "interface" course, intended both for environmentalists curious about how the computer might be useful, and for computer people interested in possible applications. No previous experience with computers will be required.

WJC 263 Applied Psychology

An examination of the various uses to which contemporary psychology is put and the settings in which the usage occurs—business, industry, government, clinics, hospitals, schools and community agencies. A solid background or experience in basic behavioral sciences concepts is a prerequisite. Admission by consent of the instructor.

WJC 265 TV as an Art Form

Students will learn how to use half-inch video as an art form. Dance, music and video feedback will be incorporated into class projects. Technical skills will be developed through work with the special effects generator, mike mixing and video mixing plus other media such as film, slides and photos. Some previous work with videotape is recommended but not required.

WJC 267 Perspective Drawing

Both free hand and mechanical methods of drawing in perspective. Essential for interior design, architecture, industrial design, etc. Also good for anyone interested in drawing.

WJC 268 Problems in Conceptualized 3-Dimensional Design

3-Dimensional problem solving in imaginative ways. Concepts dealing with kinetic possibilities, soft objects, ideas on objects out of context and the emotional aspects of space. Previous experience with basic 3-D design, **WJC 44 Introduction to Three-Dimensional Design**, similar experience or permission of the instructor is required.

WJC 273 Planning Research: Survey and Field Work

A project course involving actual planning work: researching existing economic and population conditions; administering general citizen questionnaires (including sampling and distribution techniques) and interviews; land use and environmental site analyses. Considerable time outside of class will be needed for field work. While there is no formal prerequisite, some exposure to general planning concepts and techniques will be very helpful. Mr. Richmond is Director of Environmental Planning of the West Michigan Shoreline Regional Development Commission.

WJC 276 Being a Reporter: A Workshop in Practical Journalism

Emphasis will be on writing lively and informative news and feature stories, on information-gathering techniques and on the selection and interpretation of news. Other areas of study will include the interview, the follow-up, layout and editorial problems and headlines. We will consider the role of the reporter and his relationship to sources, to city government and politics and to community institutions as well as investigative reporting, libel and slander and a discussion of what is newsworthy. Ms. Wagenaar, M.A. in English (Kent State University), has been a reporter for the *Grand Rapids Press* and now works with the *Grand Haven Tribune*.

WJC 278 Introduction to Public Relations

An introduction to what happens in the field described by the broad term "public relations." Written projects and required readings will relate specifically each week to lectures by speakers representing advertising, financial reporting, governmental and public affairs, promotion campaigns, publicity and others. Required final public relations campaign proposal will capulize the materials covered in this course. Career opportunities in the field of public relations will be discussed throughout the term. Ms. Doebel, B.S., is the Director of Media Relations, Grand Valley State Colleges. Mr. Pellisier, B.A., M.A., was a former city editor and is now public affairs editor of the *Grand Rapids Press*.

WJC 280 Organization Theory and Problems

How do organizations effect their members, their clients and their employees. What are the historical roots of the dominant organizational forms in this society? What do these organizations have to do with the kind of people we are? How are we, and they, changing? What does this imply for the manager? Readings from Carr, Lipset, Goffman, Riesman, Illich, Hampden-Turner, Skinner, Drucker and McGregor.

WJC 286 Systems Concepts

In this course we will investigate the basic concepts of systems theory, the organization as system, its information flows and the nature of information system. Examples will be drawn from business, ecology and the social sciences. This is *not* a computer or a mathematics course.

WJC 288 Portfolio Seminar

Intended primarily for students concentrating in the Arts and Media program who plan to graduate soon. We will be concerned with how to develop a portfolio for either job hunting or graduate school, how to prepare effective visual presentations and how to write a resumé and make an application. Lots of practical advice. There will be general sessions of staff and students as well as individual tutorials.

WJC 290 Technical Report Writing

This is a service course to help develop skills in writing technical reports for industry, business, public service agencies, scientific institutes and inter-office purpose. Students who are taking project courses or who have jobs and internships which involve research, the accumulation of data and the gathering of scientific information should find this course useful. There will be practice in analyzing, organizing and presenting data to a variety of audiences for different purposes. Writing definitions, abstracts and instruction guides will be used to develop greater clarity, smoothness and conciseness in writing.

WJC 291 Drawing Problems III

Drawing problems in advanced media with emphasis on developing a personal direction and statement in the work. A formal matted professional portfolio of the best work of each student will be developed for presentation. This course is the third in a series. Beginning students may have access with permission of the instructor.

WJC 292 Data Base Design and Implementation

Organization, design, creation, maintenance and use of computer data bases. A project-oriented course. Prerequisite: working knowledge of COBOL.

WJC 296 Elements of Physical Geography

This course deals with the fundamental physical relationships in climate, soils, vegetation and land forms. You will learn why certain locations have a predictable physical environment and how to make basic assumptions about the physical environment at any place in the world, whether you are familiar with it or not. This course will be a combination of lectures, discussion and exercises. Gordon Osterman is past president of the Michigan Council of Geographic Education and teaches geography at Calvin College. A recent trip to India has interested him in the interplay between physical geography and non-Western cultural factors.

WJC 297 Advanced Filmmaker's Workshop

Advanced students share critiques, ideas and techniques. Introduction of advanced techniques in sound and animation. Permission of instructor (requires production experience in 8 and 16mm sound and silent) is required.

WJC 299 Advanced 3-D Design: Furniture

This course is intended to develop theories and application in 3-D design. It will recur as the advanced course in the 3-D Design sequence, but each time one specific topic will be explored. This term our topic is furniture: The designing and recycled building of furniture that folds, inflates, knocks down, stacks, or is disposable and can be recycled. To include design and building of seating, lighting, storing and playing environments for both adults and children. Prerequisite: **Introductory or Intermediate 3-Dimensional Design** or **Sculpture** or permission of instructor.

WJC 305 Introductory Photography

A general survey of the art and technique of photography. This course will examine the principles of photography and their evolution, the structure and use of the camera and its major accessories, picture composition and its relationship to photographic intent or purpose and the darkroom equipment and procedures essential to the making of a photograph. The course will involve both picture taking and an introduction to the darkroom processes of film development and printing. Students should own or have ready access to a camera of some kind.

WJC 307 Thinking Logically

Newspaper editorials, political speeches and debates and the writings of philosophers and social critics all confront us with a variety of arguments—some accurate, some seriously misleading. In this course we will look at many examples of these arguments and study some of the techniques for appraising their accuracy. We will consider fallacies, definitions, uses of languages and analogy. The course will also include a limited introduction to formal logic and scientific reasoning.

WJC 309 The Function of Art on Our Personal Lives

Lecture-discussion course on understanding visual art and learning to articulate why a person responds to it in various ways. Course will deal with such aspects of painting and sculpture as: *Personal Functions* (love, sex, marriage, death and morbidity, spirituality and the expression of emotions); *Social Functions* (political and ideological satire and graphic information); *Stylistic Functions* (accuracy, selectivity, order, fantasy, dreams, illusions); *The Elements and Grammar of Visual Art* (line, shape, light and dark, color, composition, balance, unity, rhythm). Many slides will be shown as examples. Students will be asked to write two essays in class and one paper outside of class in order to have experience verbalizing and writing about what is felt.

WJC 310 Small Business Management

Drawing on the Small Business Management Series, individuals from the business community and readings from a variety of sources, students in this course will cover the general development and operation of a small business, including its unique marketing, financing and management problems.

WJC 311 Audio Information - Advanced Production

Students in this course will be expanding into more sophisticated audio productions—documentaries, commercials, radio plays and audio audacities (beyond firesign theatre). Permission of the instructor is required (**WJC 230** or prior radio production experience is a prerequisite).

WJC 315 Surveying

An introduction to surveying, including a study of basic surveying concepts and procedures. The course will emphasize the skills and techniques of land boundary surveys and surveys used in construction of public or private works. While a single course in surveying is not enough to develop the student into an expert instrumentman, it is expected that the course will give the student a working knowledge of basic surveying instruments and their uses. The information learned in this course is useful in many fields from biological and physical sciences to, for example, planning, real estate and law. Prerequisite: ability to do arithmetic and basic trigonometry.

WJC 316 Advanced Problems in Two-D Design

Problems will include multimedia and multiple part projects dealing with such things as displaced images, metamorphosis and organization of dissimilar subjects. Students will present their term's work in a professional portfolio. This is the third of a series of courses in 2-D design; beginning students may have access with permission of the instructor.

WJC 319 (CAS 345) Environmental Economics

Examination of the economic causes of pollution problems and various economic solutions to the problems. Throughout the course, we will attempt to familiarize the student with basic economic concepts such as resource allocation, tradeoffs, market failures and cost-benefit analysis. At the conclusion of the quarter, we have to have formulated public policy implications from empirical analyses according to the areas of student interest. No prerequisites.



COLLEGE IV


SELF PACED	MODULAR	MASTERY LEARNING
LIBERAL ARTS	→ PROFESSIONS	DEGREES
INDIVIDUAL IZED	 FREE DESIGN	PROBLEM CENTERED
TUTORIALS	SEMINARS	INTERC ACTION

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PHILOSOPHY OF COLLEGE IV

College IV seeks to develop in its students a spirit of curiosity about life, a longing to search for truth and beauty and a respect and tolerance for the judgment of their fellow man. The college offers many pathways toward the enrichment of life and fulfillment of goals. Although the journey is essentially a solitary one for each person, the travel can be made easier by the gentle guidance of others. Recognizing that skills and attitudes are developed largely through interaction with others, College IV employs a series of instructional tools to enhance that interaction and to bring about the optimum development of the individual student's capabilities.

Much of the potential of our education fails to be realized because of the restrictions of form which have been placed upon the system. College IV has thrown away the lecture platform and class schedule, freed the student and the professor from the drudgery of fact-passing and engaged them both as partners in the learning process. Students are given a greater choice in determining content, modes and time of study. College IV encourages the development of self-motivation and dependence on personal initiative.

Students seeking a baccalaureate degree should be exposed to the major products of man's mind and to the wonders of the universe. They should develop a comfortable acquaintance with both their physical surroundings and their culture. They should demonstrate their competence in some coherent area of study. They should come to possess those vocational and intellectual skills necessary to make them productive members of society.

Many individuals have goals which may lead them to seek an education which does not conform to a traditional pattern. For them, College IV offers endless varieties of study programs to fulfill those interests. No amount of study is too small to be considered in College IV. No area for which it has materials and expertise is too specialized to be offered. College IV encourages the creation of innovative programs of study to meet the special needs of its students.

An important intellectual tool is the ability to set clear goals for oneself. The format of College IV is designed to give great emphasis to the development of the skills necessary to set achievable goals. An integral part of goal analysis is the assumption that goals, once set, will be achieved. Task completion is the logical extension of goal setting. The use of mastery learning in College IV will assure that task completion is both practical and rewarding.

College IV subscribes to the idea that education should be available to all who can derive benefit from it. To facilitate this the admissions criteria for College IV are flexible. Evidence of ability and intent are as important as past performance. Obviously, personal drive and motivation must be high to succeed in College IV, but given those attributes, the potential rewards in freedom of choice are enormous.

ADMISSIONS

College IV seeks to offer appropriate educational experiences to persons with a wide range of interests. Because much of the work of College IV is to be done through independent studies and not tied specifically to the calendar, the student should consider seriously his or her intent to pursue a program based largely on personal initiative. While academic counseling will be available, it cannot replace self-motivation. For additional information, please refer to the admissions section in this catalog.

DEGREE OPPORTUNITIES

College IV will offer the bachelor of arts (B.A.) or bachelor of science (B.S.) degree for students successfully completing the requirements. The B.S. degree will be awarded to graduates whose area of concentration includes primarily biology, chemistry, geology, mathematics, physics or psychology. Graduates with other areas of concentration will be awarded the B.A. degree.

Students may elect as their area of concentration (major) any of the following:

Anthropology*	Mathematics
Art	Music*
Biology	Philosophy*
Business Administration*	Physical Education*
Chemistry	Physics
Economics	Political Science
English language & literature	Psychology
Foreign languages & literature*	Social Psychology
Geology*	Sociology
History	

In addition, students are encouraged to develop areas of concentration which cut across these traditional discipline lines in order to build a program that best suits their interests and needs.

Thus, a student might combine work in biology, chemistry and geology, resulting in an area of concentration in environmental studies.

Another student might use work in sociology, psychology, biology and accounting leading to a career as a social worker specializing in aiding families with home management problems. For a student interested in playground recreation management, a possible course of study might include physical education, biology, psychology and art or drama.

College IV encourages applications from adults who are seeking college level work, but whose degree plans are not yet formulated. Many possibilities exist for upgrading skills needed for current jobs. Promotion to a better position may require special study in a limited area (for example, computer programming, chemistry, accounting or statistics). Many

*These majors will include course work taken in the other three undergraduate colleges.

adults are seeking enrichment of their lives through college work (for example, literature, history, art and astronomy).

Programs of study of nearly any length and breadth may be designed to meet individual needs. Each student will be assigned a faculty adviser who will help with the task of setting up his or her program. Resource materials available will aid in the selection of appropriate areas of study. In addition, tests may be taken to determine interests and potential for students who are uncertain about their abilities and goals.

Once enrolled in College IV the student may interrupt his or her studies without loss of credit or penalty, provided that appropriate arrangements are made before such interruptions.

TRANSFER STUDENTS

Students who transfer into College IV from another college or university (including the other Grand Valley undergraduate colleges) must earn a minimum of 45 term credit hours in College IV toward their degree.

Credits for transfer to College IV from other colleges and universities will be evaluated by the registrar of the Grand Valley State Colleges. Students who do not agree with the registrar's evaluation may consult the assistant dean of College IV.

Transfer credit toward the fulfillment of College IV degree requirements will be granted for all courses deemed equivalent by the appropriate College IV faculty.

Distribution requirements for the degree will be considered as complete for those students who enter College IV with an associate of arts degree or an associate of science degree from any junior or community college accredited by the North Central Association of Colleges and Schools.

All courses taken at GVSC by students from the other colleges in the cluster for which credit has been received may be transferred into College IV with credit. However, for those seeking a degree from College IV, an area of concentration must be presented. If the transfer courses fail to fulfill the requirements for that area of concentration, additional work will be required.

CREDIT BY EXAMINATION

Entering students may request examinations in any areas offered by College IV to demonstrate their skills and knowledge.

If they achieve high test scores, credit will be given for the specific modules considered completed. In this way, they may receive college credit for knowledge gained during work or for previous experiences.

At any time during their college career students may challenge any module and ask to be tested on their mastery of it. With advance notice at the College IV office, and payment of a test fee of \$3.00 per 1/2 credit, such exams will be given.

Throughout its curriculum College IV will use mastery learning (at the 90% level) as the measure of achievement.

College credit will be given for work completed under the CEEB advanced placement program provided a score of three or higher was obtained in the examination.

College IV will accept credit recommendations of the American Council on Education with respect to college level USAFI courses and USAFI college subject matter examination. College IV will grant credit for appropriate subject matter examinations (not general examinations) administered by the College Level Examination Program when satisfactory scores are presented.

CREDIT LOAD AND CLASS STANDING

The average credit hour load for a full-time study program at GVSC is 15 per term.

In College IV the learning modules will each be worth one-half term credit. Thus, 30 modules per term would be an average workload. However, a significant portion of each student's work will be in independent study projects and problem-centered group projects. These will have variable credit, as explained in a later section.

Class standings are based on the following credit hours completed:

Freshman	0 - 39
Sophomore	40 - 84
Junior	85 - 129
Senior	130 and above

REQUIREMENTS FOR GRADUATION

In order to qualify for a B.A. or B.S. degree, a student in College IV must have earned a minimum of 180 term credits. Forty-five of these credits must be in a major area of concentration

approved by the faculty adviser. This will represent an in-depth study of a discipline or other coherent area.

Eighty-five credits may be elected from all of the curricular offerings.

Fifty credits will be distributed according to the following plan:

Communications Skills - 10 credits

Oral and Written Communications (5 minimum)

Computer Science

Foreign Language

Mathematical Skills - 6 credits

Study of the Physical Universe - 9 credits

Geology

Geography

Astronomy

Meteorology

Physics

Chemistry

Study of Life Processes - 6 credits

Biology

Psychology

Physical Education

Man and His Social Systems - 9 credits

Psychology

Economics

Anthropology

Sociology

Government

History

Political Science

Man and His Thoughts - 5 credits

Philosophy

Mathematics

Literature

Religion

Man and His Works - 5 credits

Art

Music

Drama

Architecture

Design

All candidates for the B.A. or B.S. degree must pass a comprehensive examination covering both their general knowledge of the major areas listed above and their specific knowledge of their area of concentration. This examination will normally be given after 160 credits are completed toward the degree.

The design of the curriculum will ensure that all students completing the requirements for the degree will have had experience with learning modules, tutorials, seminars, discussion groups, problem-centered projects and independent studies.

SYSTEM OF GRADING

College IV will not use a traditional grading system. When a module or project has been completed students will be examined on their understanding of that work by the instructor. If they demonstrate 90% mastery or better on the test, credit will be given.

If they fail to master the material at the 90% level, they will be given instructions for selected re-study of the material and will be allowed to take a mastery test again. After the third unsuccessful attempt at master of a given module, they will be required to pay an additional tuition charge before receiving more help on that given block of material.

Student transcripts will record only modules and independent work which have been successfully mastered. No record of unsuccessful attempts will appear on the official transcript.

For independent study and small group problem-centered projects, students will contract with an instructor for a number of credits to be awarded when the study is completed successfully. A minimum of one credit, and a maximum of five credits, will be allowed for any single independent study or group project.

A clear distinction should be made between the mastery-no mastery system of College IV and a pass-fail option. Whereas a pass may indicate any work of "D" level or above (depending upon the system), mastery in College IV indicates essentially "A" level work. In a graded system, or a pass-fail system, time is held as a constant, and the amount of material successfully completed in that time is used to assign the grade. In mastery learning, the content is held fixed, and the student is allowed as much time as necessary to successfully master that content.

MODES OF STUDY

Much of the instruction in College IV will involve one student working with one faculty member. The faculty will be available

throughout the day to work with students individually as they have questions and problems in their studies. Since there will be no regularly scheduled classes students may come to see their professors whenever they have an opportunity to do so.

Learning Modules

Instead of attending classes or lectures students will do a good deal of the learning of their basic educational program through the use of portable, pre-packaged self-instructional learning modules. Students will purchase module booklets from the bookstore and will check out tapes or films from the Audio-Visual Media Center. They may work on them at their own schedule, in their rooms or wherever they please. Since there are no fixed deadlines, students will pace themselves through the material.

Each learning module will consist of an objective which states the expected goal to be achieved by the student as a result of its study, a study guide to the materials necessary for this understanding and a self-assessment to be administered by the student to check on his or her understanding of the material. Only when students are confident that they know the materials involved will they schedule a test over that material with their faculty members. Should they fail to master the material on that test, they will be given help in determining their weaknesses, and will then concentrate their study in those areas. When once again they believe they are ready to test their knowledge, they will meet with their faculty member for another mastery test. Only when the module has been mastered will the student move on to the next module.

Roughly one-fifth of the modules will be designed as small group seminars. Thus, when a student approaches one of these special modules he or she will sign up with the instructor in charge of that module. When four or five students are ready, a time will be scheduled that is mutually agreeable and the seminar will commence. In these seminars, lasting from two to four hours, the students will interact with their professors to discuss the topic outlined in the objective. They will see their instructors as discipline-oriented specialists and will have an opportunity to interact with one another in a formal, but small, classroom setting. Seminars will permit students to develop their analytic powers, while allowing faculty the opportunity to use their special skills and to share their expertise. Some seminars will involve the presentation of papers by students.

Discussions

Both formal and informal discussions involving a handful of students and one or more faculty will be held routinely. Often the culmination of a given area of study will be a discussion of that subject with others whose background and point of view may differ.

Tutorials

All students will be involved in individual tutorial sessions with their faculty members. Faculty members sharing the students' concern for mastering their learning materials will encourage the tutorial session.

Capstone Modules

Whenever a student completes a coherent area of study which may represent the equivalent of a traditional course, or a hybrid area crossing over several discipline lines, the faculty will design a special integrative module for that student. The objective of this integrative module will give the student an opportunity to synthesize the materials gleaned from the study of the individual modules. These capstone modules will carry variable credit.

Problem-Centered Projects

Knowledge and intellectual skills learned in College IV will be put to good use as students will be involved with fellow students in projects of their choosing. These projects will focus on problems of interest to the group. The students will discuss an area of concern with a faculty adviser. A number of possible objectives for study will arise out of this discussion. Each objective will be given a priority ranking, and the most important ones will be used as the basis for an investigation. The students will contract with their instructor to carry out the investigation for a fixed number of credits from one to five. Following the establishment of a rationale, students will collect data and information relative to their project. When they are satisfied that they have collected enough pertinent information, they will assess their original objective. The project will culminate in a series of reports suggesting possible solutions or directions for further study. The faculty member or members in charge will determine when the students have completed the work. After the reports have been turned in, and the instructors are satisfied that the project is complete, each student will be tested on his or her understanding of the prob-

lem and the project. As each student demonstrates adequate understanding of the project, he or she will be given full credit for the project. Should a given student fail to convince the instructor of such mastery, that student will be asked to study the report and its procedures again. The group will then dissolve itself, and its members will be free to select other classmates for other projects.

Independent Studies

For those who are more adjusted to working alone there will be many opportunities for carrying on independent studies. With the resources to be found in the library, the laboratories and the surrounding communities, students will choose topics which may provide solutions to identifiable problems. The format to be followed for the independent studies will be similar to that for the problem-centered projects. The student will contract to do a study for a given number of credits.

Advanced Research

Students working in their chosen area of concentration will be given opportunities to contract for advanced independent work. Such contracts will be made only after consideration of a prospectus of the intended study has been approved by the faculty adviser and the appropriate faculty committee. These contracts may be written for a minimum of 5 credits and a maximum of 15 credits.

The advanced research format is designed to give students more freedom in coming to grips with a problem from their chosen area of study. Students seeking this mode of study must be judged to be well motivated and to have sufficient prerequisite knowledge and skills to make a significant contribution to our understanding of the area.

A continuation contract for additional work in the same area will be considered only after adequate progress has been demonstrated and a coherent plan for the completion of the work has been made.

Comprehensive Examination

Degree candidates will be required to take a comprehensive examination to demonstrate their competence in their chosen area of concentration and their general knowledge as a liberally educated student. This examination will be given by the faculty of College IV plus invited colleagues from the other colleges.

Contract Study: Description

Although modules get a lot of attention and are the most obvious way to study in College IV, they are not the whole show. Contract study is another way students may study and earn credit. This is the approach students would make to some things which they want to study but for which there is no module in the College IV system. When students have an idea for a contract study they go to the professor(s) in the area(s) which it involves and discuss the idea. If they are encouraged to continue, they will write up a proposal for the study using the form which the professor will give them. The details of the proposal will be covered by the form, but essentially it will call for a statement of the goals of the students' study, the method by which they will carry it out and the expected results.

A group of students may enter into a group contract with a professor or professors. In a group contract, the expectations of each member in the group would be clearly stated in the group contract study proposal.

Another interesting form which a contract study can take is that of writing a module. If students like the idea of modules and they have an interest in writing a module in some area of study, they can earn five credits for writing that module plus credit for mastery of the module itself. Students would work out the details of this project in a contract study proposal.

The farther students go in their studies in College IV the more common it will become for them to study in this contract format. But we recommend that students start looking right away for an idea which they would like to pursue in the form of a contract study. As soon as students find the idea, they should talk it over with the appropriate teacher or teachers. This process can really help make their College IV work meet their own individual needs.

Contract Study: Independent Study and Group Projects

In addition to the study of learning modules, College IV students are expected to propose and conduct independent and group projects. Such projects offer unique opportunities for tailoring your education to meet your specific goals.

The development and execution of these projects will necessarily involve goal analysis and tasks completion; two skills which are of great importance in College IV, and which require experience and practice.

Before registering for any contract study students must invest some time and thought on their own. The most significant part of this work will be the development of a proposal for the project or study to be done. The following outline will guide students in getting such work under way.

1. When students have an idea for a contract study, they go to the professor(s) in the area(s) which it involves and discuss the idea.
2. If they are encouraged to continue, they write up a proposal for the study. That paper must contain the following sections if the contract is for more than five hours of credit:
 - a. Goals and objectives
 - b. Rationale
 - c. Method or approach to be used
 - d. Resources available or needed
 - e. Expected outcomes
 - f. Final product (a paper, report, film, new compound, etc.)
 - g. Check points with faculty
 - h. Effort estimates and time frame, justifying the credit requested
 - i. Responsibility of each individual (for group projects)
 - j. Mode of faculty interaction during project

If the student's study is for less than six hours of credit, he or she may use the one-page form called "Contract Study Proposal, 1-5 Credits.

3. Student proposals should be turned in to the person contacted about the study. After some discussion it may be necessary to revise and rewrite the proposal. It must be satisfactory to the professor in charge before he or she will allow you to sign up for credit.
4. The professor will then discuss the proposal with two faculty colleagues and the three of them must reach agreement on the content, scope, and credit before allowing the work to begin.
5. Students will then be given permission to register and will begin their work.

AREAS OF STUDY

Following is a listing of areas of study which are available in College IV. In some cases, specific modules to be offered are not listed in the catalog because they were being prepared when it went to press.

Students designing their programs of study should consult with the faculty of College IV. A complete catalog of module titles and objectives will be available in College IV.

During the first year of operation of College IV this list will be greatly expanded as additional offerings in each of the major disciplines are developed. New disciplines will also be added to the curriculum. For an up-to-date listing of the modules available, students should see their faculty adviser.

Students wishing to take work in areas not yet available in College IV may cross-register for such course work in the other three colleges in the cluster. Since the curriculum will be expanding rapidly throughout the first four years, students should consult with their adviser before cross-registering to determine when the work they seek will be available in College IV.

ACCOUNTING

PRINCIPLES OF ACCOUNTING I

Introduction to accounting and the application of accounting theory including such topics as the meaning of the balance sheet, the income statement and financial reporting.

PRINCIPLES OF ACCOUNTING II

A continuation of Principles of Accounting I with emphasis upon the uses of accounting data from the viewpoint of management.

BIOLOGY

GENERAL BIOLOGY

An introduction to biology including such topics as the use of the microscope, describing, inferring and classifying data.

CONSTRUCTING AND TESTING PREDICTIONS

A series of modules may be elected on how to construct testable predictions and test these predictions to allow the student to demonstrate the test of a prediction including design, test, evaluation and written report.

GENETICS

Modules may be elected on the fundamentals of genetics including molecular theories of inheritance, chromosomes, chromosomal rearrangements, Mendelian and non-Mendelian inheritance. Laboratory activities are stressed.

INTRODUCTION TO CELL BIOLOGY

Modules may be elected which introduce the student to the structure and function of cells.

Additions to the biology curriculum for 1974-75 will focus on an integrated program of biology which will include modules in anatomy, animal behavior, morphology, histology and physiology.

CHEMISTRY

GENERAL CHEMISTRY

This 15-credit series of modules includes descriptive chemistry, solutions, equilibrium, qualitative analysis and problem-solving techniques. It is usually the first chemistry course elected by majors in the following areas: pre-medicine, pre-dentistry, pre-veterinary medicine, medical technology, nursing, chemistry, pre-engineering and other natural and physical sciences.

Additions to the chemistry curriculum for 1974-75 will focus on the addition of modules amounting to a full year's course of 15 credits in organic chemistry.

ORGANIC CHEMISTRY

This sequence of modules will deal with the chemistry of aliphatic, aromatic and heterographic compounds. Also included in this sequence will be classical and instrumental methods of separation and identification.

COMPUTER SCIENCES

FUNDAMENTALS OF DATA PROCESSING

This five-credit series of modules provides an introduction to computers and computer language.

INTRODUCTION TO RPG LANGUAGE

A series of modules on how to write computer programs in RPG language.

ECONOMICS

CURRENT ECONOMICS TOPICS

(31-20 series and 31-23 series)—These series include problems of prices and inflation, international trade policy, foreign exchange, poverty, the stock market, and other topics currently in the news.

**PRINCIPLES OF ECONOMICS (MARCO)
AND PRINCIPLES OF ECONOMICS (MICRO):**

(31-30 series)—The macro series provides an introduction to national income measurement and determination, fiscal and monetary policy and growth. The micro series introduces the theory of pricing of products, resource allocation, income distribution and international economics.

Additions to the economics curriculum for 1974-75 will focus on:

**IMPACT OF THE TECHNOLOGICAL EVOLUTION:
ECONOMIC DEVELOPMENT IN THE WESTERN WORLD**

(31-27 series)—This series traces the history of industrialization from the pre-industrial societies of the North Atlantic Community.

ENGLISH

WRITTEN COMMUNICATION I: BASIC WRITING SKILLS

Module 39-20-02 provides a succinct review of spelling, grammar and punctuation. It is the starting point for the study of the 39-10 series which includes these modules: spelling, verbs, nouns, pronouns, number agreement, adjectives, adverbs, phrases, clauses, sentences, commas, semicolons, colons, quotation marks and italics.

WRITTEN COMMUNICATION II: COMPOSITION

This includes a series of modules at the freshman level on such topics as: the nature of language, use of the dictionary, library sources, structure, content and style in writing.

WRITTEN COMMUNICATION III: LIBRARY RESEARCH

A series of freshman level modules dealing with skills such as: topics for research, preparing a bibliography, gathering data, documenting and organizing research, writing and utilizing a research paper.

INTRODUCTION TO LITERATURE

This series of modules deals with character, imagery and symbolism, sound and related aspects, metaphor and irony.

GROUP DISCUSSIONS—LITERATURE

This continuing series of discussion modules is based on current authors and current themes in literature.

Additions to the English curriculum for 1974-75 will focus on:

SURVEY OF ENGLISH LITERATURE

A series of seven modules will be developed containing a period by period survey of English literature and its background.

IMPACT OF THE TECHNOLOGICAL EVOLUTION: A LITERARY VIEW OF THE INDUSTRIAL REVOLUTION

This will be an English module in the interdisciplinary sequence.

INTRODUCTION TO LITERATURE

Modules will be developed to expand this sequence.

GEOLOGY

PHYSICAL GEOLOGY

A series of modules dealing with the role of geology in today's world which will survey the principles and processes of physical geology. Students will be introduced to the earth's minerals and mineral aggregates and the study of geologic processes important in the development of land forms.

Additional Modules which may be developed include:

- Introduction to Fossils and Relative Dating
- Radioactivity, Absolute Dating and Geochronology
- Continental Drift and Plate Tectonics
- Paleogeography, Paleocology and Paleoclimatology
- Natural Resources and Energy
- Geology, Waste Disposal and Ground Water Problems
- Geology and Environmental Health
- Geologic Hazards

HISTORY

AMERICAN HISTORY

Modules will be developed that will analyze: (1) the development of American society from colonies to nation with focus on the formation of American character and society, the role of democracy in American life and the impact of the Revolution and the Civil War on American values and political institutions; (2) the major themes and developments in United States history with emphasis on the evolution of political systems in an urban industrial society, the development of a mass production economy, the emergence of America as a world power and a quest for social equality.

MATHEMATICS

BASIC ARITHMETIC SKILLS

The 08 sequence of modules reviews the basic skills necessary for the study of algebra or application of mathematics in any discipline.

BEGINNING ALGEBRA

Election of the 15 series of modules will provide skills in this area.

INTERMEDIATE ALGEBRA

Election of modules in the 20 sequence will provide students with skills at this level.

PRE-CALCULUS MATHEMATICS

Election of the 30 sequence of modules will provide pre-calculus skills including both algebra and trigonometry.

Additions to the mathematics curriculum for 1974-75 will focus on:

CALCULUS WITH ANALYTIC GEOMETRY

This series of modules will cover conventional differential and integral calculus along with analytic geometry.

MATHEMATICS APPRECIATION

This series of modules will be designed to show that mathematics is more than a study of the letter x and will rely, when necessary, on portable laboratory materials. This sequence will be available during Winter Term, 1975.

PHYSICS

GENERAL PHYSICS

A series of modules amounting to 15 credits will be developed following a sequential approach and dealing with the following areas: mechanics, thermodynamics, electromagnetism, AC and DC circuits, waves, sound, optics, and ionizing radiation and quantum mechanics. There will be three five-credit topical areas in this sequence: (1) mechanics, (2) electricity and magnetism and (3) modern physics. While it is possible that a student may elect these topical areas singly or in any order, the student is strongly urged to take them in sequence. It is further recommended that the student have sufficient

mathematical preparation at the level of basic algebra and trigonometry prior to electing these modules. General physics is usually a beginning course for students majoring in health sciences and life sciences.

POLITICAL SCIENCE

INTRODUCTION TO POLITICAL SCIENCE

A series of modules will be developed that will provide an introduction to the study of political science, a survey of how governments form policies to meet problems and an analysis of the factors which are involved in the relations among governmental units.

PSYCHOLOGY

INTRODUCTION TO PSYCHOLOGY

Modules will be developed to offer an introduction to the major areas of scientific psychology.

EXPERIMENTAL PSYCHOLOGY

Modules in this series will emphasize the basic skills and concepts useful in doing and interpreting experimental research in psychology.

ANIMAL CONDITIONING LABORATORY

Modules will be provided to allow students to demonstrate basic phenomena of operant conditioning in the laboratory rat.

BRIEF INTRODUCTION TO STATISTICS

These modules are designed for a quick introduction to the methods of statistics. Students desiring a longer and more traditional treatment of statistics should elect "Introduction to Statistics" in the statistics sequence.

Additions to the psychology curriculum for 1974-75 will focus on:

PSYCHOLOGY OF KNOWING

These modules will focus on man as a seeker, storer and handler of information. Individual modules dwell on the processes of perception, memory, thought and language.

DEVELOPMENTAL PSYCHOLOGY

This series of modules will provide an overall understanding of human development.

SOCIAL PSYCHOLOGY

This series of modules will focus on the general topic of social psychology. An emphasis will be placed on understanding how the individual's behavior is influenced by social groups and structural contexts.

SOCIOLOGY

INTRODUCTORY SOCIOLOGY MODULES

Election of these modules will provide a general introduction to the sociological perspective or frame of reference and includes modules on such topics as: social groups, organizations, communities and institutions.

CONTEMPORARY SOCIAL PROBLEMS MODULES

This series of modules provides an introduction and overview to the key issues involved in the sociological study of social problems such as poverty, crime, urbanization, sexism, racism and militarism.

Additions to the sociology curriculum for 1974-1975 will focus on:

SOCIOLOGICAL THEORY MODULES

This series of modules will focus on the contributions of major theorists toward a critical understanding of social behavior.

SOCIAL STRATIFICATION MODULES

This series of modules will explore the topics of social inequality, social class, effects of inequality on attitudes and behavior and social mobility.

ORGANIZATIONAL BEHAVIOR MODULES

This series of modules will examine the sociology of organizations: nature of organizations, structures, models of organizational behavior, the organization man and applications of organizational theory.

SPEECH

ORAL COMMUNICATION

Election of modules in this series will provide students with skills in listening, overcoming communication barriers, interviewing, problem solving through discussions and persuasive public speech.

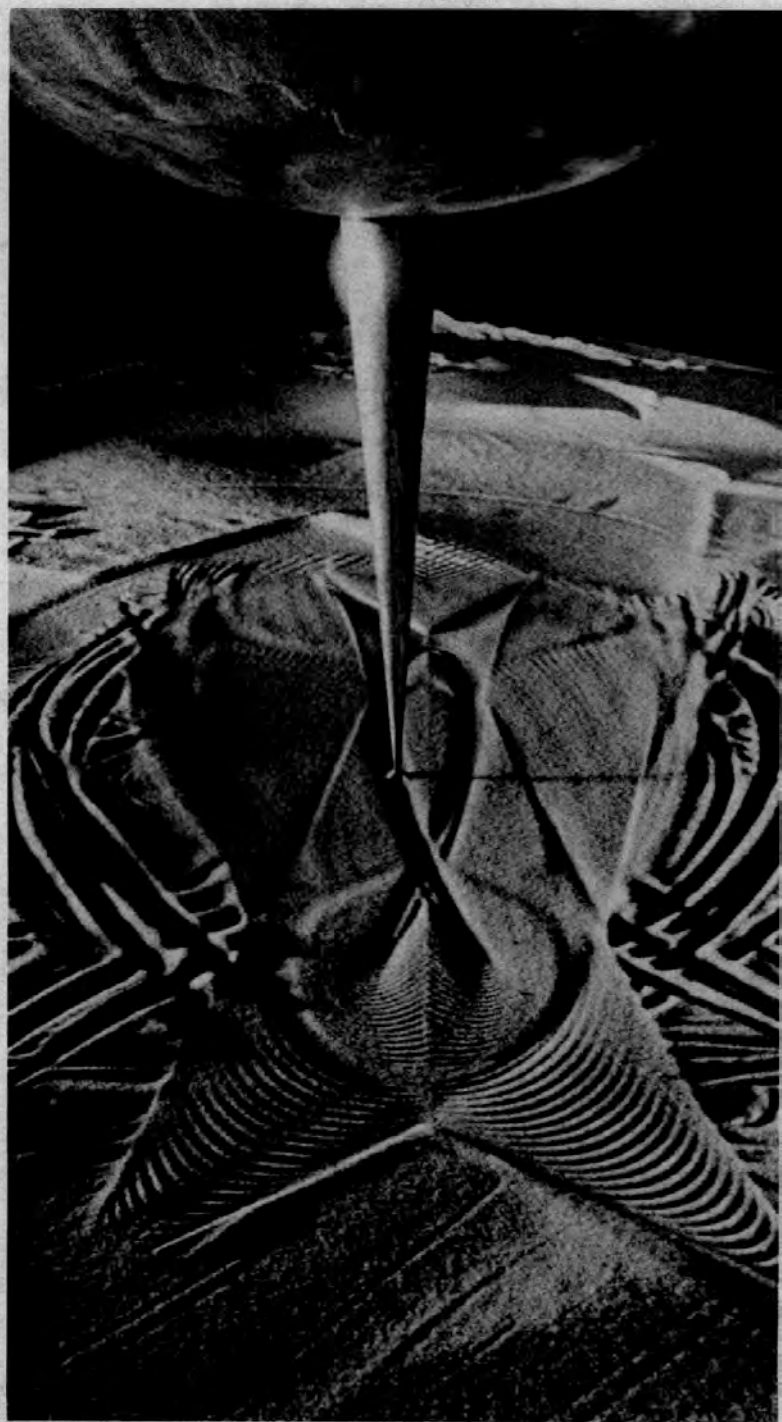
STATISTICS

INTRODUCTORY STATISTICS

This is a series of modules which taken in its entirety represents a general introduction to statistics as a tool, especially as used in the social, behavioral and biological sciences. Topics covered include distributions and their measures, probability, correlation and regression, hypothesis testing for means, nonparametric tests and analysis of variance.

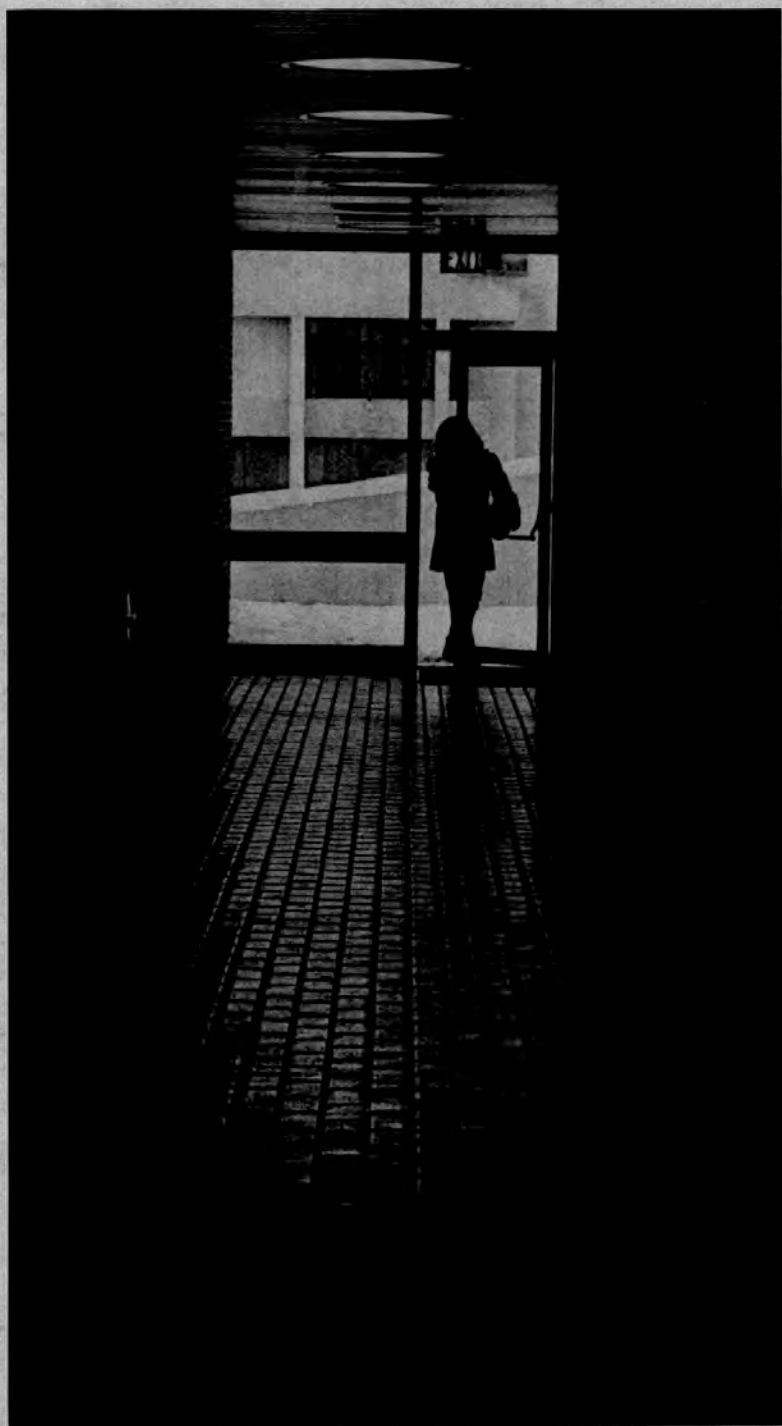




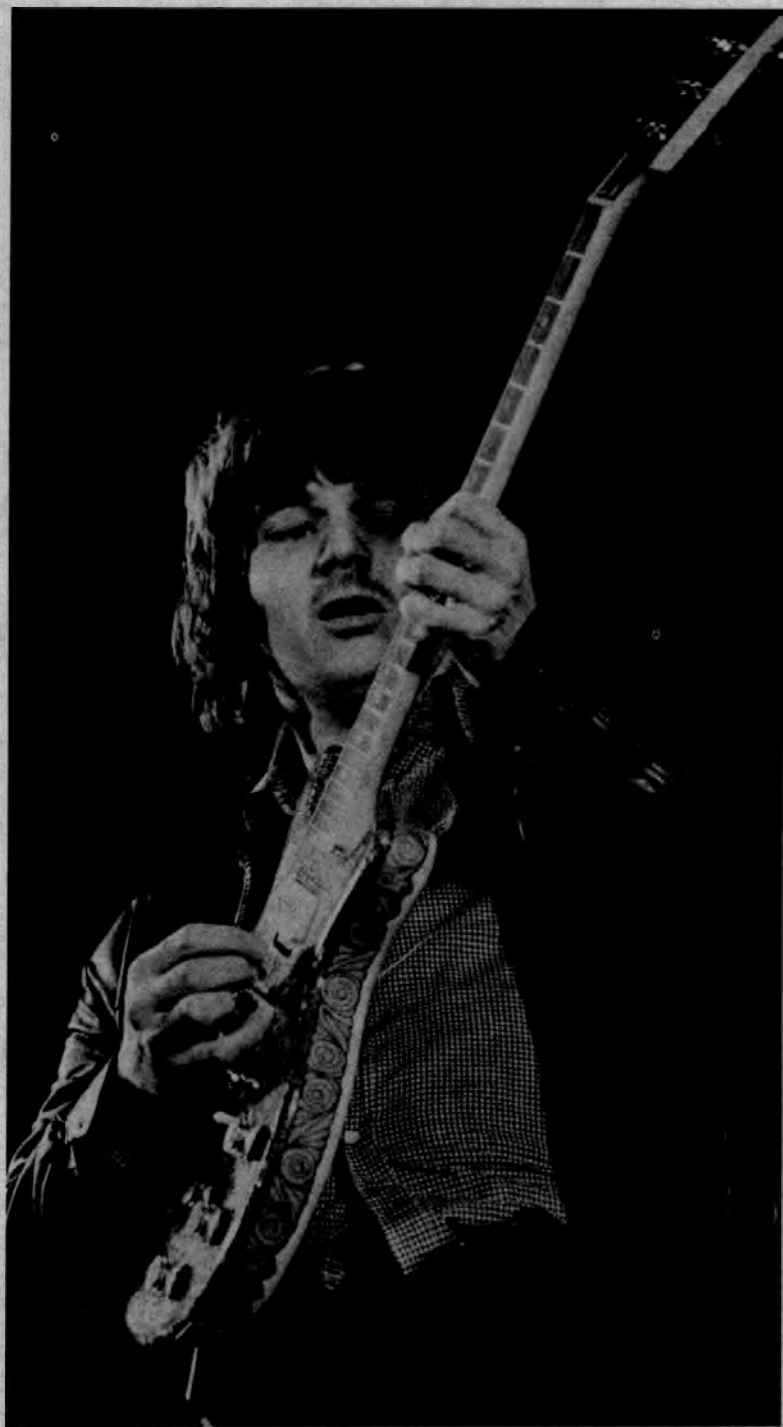


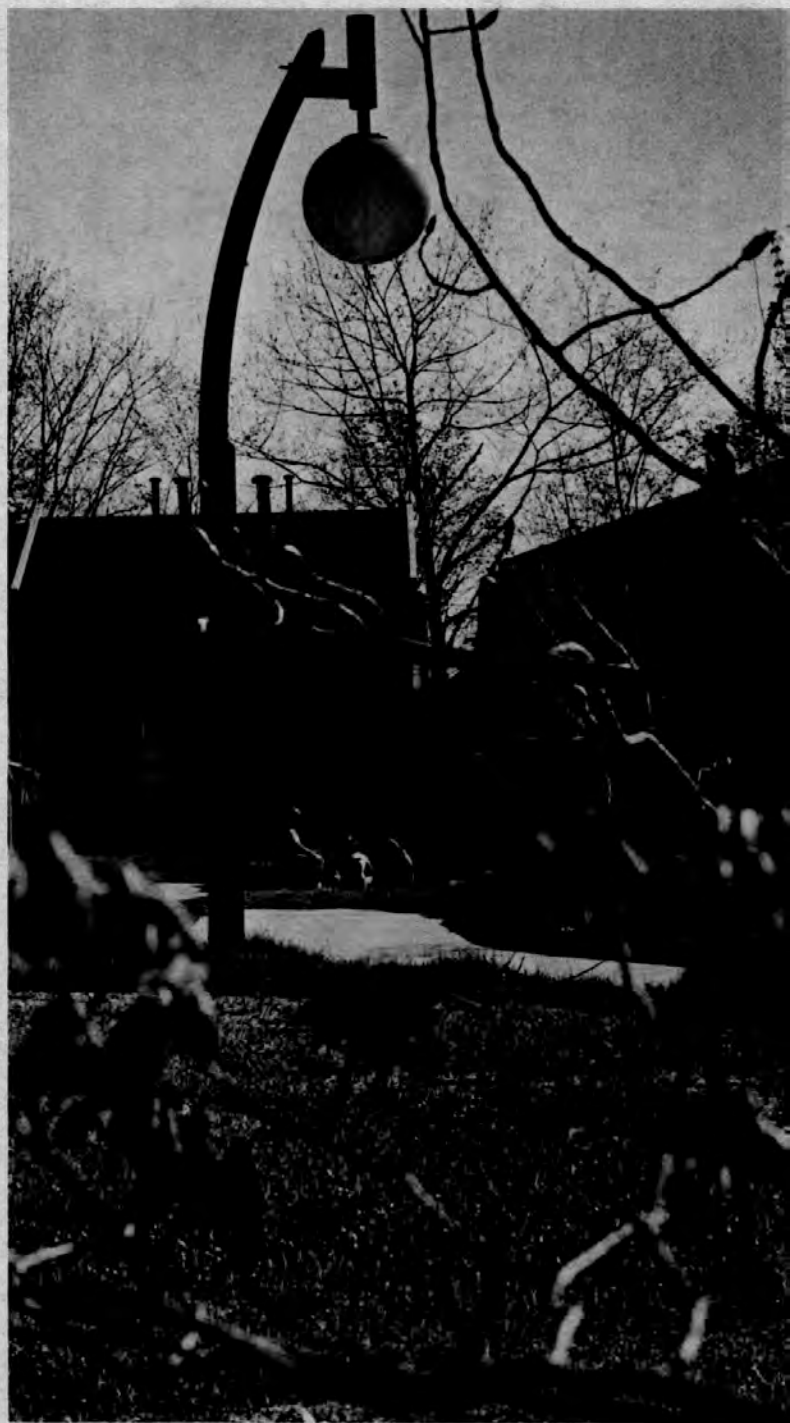




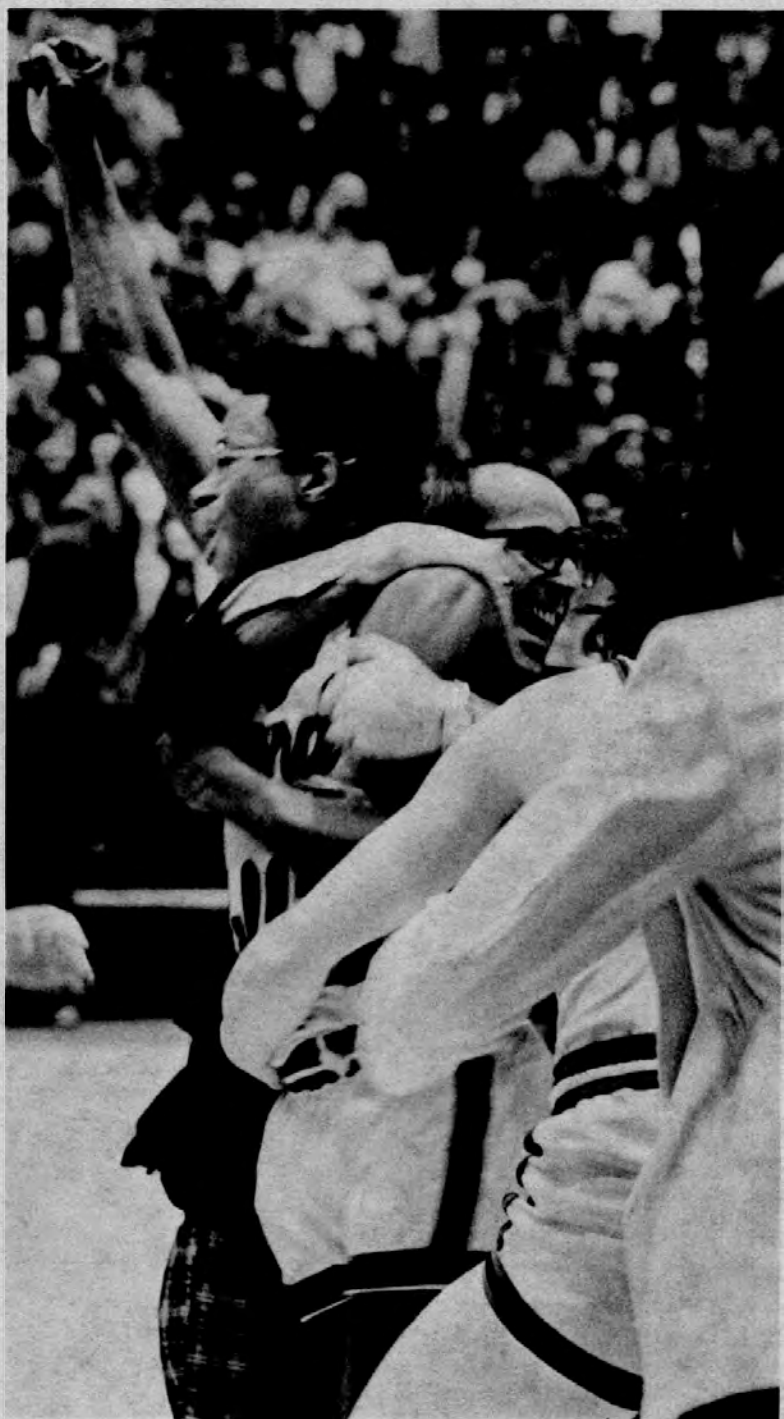














Educational Studies Institute

Any person who wishes to teach in Michigan must be certified by the State Board of Education. Provisional teaching certificates are issued to the graduates of Grand Valley State Colleges upon the recommendation of the Educational Studies Institute.

Approved teacher education programs are offered on the elementary and secondary level. Additional endorsements are available in special education. These are planned to be consonant with the "Administrative Rules Governing the Certification of Michigan Teachers" adopted by the State Board of Education in 1973. Some significant aspects of the teacher education programs for students include: (1) Gaining a comprehensive background in the liberal arts, (2) completing a major and minor subject area or three minors, (3) studying psychology of learning and child development, (4) participating in a unique school program as a teacher aide with accompanying seminars and tutorial sessions, and (5) completing a directed teaching program. Early in the freshman or sophomore year, the student is urged to confer with the educational adviser in the department from which a major is selected for the elementary or secondary certificate.

Continuing certificates, elementary or secondary, can be obtained by teaching successfully for three years within the first six-year period of provisional certification and completing 27 additional quarter hours as planned by the Educational Studies Institute or any other approved teacher education institution.

PROCEDURE FOR ADMISSION

1. Declare candidacy as a prospective teacher at the time of application to one of the Grand Valley colleges.
2. Request admission to regular education programs no later than the term in which 100 credit hours have been earned, or 80 hours in the case of special education.
3. Obtain signature of the educational adviser of your college.

**TEACHER CERTIFICATION
MAJOR PROGRAMS - ELEMENTARY AND SECONDARY**

Major programs require a minimum of 45 term hours while a group major requires 55 term hours.

Social Studies

History

Social Studies Group Major

Emphasis Subjects:

Economics, History, Political Science,
Psychology, Sociology.

Humanities

Art (55 hours)

German

English

Music (55 hours)

French

Spanish

Sciences and Mathematics

Biology

Mathematics

Chemistry

Physics

Earth Science

Group Science Majors:

Environmental Studies*

General Science,

Health Education*

Elementary Science

Physical Education (45 hours)

MINOR PROGRAMS FOR SECONDARY

TEACHER CERTIFICATION

Minor programs for secondary certification require a minimum of 30 term hours. Group programs require a minimum of 36 term hours.

Social Studies

Economics

Sociology

Psychology

Political Science

History

Humanities

Art (36 hours)

German

English

Spanish

French

Music (36 hours)

Sciences and Mathematics

Biology

Health Education*

Chemistry

Mathematics

Earth Science

Physics

Environmental Studies*

Group Minor

Physical Education (30 hours)

*Pending approval by the State Board of Education, 1974-75.

MINOR PROGRAM FOR ELEMENTARY

Teacher preparation, leading to elementary school certification, couples three terms of practical experience with children in public schools and related courses and seminars.

A student seeking elementary teacher certification completes requirements for a B.S., B.A., or B.Ph. degree with an elementary teaching minor, which includes the teaching of reading and other inter-disciplinary courses cooperatively prescribed by both academic and Educational Studies Institute advisers.

During the three terms of school experience the pre-service teacher progressively assumes more responsibility for diagnosing learning problems, developing teaching techniques and effectively utilizing personal resources to help children learn. During the first term, while studying child development, the student observes and may tutor an individual child. This is followed in the junior year by a term of participatory activities as an aide to teachers in a variety of school environments and in the senior year by a 13-week term of full-time directed teaching. The first weeks of this directed teaching experience occur during the opening of public schools in the fall.

The principal objective of the elementary minor programs is to assist the pre-service teacher in the development of teaching competencies. Subsequent teacher aiding and directed teaching are designed to provide further development and demonstration of these competencies. This program consists of at least 30 term hours of liberal arts courses distributed in the areas of teaching of reading (required), mathematics, science, learning theory, social studies, fine arts and language arts and literature. Pre-service teachers, assisted by their advisers, elect one of the designated courses from each area except that of their major. For example, a mathematics major takes one course from each group area except from the mathematics group.

PROFESSIONAL PROGRAM

Professional requirements for teacher education (K-12) are met by a 30-term hour block that includes a psychology course, How Human Beings Grow and How They Learn (five credit hours), and one term as a teacher aide (10 credit hours) with accompanying seminars conducted by major area and teacher education professors. This block must precede di-

directed teaching and is scheduled during the junior year. Directed teaching (15 credit hours) is offered to seniors. **IMPORTANT: TEACHER AIDING AND DIRECTED TEACHING ARE NOT TO BE TAKEN DURING THE SAME ACADEMIC YEAR.**

However, the required psychology course (How Human Beings Grow and How They Learn), teacher aiding and directed teaching must be successfully completed at Grand Valley.

TEACHER AIDING REQUIREMENTS

Students are required to file a teacher aiding application by April 10 for fall term, October 15 for winter term and by December 15 for spring term. Applications are accepted after having earned a minimum of 85 and a maximum of 120 term hours; satisfactory performance in a psychology course which covers "How Human Beings Grow and How They Learn" (a grade of "C" or better in CAS, a grade of "S" in TJC, credit in WJC and 90 percent mastery or better in College IV); a 2.0 GPA in CAS or its equivalent in TJC, WJC or College IV at entry time in teacher aiding; and evidence of having completed a tuberculin test within a nine month period prior to aiding, which must be recorded in the Educational Studies Institute office before reporting to the assigned school.

FALL EXPERIENCE (August-September)

Fall, winter and spring term student teachers report to their assigned schools for beginning conferences, which usually commence just prior to or after Labor Day. Fall term student teachers remain for 13 weeks. Winter and spring term student teachers remain for three weeks and return for their remaining 10 weeks during their assigned term. Important: The "Fall Experience" must follow teacher aiding and precede directed teaching.

REQUIREMENTS FOR DIRECTED TEACHING

Satisfactory academic standing in one's college (a 2.0 GPA in CAS or the equivalent in TJC, WJC or College IV) must have been achieved prior to the term of entry into directed teaching.

Successful completion of aiding as evidenced by recommendations from teacher aide professors and personnel in the school where aiding was experienced. Directed teaching and teacher aiding are not to be taken during the same academic year.

Evidence of having completed a tuberculin test within a nine month period prior to directed teaching must be recorded in the Educational Studies Institute office before reporting to the directed teaching assignment.

Filing of application forms for the directed teaching assignment must be made to the Educational Studies Institute by April 10 for fall, winter, spring and summer terms of the succeeding academic year.

SUMMER SESSION DIRECTED TEACHING

Directed teaching for the summer session requires three weeks "fall experience" prior to entry. The program is a full-time 13-week experience including the three-week "fall experience," and earns 15 hours credit.

COURSES OF INSTRUCTION

303 Elementary Teacher Aide Program

Half-day elementary teacher aide experience in elementary schools. Three weekly two-hour accompanying seminars concerned with the learning process, and materials and teaching strategies in reading, science, social studies, mathematics and other instructional areas taught in elementary schools. Ten hours credit.

305 Junior High or Middle School Teacher Aide Program

Junior high teacher aide seminars conducted by major subject department and the education staff, drawing upon the A-V department, practicing professionals and professors in the subject fields as resources for background enrichment in an academic area. The learning process, materials and instructional strategies are covered. A part of each day is spent in junior high or middle schools as aides in the teaching programs of the schools, and there are accompanying seminars three afternoons per week. Ten hours credit.

307 Senior High Teacher Aide Program

Senior high teacher aide seminars conducted by major subject department and the education staff, drawing upon the A-V department, practicing professionals, and professors in the subject fields as resources for background enrichment in an academic area. The learning process, materials and instructional strategies are covered. A part of each day is spent in senior high schools as aides in the teaching programs of the schools, and there are accompanying seminars three afternoons per week. Ten hours credit.

399 Independent Readings

Independent supervised readings on selected studies. Credit and topics prearranged with the Director of the Educational Studies Institute and the professor. One to five hours credit.

403 Elementary School Directed Teaching

Elementary school directed teaching with seminars concerning issues in education are required. Full-time directed teaching with a three-hour seminar per week with a member of the education staff. Fifteen hours credit.

405 Junior High or Middle School Directed Teaching

Junior high school or middle school directed teaching with seminars concerning issues in education. Full-time directed teaching with a three-hour seminar per week with a member of the education staff. Subject area professors and school personnel are involved as resource people. Fifteen credit hours.

407 Senior High School Directed Teaching

Secondary school directed teaching with accompanying seminars concerning issues in education are required. Full-time directed teaching with a three-hour seminar per week is conducted by a member of the Educational Studies Institute staff. Subject matter professors and school personnel are involved as resource people. Fifteen credit hours.

499 Advanced Studies Seminar

Research and study projects are conducted individually or with other seminar members under the guidance of a staff member. There are required written and oral presentations of research topics. Permission of the director of the Educational Studies Institute and the professor is required for enrollment. One to five credit hours.

SPECIAL EDUCATION

Special education teachers concern themselves with the instruction of handicapped children in special or regular classroom programs. The specific areas of special education each require a different and unique process of preparation, yet seldom does one find a classroom for the handicapped which does not consist of children with multi-handicaps. It is for this reason Grand Valley requires course work so that all special education teachers have an expertise in more than one disability area and should be especially skilled and knowledgeable in the area of learning disabilities. Thus, all special education teacher candidates must complete a core of course work in learning disabilities and gain approval in at least two associated disability areas in addition to meeting the requirements for elementary teacher certification.

At the present time Grand Valley offers approval in the following combinations of special education.

1. Trainable Mentally Impaired
Emotionally Impaired (Regular Track)
2. Trainable Mentally Impaired
Physically or Otherwise Impaired (Regular Track)*

*Pending approval by the State Board of Education, 1974-75.

3. Learning Disabled*
Emotionally Impaired
Educable Mentally Impaired (Internship Program)
4. Hearing Impaired
Educable Mentally Impaired (Internship Program)
5. Hearing Impaired
Emotionally Impaired (Internship Program)
6. Hearing Impaired
Physically or Otherwise Health Impaired (Internship Program)

Grand Valley offers two types of programs for students interested in special education. The Regular Track Program is designed for students seeking approval as a teacher of the trainable mentally impaired combined with approval in either emotionally impaired or physically or otherwise health impaired. The Special Education Internship Program (S.E.I.P.) is designed for students whose primary interest is in learning disabled, hearing impaired, educable mentally impaired or emotionally impaired.

The deadline for application to the S.E.I.P. is April 10 for students planning to enter the summer program. Applications for the Regular Track Program are due April 10 for fall term and December 15 for spring term. Students should make appointments with special education staff members for assistance in program planning.

REGULAR TRACK

The Regular Track Program is a four-year program with special education field work beginning during the junior year. Students in this program are required to take **Education 349** and **Education 350** during the junior year. This is a 20-week pre-teaching experience and may not be split up. Students choosing the combination of trainable mentally impaired and emotionally impaired may begin the pre-teaching block either fall or spring term. Students choosing the combination of trainable mentally impaired and physically or otherwise health impaired may enter the pre-teaching block during the spring term only.

PROGRAM FOR TEACHERS OF THE TRAINABLE MENTALLY IMPAIRED, EMOTIONALLY IMPAIRED

The Grand Valley student who wishes to qualify as a teacher of

*Pending approval by the State Board of Education, 1974-75.

the trainable mentally impaired and emotionally impaired must complete requirements for general distribution, elementary distributed minor, psychology major and special education course work in trainable mentally impaired and emotionally impaired.

Freshman and Sophomore Years:

(general distribution)	One writing skills course (English 100, 102 or 104)
	Three humanities courses (English 351, 361 and History 206)
	Three science and mathematics courses (Biology 200 and Mathematics 221)
	Three arts courses
(major elementary distributed minor)	One social science course (Sociology 201)
	Psychology 201, 420, 301, 302, and 303
	Sociology 280 and 382
	Education 202

Junior Year:

(fall)	Education 349*
	Psychology 363
	Art 281
(winter)	Education 350
	Psychology 306
	Music 350B
(spring)	English 308
	Psychology 402 and two other psychology courses to be planned with adviser

Senior Year:

(fall)	Education 403
(winter or spring)	Education 473, 461 and 451
(spring or summer)	Education 472, 562, and 452

PROGRAM FOR TEACHER OF THE TRAINABLE MENTALLY IMPAIRED, PHYSICALLY OR OTHERWISE HEALTH IMPAIRED

The student who wishes to qualify as a teacher of the trainable, mentally impaired and physically or otherwise health impaired must complete requirements for general distribution, elementary distributed minor, psychology major and special educa-

*May be taken either fall or spring term.

tion course work in trainable mentally impaired and physically or otherwise health impaired.

Freshman and Sophomore Years:

- (general distribution) One writing skills course (**English 100, 102 or 104**)
 Three humanities courses (**English 351, 361 and History 206**)
 Three science and mathematics courses (**Biology 200 and SHS 100 and 250**)
 Three art courses
 One social science course (**Sociology 381**)
 (major) **Psychology 201, 420, 301, 302, and 303**
 (elementary) **English 309**
 (distributed) **Education 202**
 (minor) **Sociology 372**

Junior Year:

- (fall) **Psychology 363 and 306**
Art 281
 (winter) **Psychology 402** and one other psychology course to be planned with adviser
Music 350B
 (spring) **Education 349**
English 308
 One psychology course to be planned with adviser

Senior Year:

- (summer) **Education 350**
 (fall) **Education 403**
 (winter) **Education 473, 461 and 451**
 (spring or summer) **Education 474, 464, and 452**

THE SPECIAL EDUCATION INTERNSHIP PROGRAM (S.E.I.P.)

This program is designed for those students who prefer a more intense training program which places major emphasis on field experience in classrooms for the handicapped.

The S.E.I.P. program is a four-year program with the junior and senior years being spent in the area of special education. The program takes only Grand Valley students who have junior standing prior to the fall terms. Applications must be submitted to the director of special education by April 10th prior to the junior year.

Students selected for this program will begin special courses in the summer preceding their junior year and will proceed as a group through the pre-internship year, which consists of teacher aiding in special education fall and winter terms, student teaching in regular education spring term and special education student teaching summer term.

The senior year of internship is spent in a classroom for the handicapped. The intern is contracted with a local school district as a beginning teacher and is issued temporary approval as a teacher of the handicapped from Grand Valley. The intern receives two-thirds of the base salary of that district and is serviced one day per week by an intern consultant from the Educational Studies Institute. The following summer consists of student teaching in another disability area and methods courses. At the end of the senior year, upon successful completion of all course work and the internship, the student is awarded full approval in two areas of the handicapped and elementary provisional teaching certification.

PROGRAM FOR TEACHERS OF THE LEARNING DISABLED, EDUCABLE MENTALLY IMPAIRED, EMOTIONALLY IMPAIRED

Students who wish to qualify as a teacher of either the learning disabled, educable mentally impaired or emotionally impaired will enroll in a program that leads to approval in all three disability areas. Students enrolled in this program must complete requirements for general distribution, elementary distributed minor, psychology major and special education course work in hearing impaired and physically or otherwise health impaired.

Freshman and Sophomore Years:

(General distribution)	One writing skills course (English 100, 102 or 104) Three humanities courses (English 351, 361 and History 206) Three science and mathematics courses (Biology 200 and Mathematics 221) Three arts courses One social science course (Sociology 381)
(major)	Psychology 201, 420, 301, 302 and 303
(elementary distributed minor)	Art 281 Music 350B

Junior Year:

(summer)

(fall)

(winter)

(spring)

Education 202, 203 and 451**Education 351, English 308 and Psychology 306****Education 355****Psychology 402 and 363****Education 440**One psychology course to be
planned with adviser**Senior Year:**

(summer)

(fall, winter

and spring)

(summer)

Education 471 or 472, 496 and 495**Education 481 or 482 and 484****Education 471 or 472, 460 and 452****PROGRAM FOR TEACHERS OF THE HEARING IMPAIRED,
EDUCABLE MENTALLY IMPAIRED**

Students who wish to qualify as a teacher of the hearing impaired and educable mentally impaired must complete requirements for general distribution, elementary distributed minor, psychology major and special education course work in hearing impaired and educable mentally impaired.

Freshman and Sophomore Year:(general
distribution)One writing skills course (**English 100, 102
or 104**)Three humanities courses (**English 351,
361 and History 206**)Three science and mathematics courses
(**Biology 200 and Mathematics 221**)

Three arts courses

One social science course

(Sociology 381)

(major)

(elementary

distributed

minor)

Psychology 201, 420, 301, 302 and 303**Art 281****Music 350B****Junior Year:**

(summer)

(fall)

(winter)

(spring)

Education 202, 203 and 450**Education 352****English 308****Psychology 306****Education 354****Psychology 402 and 363****Education 440**

Psychology courses to be planned with adviser

Senior Year:

(fall, winter

and spring)

(summer)

Education 480**Education 471, 451 and 460**

**PROGRAM FOR TEACHERS OF THE HEARING IMPAIRED,
EMOTIONALLY IMPAIRED**

Students who wish to qualify as a teacher of the hearing and emotionally impaired must complete requirements for general distribution, elementary distributed minor, psychology major and special education course work in hearing and emotionally impaired.

Freshman and Sophomore Years:

(general distribution)	One writing skills course (English 100, 102 or 104) Three humanities courses (English 351, 361 and History 206) Three science and mathematics courses (Biology 200 and Mathematics 221) Three arts courses
(major elementary distributed minor)	social science course (Sociology 381) Psychology 201, 420, 301, 302 and 303 Art 281 Music 350B

Junior Year:

(summer)	Education 202, 203 and 450
(fall)	Education 352 English 308 Psychology 306
(winter)	Education 354 Psychology 402 and 363
(spring)	Education 440 Psychology courses to be planned with adviser
(summer)	Education 470, 463 and 452
(fall, winter and spring)	Education 480
(summer)	Education 472, 451 and 460

**PROGRAM FOR TEACHERS OF THE HEARING IMPAIRED,
PHYSICALLY OR OTHERWISE HEALTH IMPAIRED**

Students who wish to qualify as a teacher of the hearing impaired and physically or otherwise health impaired must complete requirements for general distribution, elementary distributed minor, psychology major and special education course work in learning disabilities, educable mentally impaired and emotionally impaired.

Freshman and Sophomore Years:

(general distribution)	One writing skills course (English 100, 102 or 104)
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(major)
(elementary
distributed minor)

Three humanities courses (**English 351, 361 and History 206**)
Three science and mathematics courses (**Biology 200, Mathematics 221 and SHS 100**)
Three arts courses
One social science course (**Sociology 381**)
Psychology 201, 420, 301, 302 and 303
Art 281
Music 350B

Junior Year:

(summer) **Education 202, 203 and 450**
(fall) **Education 352**
English 308
Psychology 306
(winter) **Education 354**
Psychology 402 and 363
(spring) **Education 440**
Psychology courses to be planned with adviser

Senior Year:

(summer) **Education 470, 463 and 452**
(fall, winter and spring) **Education 480**
(summer) **Education 474, 464 and 451**

COURSES OF INSTRUCTION—SPECIAL EDUCATION

202 Introduction to Special Education

A survey of the educational program in schools provided for the handicapped child. Recommended for elementary and special education classroom teachers. Five credit hours.

203 Practicum in Special Education

One term (summer only) of working with exceptional children in programs designed for the handicapped child. Five to ten credit hours.

349—350 Pre-Teaching Core in Trainable Mentally Impaired

Required for all students in the regular special education track. Consists of five half days per week of working with the exceptional child.

351—353 Pre-Internship Program in Educable Mentally Impaired, Learning Disabled

Two terms (fall and winter only) of experience working with exceptional and normal children in conjunction with accompanying methods of teaching the mentally impaired and core study in learning disabilities. Five mornings per week. (Only for those in S.E.I.P. program.) Ten credit hours.

352—354 Pre-Internship Program in Hearing Impaired, Learning Disabled

Two terms (fall and winter only) of experiences working with exceptional and normal children in conjunction with accompanying methods of teaching the hearing impaired and core study in learning disabilities. Five mornings per week. (Only for those in S.E.I.P. program.) Ten credit hours.

355—357 Pre-Internship Program in Emotionally Impaired, Learning Disabled

Two terms (fall and winter only) of experiences working with exceptional and normal children with accompanying methods of teaching the emotionally impaired and core study in learning disabilities. Five mornings per week. (Only for those in S.E.I.P. program.) Ten credit hours.

440 Elementary Student Teaching

Student teaching with elementary students enrolled in regular programs with emphasis on diagnostic-prescriptive techniques, unit teaching and interaction analysis. (Only for those in S.E.I.P. program.) Twelve credit hours.

450 Audiology, Anatomy and Physiology of the Hearing Impaired

A study of the structure and physiology of hearing and speech mechanism; etiology and terminology of hearing problems; methods and interpretation of audiological testing; implications for classroom instruction. Five credit hours.

451 Learning Disabilities

A survey of the field of learning disabilities emphasizing historical development, definitions, characteristics, services, remedial systems, diagnostic procedures and correlates of learning disabilities. Five credit hours.

452 Counseling and Interview Techniques

A study of the methods used in student and parent counseling. Five credit hours.

453 Visual-Perceptual Motor Training

This course is designed to acquaint classroom teachers with the rationale for visual-perceptual motor training as it relates to achievement. Practical classroom solutions to aid students will also be presented.

458 The Illinois Test of Psycholinguistic Abilities (ITPA) - Administration and Interpretation

The purpose of this course is to qualify an individual to administer, interpret and report the results of the Illinois Test of Psycholinguistic Abilities (ITPA). Fundamentals of individual measurement will be stressed as well as observation, practice and interpretation in an educational setting. Remedial education, as it relates to the ITPA, will also be incorporated.

460 Materials and Curriculum for Teaching the Educable Mentally Impaired, Emotionally Impaired, Learning Disabled

A study of the materials and curricula used for the different levels of instruction. This includes the ability to prescribe materials appropriate for remediation activities. Five credit hours.

461 Materials and Curriculum for Teaching the Trainable Mentally Impaired

A study of the materials and curricula used for the different levels of instruction. This includes the ability to prescribe materials appropriate for remediation activities. Five credit hours.

462 Materials and Curriculum for Teaching the Emotionally Impaired

A study of the materials and curricula used for the different levels of instruction. This includes the ability to prescribe materials appropriate for remediation activities, contingency management and behavior modification techniques. Five hours credit.

463 Materials and Curriculum for Teaching the Hearing Impaired

A study of the materials and curricula used for the different levels of instruction. This includes the ability to prescribe materials appropriate for remediation activities, contingency management and behavior modification techniques. Five credit hours.

464 Materials and Curriculum for Teaching the Physically or Otherwise Health Impaired

A study of the materials and curricula used for the different levels of instruction. This includes the ability to prescribe materials appropriate for remediation activities. Five credit hours.

470 Student Teaching in Hearing Impaired

One term of student teaching, full-time, in a special education classroom under professional supervision, with accompanying seminar concerned with materials and curriculum for the hearing impaired. (Only for those in the S.E.I.P. program.) Ten credit hours.

471 Student Teaching in Educable Mentally Impaired, Learning Disabled (Type A or B)

One term of student teaching, full-time, in a special education classroom under professional supervision, with accompanying seminar concerned with methods of teaching and the organization and development of curriculum for the mentally impaired. Ten credit hours.

472 Student Teaching in Emotionally Impaired, Learning Disabled

One term of student teaching, full-time, in a special education classroom under professional supervision, with accompanying seminar concerned with materials and curriculum for the emotionally impaired. (Only for those in the S.E.I.P. program.) Ten credit hours.

473 Student Teaching in Trainable Mentally Impaired

One term of student teaching, full-time, in a special education classroom under professional supervision, with accompanying seminar. Ten credit hours.

474 Student Teaching in Physically or Otherwise Health Impaired

One term of student teaching, full-time, in a special education classroom under professional supervision, with accompanying seminar concerned with methods of teaching and the organiza-

tion and development of curriculum for the physically or otherwise health impaired. Ten credit hours.

480 Internship in Hearing Impaired

One year of internship in a classroom for the deaf and hard of hearing. This is done during the senior year under the supervision of an intern consultant from Grand Valley. Ten credit hours.

481 Internship in Mentally Impaired

One year of internship in a classroom for the mentally impaired. This is done during the senior year under the supervision of an intern consultant from Grand Valley. Ten credit hours.

482 Internship in Emotionally Impaired

One year of internship in a classroom for the emotionally impaired. This is done during the senior year under the supervision of an intern consultant from Grand Valley. Ten credit hours.

484 Internship in Learning Disability

One year of internship in a classroom for the learning disabled. This is done during the senior year under the supervision of an intern consultant from Grand Valley. Ten credit hours.

495 Advanced Diagnostic and Interpretative Procedures for the Learning Disabled

Advanced study of formal and informal assessment procedures with emphasis on test interpretation as it relates to performance objectives for the learning disabled. Five credit hours.

496 Advanced Remedial Procedures for the Learning Disabled

Advanced study emphasizing the use of remedial methods and materials for designing educational programs for the learning disabled. Five credit hours.



International Studies Institute

The International Studies Institute is a teaching and service center aimed at directing and coordinating all phases of international activities at Grand Valley State Colleges for the benefit of students, faculty and the community at large.

In cooperation with the colleges and institutes at GVSC, the activities of the International Studies Institute deal primarily with the following areas:

1. Study Abroad Programs. The International Studies Institute presents numerous opportunities for study abroad so that students may experience a world beyond their own borders. Located in Lake Superior Hall, the institute maintains a current file on foreign study, travel and work opportunities. Students are invited to consult this file and to seek counsel regarding the international experience most appropriate for them. Assistance will be given in making the necessary arrangements for participating.

The institute directly administers a number of foreign study programs and provides students the opportunity to participate in others through affiliation with a number of consortia. Students should consult their major adviser concerning their plans for study abroad. Applications for all approved programs are processed through the International Studies Institute.

Financial aid is available in meeting the costs of these programs if the student is enrolled full-time and meets all other eligibility requirements regarding financial aid.

The on-campus requirement, which specifies that a student expecting to receive a degree from Grand Valley must complete at least the final 45 term credit hours on campus, does not apply to foreign study programs.

- Austria — GVSC German Summer School at Klagenfurt.
— GVSC Summer School at Vienna.
- Canada — AASCU Canadian Studies Program at Montreal.
- Denmark — Northern Illinois University International Program at Copenhagen.
- England — Lancaster Junior Year Program.
- France — GVSC French Foreign Study Program at Tours.
- India — AASCU Indian Studies Program at Madras.
- Italy — AASCU International Studies Center at Rome.
- Japan — Far East Studies Program in cooperation with Kanasi University and International Christian University.
- Latin America — GLCA Latin American Program at Bogota, Colombia.
Central College Latin American Program at Merida, Mexico.
AASCU Latin America Program at Puebla, Mexico.
GVSC Student Teaching Program in Venezuela.
GVSC Biology Winter Term Program in Mexico.
Field Study in Latin America.
- Middle East — GLCA Middle East Program at the American University of Beirut, Lebanon.

Independent Study Abroad Program. Individual research on a chosen subject approved by GVSC study adviser and the International Studies Institute, in cooperation with study supervisor in the host country. Junior and senior students preferred. Up to 15 credits for work completed per term.

2. Foreign Student Affairs. Grand Valley welcomes and encourages attendance at its colleges by foreign students. The institute is responsible for their recruitment and admission to the colleges, for counseling them regarding their academic and personal problems and for integrating them into campus life. The aim is to create an international community in microcosm for the benefit and enjoyment of all.

3. Inter-Disciplinary Support Courses. In cooperation with existing units the institute provides special support courses of an international character, sponsors seminars and lectures and facilitates visits to the campus by guests from abroad.

4. Community Extension Services. The institute relates GVSC's international goals to the people of Western Michigan. It organizes cultural travel opportunities for senior citizens, offers credit and non-credit courses of an international nature for citizens at large and puts its resources at the service of the community.

Urban and Environmental Studies Institute

The Urban and Environmental Studies Institute has been established to focus the resources of the cluster colleges on the quality of life in Western Michigan. The institute was formed by the combination of two former GVSC institutes, Urban Studies and Environmental Studies, so as to better serve the broad area where urban and environmental interests coincide or overlap. Through research, community service and teaching, the institute provides a bridge between collegiate programs and the urban and environmental concerns of the larger community as well as facilitating cooperation and shared effort by the separate units of the Grand Valley State Colleges.

To meet these goals, the institute has focused on the following tasks:

1. The institute serves as a coordinating office to facilitate cooperation and interaction between faculty and students of the urban and environmental programs of the separate colleges. In this capacity, it promotes communication among the colleges, provides a central data file for easy access to pertinent information and encourages research activities which draw on the resources of the several colleges.

2. The institute serves the West Michigan community as a source of professional advice on urban and environmental problems. The institute accepts contract research and utilizes faculty expertise, student manpower and the institutional resources of GVSC to complete such research.

3. The institute offers special academic programs to meet the remedial and developmental needs of educationally handicapped students. In addition, the institute offers a limited number of special courses, workshops and symposia to meet particular needs of the colleges and of the community.

4. The institute provides advice and research to assist Grand Valley in developing environmentally sound criteria for the operation and maintenance of college facilities.

COURSES OF INSTRUCTION

UESI 390 Urban Quarter

Students will work and study in the city for one full quarter. A broad spectrum of city problems will be examined through participation in part-time internships or major research projects, seminar discussions and minor urban research projects. Classroom activities will include a body of required readings and students will be expected to attend City Commission and other public meetings.

GENERAL ACADEMIC PROGRAM

Many students experience difficulty in college because of inadequate preparation for college course work. These difficulties stem from poor study habits or skills, a particular academic deficiency or a disadvantaged educational background. The General Academic Program helps such students bridge the gap between these difficulties and the demands of college courses. GAP is open to all Grand Valley students. It offers a number of services at several levels. *Emphasis is placed on study skills and the basic academic skills of reading, composition, literature, mathematics and science.*

The GAP courses are individually designed in that each student is tested at the beginning of the term. The test results help determine at which level in the course the student should begin. Instruction is designed for the individual student, not the entire class.

The courses also are open-ended. These are specific requirements for the successful completion of each course. The open-ended concept allows each individual student to take the time needed to master the material. There are no pressures to complete the course within a specified time period. When all course requirements are met, whether it takes five weeks, ten weeks or two terms, the student receives credit.

COURSES OF INSTRUCTION

UESI 001 College Orientation

This course provides a structured mechanism that will assist and support the first term college student in making the transition and adjustment to the demands and expectations of a college environment. One audit credit.

UESI 100 Composition I

A study of the elements of composition, with practice in writing. Two hours credit.

UESI 101 Composition II

A continuation of **Composition I**. Three credit hours (**UESI 100** and **101** are equivalent to **English 100 Composition**, a course in the College of Arts and Sciences.)

UESI 102 Introduction to Modern Literature

An introduction to literature through an analysis of representative modern poems, drama and fiction. Emphasis is on Afro-American literature and on the writing of essays. Five credit hours. (**UESI 102** is equivalent to **English 102 Modern Literature**, a course in the College of Arts and Sciences.)

UESI 110 Algebra I

An introduction to college algebra with a review of arithmetic and numerical geometry. Three credit hours.

UESI 111 Algebra II

A continuation of **Algebra I**. Two credit hours. (**UESI 110** and **111** are equivalent to **Mathematics 100 Algebra**, a course offered in the College of Arts and Sciences.)

UESI 120 Introduction to Scientific Concepts

A general survey of major scientific concepts in astronomy, physics, chemistry and biology, with emphasis on the historical development of those concepts. Five credit hours.

UESI 131 Reading Skills II

Designed for students who are reading from 8.0 - 9.9 grade level. Course includes work in the areas of: speed, comprehension, and vocabulary development at these levels. Students must be pre-tested before being accepted into the course. For one credit.

UESI 132 Reading Skills III

Designed for students who are reading from 10.0 - 11.9 grade level. Course includes work in the areas of: speed, comprehension vocabulary development at this level. Students must be pre-tested before being accepted into the course. For one credit.

PROJECT MAKE-IT

Project Make-It is an entry program for people, especially low-income and minority-group youth, who have the ability and desire for a college education, but are not eligible for regular admission to most colleges, including Grand Valley, because they did not finish high school or because they had a poor high school background.

The most important requirement for admission to Project Make-It are good academic potential and strong motivation. Since past records do not usually reveal these qualities, recommendations and personal interviews weigh heavily in the selection of students for admission.

Project Make-It helps the individual student make the transition to college life and course-work, and helps the student acquire the skills, confidence and self-concept necessary for success in college. this assistance is supplied in many ways: ample time to meet the student's particular needs, adequate financial aid and tutorial help in all of the courses offered.

For the first one or two terms, students usually concentrate on developing good study habits and skills. Most of the course-work is taken in connection with the General Academic Program.

When the student has progressed sufficiently, application can be made to transfer to one of Grand Valley's cluster colleges. Following the transfer, Project Make-It continues to offer its services to insure the student's success at Grand Valley.



Directory Index College Calendar

BOARD OF CONTROL

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President, Grand Valley State Colleges

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EXECUTIVE OFFICERS

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B.A., Hope College;
M.A., Rutgers University
- Executive Assistant to the President M. Jean Ellis
A.B., Bethany College;
M. Litt., University of Pittsburgh

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- Vice President of the Colleges Arthur C. Hills
B.M., M.M., University of Michigan
- Dean of College Planning Harold M. Kolenbrander
B.A., Central College;
Ph.D., University of Iowa
- Vice President of the Colleges Bruce A. Loessin
B.A., University of Southern California;
M.A., University of Wisconsin
- Vice President of the Colleges Glenn A. Niemeyer
A.B., Calvin College;
M.A., Ph.D., Michigan State University
- Vice President of the Colleges Ronald F. VanSteeland
B.A., Michigan State University

COLLEGES

College of Arts and Sciences

- Dean John Linnell
B.A., Augustana College;
M.A., University of Iowa;
Ph.D., University of Minnesota
- Assistant Dean John Gracki
B.A.E., University of Detroit;
Ph.D., Brown University
- Assistant Dean Earl Harper
B.S., M.S., Western Michigan University
(on leave 1974-75)
- Assistant Dean Mary Seeger
B.A., University of Minnesota;
Ph.D., University of Wisconsin
- Director, School of Business Stan Lindquist
B.A., Luther College;
M.A., C.P.A., University of Iowa;
Ph.D., University of Missouri
- Director, Business Internship Program John B. Payne
B.S., M.F., University of Michigan
- Director, School of Health Sciences Marlin Dearden
B.A., University of Utah;
M.P.H., Dr.P.H., Yale University
- Director, Medical Technology Program Shirley Weaver
B.S., Hanline University;
M.A., University of Minnesota
- Director, Nursing Education (to be announced)
- Laboratory Supervisor G. Michael DeGraeve
B.S., M.S., Eastern Michigan University

Director, School of Public Service Samir T. IsHak
 M.B.A., Cairo University;
 M.P.A., M.A., Harvard University;
 Ph.D., Indiana University
 (on leave 1974-75)

Thomas Jefferson College

Dean T. Dan Gilmore
 B.A., University of California;
 Ph.D., University of Nevada

Assistant Dean (to be announced)

William James College

Dean Adrian Tinsley
 A.B., Bryn Mawr College;
 M.A., University of Washington;
 Ph.D., Cornell University

Assistant Dean Rodney A. Bailey
 B.A., University of Connecticut;
 Ph.D., Washington State University

College IV

Dean Robert J. Toft
 B.A., Beloit College;
 M.A., Ph.D., Rice Institute

Assistant Dean Carl Arendsen
 B.A., M.A., Western Michigan University;
 Ph.D., Michigan State University

Associate Project Administrator Anthony Catanese
 B.A., University of Dayton;
 M.B.A., Ohio University;
 Ph.D., Southern Illinois University

F. E. Seidman Graduate College of Business

Dean Marvin G. DeVries
 B.S.E., M.B.A., Ph.D., University of Michigan

CONTINUING EDUCATION AND COMMUNITY SERVICES

Dean Ezra G. Gearhart
 A.B., Hope College;
 M.A., Ph.D., Indiana University

Continuing Education

Director Geoffrey Smith
 B.Ed., M.Ed., University of Alberta

Assistant Director for Special Programs Elizabeth Baxter
 B.A., Vassar College;
 M.F.A., Michigan State University

Educational Studies Institute

- Director Dale Olsen
A.B., Western Michigan University;
A.M., Ph.D., University of Michigan
- Assistant to the Director Robert Cross
A.B., M.A., Michigan State University
- Assistant to the Director F. Weston Wochholz
B.A., Albion College;
M.A., Ed.S., Michigan State University

International Studies Institute

- Director Ezra G. Gearhart
A.B., Hope College
M.A., Ph.D., Indiana University
- Assistant to the Director A. Frank Schwarz
Ph.D., Milan University

Urban and Environmental Studies Institute

- Director Phyllis T. Thompson
B.A., University of Nebraska;
M.A., University of Chicago;
Ph.D., University of Colorado
- Assistant Director Rodney Mulder
A.B., Calvin College;
M.A., Michigan State University

Model Cities Higher Education Facilities

- Director Donna Carter
B.A., M.A., Michigan State University

Project Make-It and General Academic Program

- Director Curtis J. Jones
B.A., M.A., Western Michigan University

ACADEMIC SERVICES

Admissions

- Director Charles H. Eardley
B.A., M.A., Michigan State University
- Admissions Coordinator Douglas P. Vance
B.A., Albion College;
M.A., Michigan State University
- Assistant Director (to be announced)
- Counselor John Rolph
B.A., M.A., Central Michigan University

- Counselor Joan Shepard
 B.A., Grand Valley State Colleges;
 M.A., Michigan State University
- Community Counselor Marilyn Chambers
 B.A., M.A., Ball State University

Audio-Video Services

- Director David H. Doebel
 B.A., University of Iowa

College Planning

- Director of Budgets James P. Starkweather
 B.A., Wayne State University
- Director of Institutional Research Lora H. Robinson
 B.A., M.A., University of Iowa;
 Ph.D., University of California, Los Angeles
- Internal Auditor Adrian Dawson
 A.B., Calvin College;
 M.A., Michigan State University

Communications

- Administrator Thomas T. Hart
 A.B., Yale University
- Assistant to Communications Administrator Valeria Derda
- Director of Development John Edison
 B.A., M.B.A., Dartmouth College
- Director of Media Relations Shirley Doebel
 B.S., St. Lawrence University
- Director of Publications James E. Kipp
 B.S., John Brown University;
 M.A., University of Iowa
- Staff Writer Gerald A. Elliott

WGVC-TV

- Manager Gordon Lawrence
 B.A., Michigan State University
- Director of Instructional Television John Nelson
 B.S., Ohio State University;
- Chief Engineer Paul A. Bock
- Art Director James A. Jerkatis
 B.S., Western Michigan University
- Program Director Charles R. Furman
 B.A., College of Wooster;
 M.A., Pennsylvania State University

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Senior Producer-Director	James R. Gaver B.A., Bowling Green State University
Producer-Director	Michael Stokes B.F.A., Ohio University
Promotion Director	Judith Baxter B.A., George Washington University
Graphics Designer	Jolanta Rynsburger

Computer Center

Director of Computer Services	(to be announced)
Director of Academic Computer Services	Gordon A. Stegink A.B., Hope College; M.A., Washington University
Systems Manager	Richard J. Grice
Programmer-Analyst	Raymond B. Bell

Libraries

Director	Stephen Ford B.A., Wayne State University; A.M.L.S., University of Michigan
Catalog Librarian	Carol Garey A.M.L.S., University of Michigan
Catalog Librarian	Mary Elizabeth Sparks B.A., University of Virginia; B.L.S., Columbia University
Reference Librarian	Margaret Atkinson M.L.S., Rutgers University
Reference Librarian	Robert F. Beasecker A.B., Hillsdale College; A.M.L.S., University of Michigan
Reference Librarian	Betty Jones A.B., A.M.L.S., University of Michigan
Reference Librarian	Judith King B.S., Wheaton Colleges; A.M.L.S., University of Michigan
Reference Librarian	M. Nancy Terry A.B., A.M.L.S., University of Michigan
Reference Librarian	Helen Wong B.A., National Sun Yat-sen University; A.M.L.S., University of Michigan

Student Records

Director of Records and Registration (to be announced)

Assistant Registrar Stuart H. Post
B.A., Hope College;
M.A., Western Michigan University

CAMPUS ACTIVITIES

Administrator Rosemary Alland
B.A., Texas Christian University

Scheduling and Operations

Coordinator Jeffrey G. Nemens
A.B., Central Michigan University;
M.A., Marshall University

Student Activities Programming

Assistant Jeffrey Brown
B.Ph., Grand Valley State Colleges

Director of Recreational Programs David P. Sharphorn
B.S., M.A., Western Michigan University

Intercollegiate Athletics

Director Donald Dufek
B.S., M.A., University of Michigan

Head Football Coach E. James Harkema
A.B., Kalamazoo College;
M.A., Western Michigan University

Assistant Football Coach William Hardy
B.S., University of Michigan;
M.A., Eastern Michigan University

Head Basketball Coach Thomas Villemure
B.S., M.A., University of Detroit

FINANCE

Administrator Richard Hansen
B.A., M.B.A., University of Michigan

Chief Accountant Robert Daniels

Accountant Celia Brown

Accountant Richard F. Heley
B.S., Villanova University

Purchasing Agent Howard VandeVusse

PERSONNEL

Director of Personnel Ward M. Aurich
B.A., Grand Valley State Colleges

Assistant Director Gary J. Mack
B.S., Western Michigan University

PHYSICAL PLANT AND AUXILIARY SERVICES

Administrator Robert Romkema, P.E.
B.S., Michigan State University

Auxiliary Operations Manager David Lorenz
B.S., Central Michigan University;
M.A., Michigan State University

Director of Residence Life Jacqueline D. Scott
B.S., M.S., Indiana State University

Bookstore Manager Phyllis Aurich
B.S., Grand Valley State Colleges

Campus Police Chief Purl A. Cobb Jr.

Director of Planning and Construction Robert E. Fansler

Plant Operations Superintendent James Rotman

Graphics Supervisor Robert Bauer

Plant Services Supervisor John C. Scherff

STUDENT SERVICES

Dean Berthold M. Price
B.S., Central Michigan University;
M.A., Western Michigan University

College Physician Harvey J. De Maagd
B.A., Calvin College;
M.D., University of Michigan

Counselor, Counseling Center David Regester
B.S., Dennison University;
M.S., Ohio University;
Ph.D., University of Nebraska

Counselor, Counseling Center William Philip Gordon
B.S., Purdue University;
M.A., Ed.D., Ball State University

Counselor, Counseling Center Richard L. King
B.S., M.A., Western Michigan University

Counselor, Counseling Center Wayne B. Kinzie
B.A., Bridgewater College;
Ph.D., University of Georgia

Director of Financial Aids Kenneth Fridsma
B.S., Calvin College;
M.A., Michigan State University

- Assistant Director James Moored
 B.A., Hope College;
 M.A., Michigan State University
- Counselor Dennis Booker III
 B.S., Western Michigan University

TEACHING FACULTY OF RECORD — 1973-74

COLLEGE OF ARTS AND SCIENCES

- Alkema, Chester J.** (1965) Associate Professor of Art. A.B., Calvin College; M.A., M.F.A., Michigan State University.
- Anders, F. Glenn** (1969) Assistant Professor of Biology. B.A., University of Texas; M.S., Ph.D., University of Houston.
- Atkinson, Richard F.** (1966) Associate Professor of Chemistry. B.S., University of Chicago; M.A., Ph.D., Harvard University.
- Bajema, Carl J.** (1964) Professor of Biology. B.S., M.A., Western Michigan University; Ph.D., Michigan State University.
- Baker, John H.** (1964-1973) Associate Professor Emeritus of Physics. A.B., Calvin College; M.A., University of Michigan; M.S., Michigan State University.
- Batchelder, John** (1969) Associate Professor of Political Science. A.B., Dartmouth College; M.A., Ph.D., University of Michigan.
- Baum, William C.** (1965) Professor of Political Science. B.A., M.A., Kalamazoo College; Ph.D., University of Iowa.
- Beidler, William C.** (1964) Associate Professor of Music. B.M., American Conservatory of Music; M.M., Michigan State University.
- Berger, Beverly** (1972) Assistant Professor of Art. B.S., B.F.A., M.F.A., Michigan State University.
- Bevis, Frederick B.** (1965) Associate Professor of Biology. B.S., M.S., University of Michigan.
- Blijkerk, Roelof** (1969) Professor of Psychology and Chairman, Psychology Department. Dr.Psych., Ph.D., Free University of Amsterdam.
- Blakey, James** (1972) Associate Professor of Psychology. B.S., Newark State College; M.A., Montclair State College; Ed.D., Rutgers University.
- Board, Joan (Pytlinske)** (1966) Associate Professor of Physical Education. B.S., M.A., Michigan State University.
- Boyer, Rodney F.** (1972) Assistant Professor of Chemistry. B.A., Westmar College; M.S., Ph.D., Colorado State University.
- Brand, Vera** (1972) Professor of Nursing Education and Director, Nursing Education. B.S.N., University of Utah; M.S., Ed.D., University of Virginia.
- Buchanan, William A.** (1972) Assistant Professor of Psychology. B.A., M.A., California State University at Los Angeles; Ph.D., University of Colorado.
- Butsch, Thomas C.** (1971) Assistant Professor of Art. B.A., University of Kentucky; M.F.A., University of California at Santa Barbara.
- Catanese, Anthony** (1972) Assistant Professor of Economics. B.A., University of Dayton; M.B.A., Ohio University; Ph.D., Southern Illinois University at Carbondale.
- Chamberlain, Robert L.** (1963) Professor of English. A.B., Brothers College, Drew University; M.A., Ph.D., Syracuse University.

- Chambers, Thomas** (1971) Assistant Professor of Sociology. B.A., M.A., University of California at Berkeley.
- Clarke, Robert** (1972) Professor of Political Science. B.A., DePaul University; M.A., Ph.D., Notre Dame University.
- Clinger, William L.** (1968) Associate Professor of Physical Education. B.S., M.A., Western Michigan University.
- Cole, Edward** (1971) Assistant Professor of History. B.A., M.A., University of Nebraska; Ph.D., University of California at Berkeley.
- Collins, Robert W.** (1969) Assistant Professor of Psychology. A.B., University of Michigan; M.A., Kent State University; Ph.D., Indiana University.
- Collins, Robert "Rip"** (1970) Assistant Professor of Physical Education. A.B., Hope College.
- Cooper, Robert D.** (1973) Associate Professor of Public Service. B.A., M.S., Michigan State University.
- Cunningham, Thomas J.** (1969) Professor of Philosophy and Director, Honors Program. A.B., Providence College; M.A., Aquinas Institute of Philosophy and Theology; M.S., Ph.D., University of Wisconsin.
- Dearden, Marlin H.** (1973) Director, School of Health Sciences. B.A., University of Utah; M.P.H., Dr. P.H., Yale University Medical School.
- DeLong, Arthur R.** (1965) Professor of Psychology. B.S., M.A., Ohio State University; Ph.D., University of Michigan.
- DeVries, Marvin G.** (1963) Professor of Business and Economics; B.S.E., M.B.A., Ph.D., University of Michigan.
- Dmitruk, Victor** (1968) Associate Professor of Psychology. B.A., M.A., Ph.D., Michigan State University.
- Dunlap, Wayne** (1971) Professor of Music and Chairman, Music Department. B.A., Texas Christian University; M.M., Eastman School of Music.
- Durocher, Aurele A.** (1966) Professor of English. B.A., Northern State Teachers College; M.A., University of Michigan; Ph.D., University of Minnesota.
- Dutcher, Alice M.** (1972) Assistant Professor of Music. B.M., M.M., University of Michigan.
- Dwelle, Ronald R.** (1969) Assistant Professor of English. A.B., Augustana College; M.A., University of Kansas.
- Enge, Earl W.** (1970) Associate Professor of Sociology. B.S., Wisconsin State University; M.A., Ph.D., Western Michigan University.
- Fernald, Nancy J.** (1973) Assistant Professor of Health Sciences. B.A., University of New Hampshire; M.T. (A.S.C.P.), Molden Hospital, School of Medical Technology; Ph.D., Indiana University.
- Feyt, Marie Josette** (1965) Assistant Professor of French. M.M.EqLt., Royal Conservatory of Music, Brussels; B.S., Belgium Institute of Social Studies; B.S., M.A., Western Michigan University.
- Flanders, Richard E.** (1964) Professor of Anthropology and Chairman, Sociology and Anthropology Department. B.A., M.A., University of Iowa; Ph.D., University of Michigan.
- Foote, Walter** (1968) Assistant Professor of English. B.A., M.A., University of Illinois.
- Franklin, Ursula K.** (1971) Assistant Professor of French. B.A., M.A., Ph.D., Michigan State University.

- Frase, H. Weldon** (1962) Professor of Psychology. B.S., University of Wisconsin; M.A., Northwestern University; Ed.D., Michigan State University.
- Frisch, Donald** (1972) Associate Professor of Health Sciences. A.B., Rutgers University; M.S., Washington University; Ph.D., New York University.
- Gearhart, Ezra** (1970) Professor of German; Chairman, Foreign Language Department; and Director, Office of International Studies. B.A., Hope College; M.A., Ph.D., Indiana University.
- Gendler, Phyllis E.** (1973) Assistant Instructor of Nursing. B.S.N., University of Michigan, School of Nursing.
- Gernant, Paul** (1968) Assistant Professor of Economics. B.S., M.A., Western Michigan University.
- Ghezzi, Bertil W.** (1967) Associate Professor of History. B.A., Duquesne University; Ph.D., University of Notre Dame.
- Gonce, Richard** (1972) Associate Professor of Economics. B.B.A., M.B.A., Ph.D., University of Wisconsin.
- Gracki, John A.** (1970) Assistant Professor of Chemistry. B.A.E., University of Detroit; Ph.D., Brown University.
- Griffiths, Gary** (1972) Assistant Professor of Mathematics. B.S., M.S., Kansas State College of Pittsburg; Ph.D., University of Iowa.
- Grischke, Paul R.** (1969) Assistant Professor of Music. B.A., M.A., Michigan State University.
- Hall, Donald** (1963) Professor of Physics. B.S., M.S., Michigan State University.
- Harder, Richard E.** (1971) Assistant Professor of Psychology. B.A., University of Wisconsin; M.A., Ph.D., University of North Dakota.
- Harper, Earl** (1970) Assistant Professor of Business Administration and Assistant Dean. B.S., M.S., M.B.A., Sp.A., Western Michigan University.
- Haurek, Edward W.** (1971) Associate Professor of Sociology. B.S., Northern Illinois University; M.A., Ph.D., University of Illinois.
- Helton, Virginia L.** (1970) Assistant Professor of Theatre. B.A., M.A., San Francisco State College.
- Henderson, John R.** (1970) Associate Professor of Geology. A.B., Franklin and Marshall College; M.Sc., Northwestern University; Ph.D., McMaster University.
- Herman, Donald L.** (1964) Professor of Political Science; Chairman, Political Science Department; and Director, Latin American Studies Program. A.B., University of Michigan; M.A., Wayne State University; Ph.D., University of Michigan.
- Herrera, Antonio** (1972) Assistant Professor of Spanish. B.A., Universidad Pedagógica y Tecnológica de Colombia; M.A., Ph.D., University of Oregon.
- Herzog, Thomas** (1970) Assistant Professor of Psychology. B.A., M.A., Ph.D., University of Michigan.
- Himelwright, Paul E.** (1972) Visiting Lecturer of Mathematics. B.S., Millersville State College; M.Ed., Shippensburg State College; Sp.A., Western Michigan University.
- Hoeksema, Robert J.** (1964) Assistant Professor of Spanish. A.B., Hope College; M.A., University of Illinois.
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- Kennedy, Dennis E.** (1970) Assistant Professor of English. B.A., University of San Francisco; M.A., Ph.D., University of California at Santa Barbara.
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- Knop, Charles P.** (1965) Associate Professor of Chemistry and Chairman, Chemistry Department. B.S., Aquinas College; Ph.D., Michigan State University.
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- Muskovitz, Rosalyn B.** (1972) B.A., Oakland University.
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ACADEMIC CALENDAR

Fall Term 1974	Classes Begin Thanksgiving Recess Term Ends Commencement	Sept. 26 Nov. 28-29 Dec. 13 Dec. 14
Winter Term 1975	Classes Begin Term Ends Good Friday	Jan. 7 March 22 March 28
Spring Term 1975	Classes Begin Memorial Day Recess Term Ends Commencement	April 1 May 26 June 13 June 14
Summer Term 1975	Classes Begin Independence Day Recess Second Five-Week Classes Begin Term Ends	June 24 July 4 July 29 Aug. 29
Fall Term 1975	Classes Begin Thanksgiving Recess Term Ends Commencement	Sept. 25 Nov. 27-28 Dec. 11
Winter Term 1976	Classes Begin Term Ends	Jan. 6 March 19
Spring Term 1976	Classes Begin Good Friday Recess Memorial Day Recess Term Ends Commencement	March 30 April 16 May 31 June 11 June 12
Summer Term 1976	Classes Begin Independence Day Recess Second Five-Week Classes Begin Term Ends	June 23 July 5 July 26 Sept. 3



WILLIAM
JAMES
COLLEGE

THOMAS
JEFFERSON
COLLEGE

COLLEGE IV

COLLEGE
OF ARTS &
SCIENCES

F. E.
SEIDMAN
GRADUATE
COLLEGE OF
BUSINESS