

1971

1969-1970 General Bulletin

Bowling Green State University

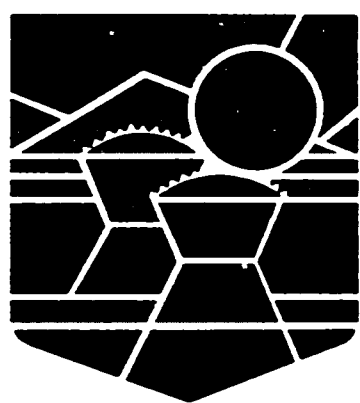
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**General
Bulletin
of
Bowling
Green
State
University
1971-72**



1971-72 GENERAL BULLETIN OF BOWLING GREEN STATE UNIVERSITY

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BOWLING GREEN STATE UNIVERSITY

THE ACADEMIC OBJECTIVES

It is the aim of the University to provide each student a climate which motivates intellectual and moral growth, promotes habits of mental and physical health, encourages appreciation of the good and beautiful, and develops powers of judgment and wisdom in handling knowledge and skills. This aim can best be furthered by a conscientious search for truth with respect for the beliefs of all persons but without prejudice toward any specific doctrine or creed. The extent to which these aims are fulfilled depends largely upon the character of the faculty and the philosophical milieu of the institution. For this reason the University seeks to select and provide highly qualified faculty members who can help achieve these goals.

In addition, the University insists upon the achievement by every student of a reasonable mastery of the skills of reading, writing, speaking, and thinking including problem solving and critical and creative thought.

Further, the University seeks to guide each student to a meaningful experience in American culture as well as in major areas of basic knowledge such as science and mathematics, social and economic studies, the humanities, and the arts.

Finally, it is the aim of the University to provide for each student significant programs of in-depth study which are conducive to an understanding of the contemporary world.

THE UNIVERSITY

Bowling Green State University is state-assisted. Private support is administered through the University Development Council in conjunction with the Bowling Green University Foundation, Inc. The main campus is located in Bowling Green, Ohio, 23 miles south of Toledo and 15 miles south of the Ohio Turnpike. The University also provides the first two years of college in academic centers in Bryan, Fostoria, and Fremont and in the Firelands Branch located near Sandusky.

THE HISTORY

The history of the University began on January 24, 1910, when John Hamilton Lowry, representative from Henry County, introduced a bill in the Ohio General Assembly "to provide for the appointment of a commission to establish two normal schools and to provide for the maintenance thereof."

The bill was passed on May 10, 1910, and approved by Governor Judson Harmon nine days later. On November 22 of that year, the city of Bowling Green was officially notified that it had been chosen as the site for the normal school to be located in northwest Ohio.

Classwork began in September of 1914; but it was not until the following year that the first two buildings — now University Hall and Williams Hall — were ready for use. In the meantime, classes met in the Armory in Bowling Green and the old Central High School in Toledo.

The General Assembly of Ohio in 1929 enacted legislation which brought about a significant expansion in the functions of the institution at Bowling Green, from

those of a normal school to a college and then to a University with facilities for a four-year liberal arts education, professional and pre-professional education, and graduate study.

ACCREDITATION AND RECOGNITION

Accreditation is accorded the University by the appropriate regional and national agencies. Each college and many departments are accredited in their respective fields.

The University is recognized by the Ohio State Department of Education for certification in all fields of teaching, school supervision, and administration for which the University conducts programs.

THE CAMPUS

Bowling Green State University is situated on a 1,200-acre campus which has 80 academic buildings and residence halls and recreational facilities to provide for the intellectual, professional, and cultural growth of a student.

CAMPUS EXPANSION

The University has completed an extended study resulting in the adoption of a flexible land-use plan. In this plan, the relationship of the physical plant to the academic needs of a growing student population has been examined, and priorities have been established for orderly growth. The following buildings have been conceived and planned as part of the University's long-range, land-use plan:

University Library. A nine-story, \$4.6 million Library is the focal point of the academic community. The design, terraced grounds, open stacks, reading lounges, study carrels, and seminar rooms have been planned to encourage independent study. The Library has a capacity of 640,000 volumes. Present holdings are 364,127 volumes, 200,000 government documents, 242,000 microforms, and 3,000 periodicals.

Science-Research Complex. The University has undertaken the planning and construction of a science-research complex in five phases. Overman Hall formed the nucleus, and the Life Science Building formed the first phase. Completed in 1969, the Psychology Building and the Science-Mathematics Lecture Building are the second and third phases. These will be followed by a Physics-Chemistry Building and a Life Sciences Research Building.

Education-General Classroom Building. A five-story, \$1.9 million building furnishes classrooms, laboratories, and offices for the College of Education, the research and development programs of the Department of Education, and the University's Instructional Media Center. The new building is situated on the west end of the Library Mall.

*Student Medical Center.** A \$1.5 million health center, with 100 beds and out-patient services, is designed for maximum flexibility in meeting the health service and health education needs of a growing student population.

*Student Services Building.** Designed to reinforce vital student government, the \$1.9 million Student Services Building houses offices and meeting rooms for student organizations, the Dean of Students and his staff, and various other services including the International Student Center and bookstore. It is centrally located on the campus and features dramatic circular design.

*Stadium and Track.** The football stadium, with a seating capacity of 22,370, also has six classrooms and 30 offices as well as team and equipment storage facilities. The adjacent all-weather, quarter-mile track and stadium are served by a 4,000-car parking lot.

*Ice Arena.** The indoor ice arena has three separate sheets of ice for hockey, figure skating, and curling. The hockey rink has a seating capacity for approximately 3,000. The arena provides facilities for health and physical education classes, intramural programs, exhibition hockey, and recreation for students and the public.

ACADEMIC ORGANIZATION

Courses of instruction leading to degrees are provided through: 1. The College of Arts and Sciences which includes the School of Art; 2. The College of Business

* Constructed, equipped, and operated without tax funds.

Administration which includes the School of Journalism; 3. The College of Education; 4. The School of Music; 5. The Graduate School.

Four-year undergraduate programs are available leading to the degrees of Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Science in Education, Bachelor of Science in Journalism, and Bachelor of Science in Technology. Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Science,

Graduate instruction is provided leading to the degrees of Master of Accountancy, Master of Arts, Master of Arts in Teaching, Master of Business Administration, Master of Education, Master of Fine Arts, Master of Music, Specialist in Education, and Doctor of Philosophy.

An undergraduate student enrolls in one of the three colleges—Arts and Sciences, Business Administration, or Education—or in the School of Music. One who has been graduated with the bachelor's degree and who wishes to do advanced study in some particular field enrolls in the Graduate School. Further information regarding graduate study is given in the *Graduate Bulletin*.

UNDERGRADUATE STUDY

The curricular content of undergraduate study may be divided into two classifications: one having to do with fundamental learning and the other dealing with specialized study for a career. The two aspects of undergraduate study are equally important and reinforce each other. The highly trained specialist engaged in a profession or business also should know something about maintaining health, have a well-developed intellectual curiosity, have some knowledge of the scientific method, and have sound ideas of character and citizenship. Most knowledge acquired in college is of value both on and off the job.

THE ACADEMIC YEAR

The academic year is divided into three quarters of approximately 11 weeks each. The Calendar for 1971-72 is printed on the inside back cover of this *Bulletin*.

SUMMER SCHOOL

Summer School is conducted as a regular part of the academic program. It consists of a regular summer quarter and two terms superimposed upon the quarter. Each term is complete within itself. A student may enroll both for courses extending through the quarter and for one or both terms.

The purpose of the Summer School is to provide courses for the student who wishes to advance his learning in a particular field of study, to meet teacher certification requirements, to accelerate his college work, or to do graduate study.

Further information and announcement of courses and workshops are given in the *Summer Bulletin*.

THE COMPUTATION CENTER

The Computation Center's facilities are available for use by either a student or a faculty member. Equipment consists of an IBM 360 Computer System capable of processing programs in FORTRAN and PL/1. These facilities may be used for academic assignments, research demonstrations, and test scoring.

COUNSELING SERVICES

The Counseling Center provides basic counseling services including those of vocational, educational, and personal-social counseling which are available without cost to the student. The Counseling Center also coordinates other specialized counseling and guidance services. Services of the Counseling Center are available to the student at his request by reporting to the Center.

Clinics offer specialized counseling and remedial or correctional assistance to the student. The Reading Center provides diagnostic testing and counseling in reading and gives instruction and practice in reading improvement. The Speech and Hearing Clinic assists the student who has a problem in speech or hearing. The Psychology Clinic provides personal counseling for the student on referral by the Counseling Center and Student Medical Center. Other services include counseling

by head residents and student counselors in residence halls and counseling on health problems by University physicians.

Diagnostic and short-term psychiatric aid is available through referral by the Student Medical Center.

UNIVERSITY HEALTH SERVICE

The Student Health Service provides the highest quality medical care for the student population of the University. Complete care encompasses several areas relative to the physical, mental, and emotional well-being of the student.

Primarily, the concern of the Health Service is the maintenance of the physical health of the student, whether it be through treatment of personal physical injury and illness, detection and solution of environmental dangers and safety hazards, or the application of preventive medicine procedures.

With ever-increasing importance, the concern of the Health Service is the perpetuation of the mental and emotional well-being of the student. Treatment is rendered to an individual through appropriate drug therapy, through referral to the psychiatrist, or through the assistance of a psychological counselor as indicated by the nature and severity of the disability.

Regular clinic hours are 8:30 a.m. to 11:45 a.m. and 1 p.m. to 4:45 p.m. A physician is on call for emergency conditions only which occur after clinic hours. Any student coming in after clinic hours is charged a \$3 fee.

Every effort is made by the University to safeguard the health of each student. The Student Medical Center has clinical facilities and hospital beds and a staff of resident physicians, registered nurses, a physio-therapist, and X-ray and laboratory technicians.

The Student Medical Center maintains a confidential health record of each student throughout his college career, including the family physician's physical examination report and complete records of observation and treatments by University physicians. Each student before admission to the University is required to be vaccinated for smallpox and to have a chest X-ray or tuberculin skin test. Other immunizations are recommended. Each student is urged to report promptly to the Student Medical Center for attention to all illnesses and injuries.

A student may obtain University sponsored Blue Cross-Blue Shield health and accident insurance to cover most costs of major injury or illnesses requiring hospital care by contacting the University Business Office. The policy is written at a reasonable cost for the calendar year and provides hospitalization both on and off campus and treatment for accidental emergencies off campus. Blue Cross-Blue Shield insurance or other health and accident insurance carried by a student or his parents may cover such medical costs. Some form of hospitalization must be carried whether it is equivalent to Blue Cross-Blue Shield or a waiver signed by the family that they will pay for the student's care.

Minimal charges are made for all medications dispensed at the Student Medical Center Pharmacy, for physical therapy treatments, for some laboratory and X-ray procedures, and for visits after clinic hours. These charges are not borne by the student insurance plan. The student insurance plan does not pay for routine treatments or treatment in the outpatient department of the Student Medical Center.

Absences from classes because of illness can be excused when hospitalized or when certified by a member of the Student Medical Center staff in accordance with University regulations.

See page 35.

The Student Medical Center is closed when school is not in session.

WITHDRAWAL FOR ILLNESS

When, in the judgment of the Director of the Student Medical Center, the physical or nervous condition of a student is such that his continuation in the University might be disadvantageous to the health or welfare of himself or others on the campus, the Dean of Students may require the withdrawal of that student from the University.

A student who withdraws from the University for reasons of mental health may not be considered for readmission for a period of six months or more after the end of treatment.

UNIVERSITY SERVICES

The University coordinates the education of a student, wherever possible, with the continual search for solutions to many social problems. It does this through research and training programs, short courses, institutes, workshops, field trips, and extension classes. The University also offers a student an opportunity for travel and study abroad for credit.

As part of his education, a student is involved in many services to the public such as those offered by the Reading Center, the Speech and Hearing Clinic, and the University Theatre.

Each year over 1,400 representatives from industry, education, and government come to the Bowling Green campus to interview degree candidates and alumni at the Office of Career Planning and Placement. Looking for potential employees, these representatives conduct more than 9,000 individual interviews at Bowling Green State University.

The five professional staff members of the Office of Career Planning and Placement provide individualized counseling to each student seeking career guidance and information. They also coordinate job vacancy information and employer recruiting. Nine clerical assistants process student and alumni credentials, arrange interview schedules, and publish vacancy listings.

The Office of Career Planning and Placement contains a complete occupational library and also provides assistance to each student interested in graduate study.

The Student Development Program at Bowling Green State University is designed for students coming to the University from standard backgrounds that indicate potential difficulties with a college academic program. The program provides special counseling, tutoring, and skills development during the freshman and sophomore years. The program is prepared to provide direct counseling to students in regard to academic, personal, or social problems encountered at the University.

The office of the director, Franklyn A. Jackson, is located in Room 315F, Student Services Building.

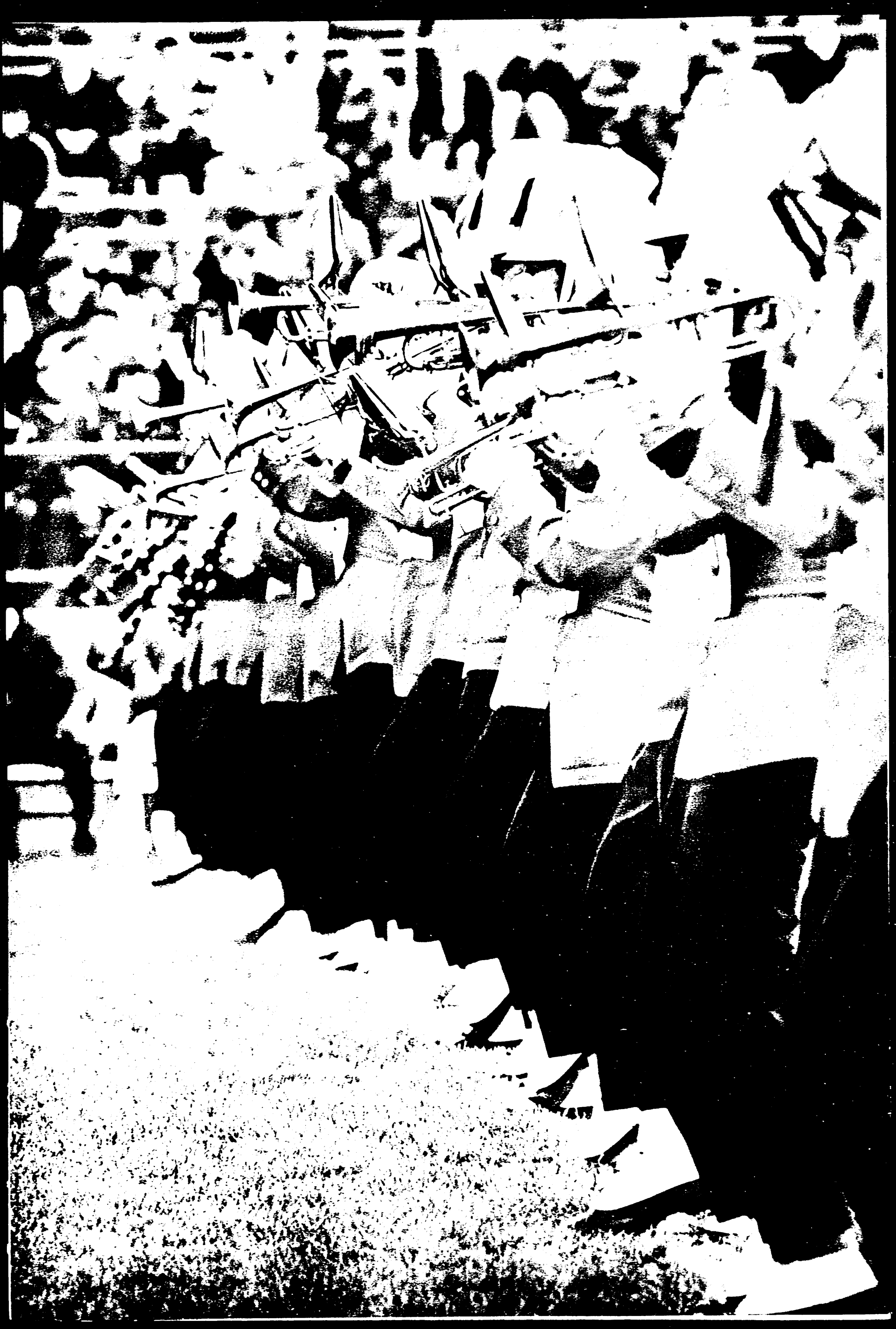
ACADEMIC CENTERS AND FIRELANDS BRANCH CAMPUS

The University operates academic centers at Bryan, Fostoria, and Fremont and the Firelands Branch near Sandusky. A student living in or near these communities may complete up to two years of study in the Colleges of Arts and Science, Education, or Business Administration. The student may transfer to the main campus or to another accredited Ohio college or university to complete his baccalaureate degree program. Extension courses beyond the freshman and sophomore years are also offered each term at the centers and at Firelands. No dormitory facilities are available at these off-campus sites.

A student planning to enter a profession—such as law, medicine, engineering, teaching, or business—may obtain up to two years of pre-professional study at an academic center or at Firelands. He can transfer to a professional college or university within Ohio without loss of credit. He is encouraged, however, to plan his first two years of work with the advice and guidance of officials of the university at which he expects to complete his professional program.

Instruction at an academic center or at Firelands is also available to the student who does not plan to earn a four-year degree, who desires education beyond high school, who wishes to enroll in courses to improve himself professionally, or who seeks to advance his education for cultural development and personal satisfaction.

Several curricula culminating in a two-year Associate of Arts degree are offered at Firelands, and others are in the planning stage. These curricula are usually in the technical education area.



ADMISSION REQUIREMENTS

The Office of Admissions offers a personalized service to each new undergraduate student seeking admission to the University. Its primary responsibility is to admit each qualified student in the most effective manner possible, supplying him with information which enables him to take advantage of the educational and social opportunities offered at the University.

A close relationship with each prospective student, his parents, and guidance counselor begins with the student's original inquiry and continues through the student's orientation.

The service provided for each student entering the University may include a response to any request for information describing the University; a conference on campus; the processing of an *Application for Admission* to the main campus, an academic center, or the Firelands Branch Campus; and the collection and distribution of data describing each new student.

For admission to Bowling Green State University, an applicant must be a graduate of a senior high school approved or accredited by the Department of Education of the state in which it is located.

Applications for Admission are accepted and processed for each quarter of the academic year until the capacity of the Freshman Class is reached on campus, in the several academic centers, and at the Firelands Branch of the University. A high school student is encouraged to apply for admission beginning October 1 of his senior year. Since housing accommodations and classroom facilities are limited, students are encouraged to submit their application as soon after receiving it as possible. The University does not publish fall quarter closing dates. However, during the past several years, admission has been closed for freshman women during the month of October and to freshman men in mid-December.

The University wishes to admit every qualified student who applies and is limited only by the availability of academic and residence hall facilities. To serve the largest possible number of qualified students, residence halls are filled to capacity. Although nearly every freshman enters in September, the University provides the opportunity for a number to enter in the spring and summer quarters.

OHIO RESIDENT

An Ohio applicant presenting an academic record predicting college success—high class rank, accumulative point average, and standardized test results—is considered on the basis of his high school record for six semesters. If accepted, the student is tentatively admitted to the University pending his graduation from high school. If his admission credential is complete, notification is mailed to the student before January 1. A student not meeting this requirement may need to submit a seventh semester transcript. He may be considered for admission if facilities are available.

Formal admission is possible when evidence of a completed high school program is received by the Office of Admissions.

An Ohio applicant who is below the University standard for fall quarter admission

may begin his academic program during the summer quarter. A student beginning his program during the summer quarter must attempt a minimum of 12 quarter hours. Continuation of his program to either the winter or spring quarter depends upon the quality of the student's high school record and the availability of residence hall and academic facilities.

NONRESIDENT

A superior student who does not reside in Ohio may apply for admission by submitting his completed application form, his high school academic record for at least six semesters, and the results of his performance in the American College Test. No other standardized test is accepted as a substitute for the above ACT requirement.

A student's admission is based on high scholastic achievement, course of study pursued, standardized test results, and recommendations from high school officials.

RECOMMENDED HIGH SCHOOL SUBJECTS

Since the prospective student frequently asks for a recommended list of subjects, the following is offered as a reasonable minimum distribution of high school credits in preparation for enrolling in one of the undergraduate colleges: English—4 units; mathematics—3 units (at least two units of algebra should be included by the student who plans to enter the College of Business Administration); social sciences—2 units (one unit should be United States history and civics); sciences—2 units (one unit of a laboratory science should be included); and electives—6 units (at least two units of one foreign language should be included in the electives by the student who plans to enter the College of Arts and Sciences).

ADMISSION PROCEDURE

The form to be used when applying for admission to the University may be obtained by writing to the Director of Admissions. Those wishing to major or minor in music must write to the School of Music for admission forms.

The *Application for Admission* form is to be mailed to the Director of Admissions by the applicant. A \$25 *Application Fee* must accompany the application of a student who previously has not been enrolled in the University. Upon receipt of the application by the Director of Admissions, a *High School Transcript form* is mailed to the applicant.

The *High School Transcript form* is for the applicant's high school record. This form is to be completed by the principal or the guidance director of the high school in which the applicant is a senior or from which he has been graduated. After filling in the applicant's record, the principal or guidance director should mail the form to the Director of Admissions.

Prior to his enrollment, each applicant receives a *Health Examination form* on which to record his medical history, physical examination results, immunizations, and tuberculosis screening (X-ray and/or tuberculin skin test). Before the student can receive formal admission, this form must be completed and returned to the Student Medical Center by the applicant's family physician. Should a question arise concerning the health of the applicant, the Director of the Student Medical Center, upon further investigation, determines whether the applicant may be admitted to the University.

Each freshman applicant is required to submit American College Test (ACT) results. The student's high school counselor should be consulted for details concerning this testing program. An applicant is encouraged to take the ACT early in his senior year of high school.

Near the end of a student's senior year of high school, the Office of Admissions mails him a form for confirmation of graduation and a supplementary listing of senior subjects, senior grades, and final class rank. The Director of Admissions grants formal admission when this form is completed and submitted by the student's guidance counselor or principal.

CORRESPONDENCE REGARDING ADMISSION

Correspondence pertaining to the admission of an undergraduate student to Bowling Green State University should be addressed to the Director of Admissions.

A student who is interested in graduate study should address his correspondence to the Dean of the Graduate School.

TRANSFER STUDENTS

The transfer student who wishes to enroll at the University as an undergraduate uses the regular Application for Admission form. The Application for Admission should be accompanied by a \$25 Application Fee. The University requires a record of the applicant's high school studies from the principal or guidance director of the high school from which he has been graduated.

An official transcript of credit is required from each college and/or university the student has attended. This transcript must be mailed to the Director of Admissions by the institution and is not accepted from the student. In addition, a transfer recommendation card must be completed by the personnel dean of the last institution attended, and sent directly to the Dean of Students at Bowling Green State University. This card must be on file before formal admission can be granted.

A student who has attended another accredited college or university is considered for admission:

1. If he has earned at least 90 quarter hours with a scholastic average equivalent to a 2.0 in a 4.0 system;
2. If he has earned less than 90 quarter hours with a scholastic average equivalent to a 2.5 in a 4.0 system. A student whose accumulative average is between 2.0 and 2.5 may be considered for admission upon petition. After the initial evaluation of the student's completed admission credentials, he is sent the Petition Form by the Office of Admissions. Upon his return of this form, an admission decision concerning a student in the petition range (2.0-2.5) is made by the dean of the college to which the student is applying in consultation with the Director of Admissions.

A student who cannot meet the above transfer admission policies and who has not attended another college or university for a period of one or more years may be considered for Probationary Admission by petitioning the Director of Admissions.

A person who is awarded Probationary Admission needs to reduce his quality point deficiency by as many as four points in order to continue the following quarter. Due to limited academic and residence hall accommodations, Probationary Admission is available to the main campus for the Summer Quarter and the academic centers and Firelands campus for all quarters of the academic year.

ADVANCED STANDING

The University evaluates and accepts credits from other accredited institutions insofar as such credits may apply to curricula offered by Bowling Green State University. Transcripts from nonaccredited colleges and universities are evaluated, but the acceptance of credits is ordinarily deferred until the student has been in residence for at least one year. A maximum of 96 quarter hours of credit is accepted from two-year institutions.

SPECIAL STUDENTS

A student aged 21 or over who has not attended another college or university and who cannot meet the specified entrance requirements including the high school graduation requirement may be admitted as a special student for one year upon his presenting evidence that he is capable of doing satisfactory work in the University. In order to continue as a student in the University, he must: 1. Secure credit for 15 acceptable units of high school work; 2. Remove by examination his deficiencies in entrance units; or 3. Earn such additional college credits beyond the number required for a degree as may be determined by the dean of his college.

ADVANCED PLACEMENT

A student entering the University with a particularly thorough background from high school may apply for advanced placement in one or more subjects in which his preparation is superior.

Advanced placement may be achieved in four ways: 1. By superior achievement on placement tests; 2. By passing a proficiency examination administered by an academic department of the University; 3. By completing a college-level course in high school and earning a prescribed grade on an Advanced Placement Program examination administered by the College Entrance Examination Board; 4. On the basis of scores on general or subject matter examinations of the College-Level Examination Program.

TRANSIENT STUDENTS

A student of another college or university who wishes to earn credits to transfer to that institution may be admitted as a transient student. He must present an official statement from the institution he has been attending in which it is certified that he is in good standing and that the credits he earns at Bowling Green State University are acceptable as part of his program there. Such a student is not required to file a transcript of his previous college credits, but he is limited to one course per quarter during the academic year.

READMISSION OF FORMER STUDENTS

A student who has not been in continuous attendance during the regular academic year (excluding Summer School) must complete the *Application for Readmission* form. A copy of this form may be obtained by writing to the Registrar. The readmission of a former student is determined by his past academic and personal records at the University and by the availability of facilities. A former student who has transferred to another college or university since his last enrollment at Bowling Green State University may be considered for readmission as a transfer student and, as such, must submit the *Application for Readmission* form and a complete transcript of his scholastic record and evidence of his good standing, both personal and academic, at the institution from which he is transferring.

EARLY ADMISSION

A superior student or one with exceptional talent may, upon recommendation of his high school and with evidence of outstanding scholastic achievement, be granted permission to take courses in the University. College credit is granted for satisfactory completion of such courses regardless of whether or not they are used toward completion of his high school requirements.

A student seeking early admission to the University should submit a letter of application to the chairman of the Committee on Early Admission explaining specifically his aims and how the University course work is to be coordinated with his high school work. In addition, a transcript of the student's high school work to date and a letter from his high school principal or school superintendent recommending the student and approving his specific plan of action should be submitted.

APPROVAL FOR ADMISSION

Approval of application by the Director of Admissions constitutes authorization for official admission to the University. Such approval is issued to an applicant only upon fulfillment of the requirements set forth in the foregoing paragraphs, clearance by the Director of the Student Medical Center, and acceptance by the applicant of the conditions of admission and enrollment as set forth in this *Bulletin*.

OFFICE OF EXPERIMENTAL STUDIES

The function of the Office is to originate and administer programs designed to appeal to specific students. Currently these programs include Academic Acceleration—geared to the high achiever; Independent Study Program—open to any student from the sophomore through senior year, the program encourages the participant to embark upon a project or research design provided he is able to defend his proposal before an appropriate member of the faculty under whose guidance he has chosen to work; Seminar Electives—a quarterly series of seminars which, while predominantly intellectual in content, seek to challenge the varied backgrounds of the participants, and provide a creative outlet for faculty and highly motivated learners.

CREDIT BY EXAMINATION

A student may, upon formal approval of a petition to the dean of his college, be granted permission to earn credit by examination. Approval is given when it is clearly evident that previous study or experience warrants such a privilege. A student may not ordinarily take an examination for credit in any course which:

1. Has significant similarity of content with;
2. Has a lower level of required knowledge or proficiency than;
3. Is a prerequisite for other courses which he has completed. A detailed statement of policy governing credit by examination is available in the offices of the deans of the colleges.

GRADUATE STUDY

In general, a student holding the bachelor's degree from Bowling Green or from any other college or university on the approved list of a regional accrediting agency may be admitted to graduate study. However, the possession of an undergraduate degree is not the only determinant. The student must have a purpose which the Graduate School may promote, and he must present evidence not merely of interest but also of a broad and thorough undergraduate preparation in which he has achieved a better than average scholastic record. A student who plans to enter the Graduate School may find a complete statement of admission requirements and a listing of graduate courses in the *Graduate Bulletin*.

INTERNATIONAL STUDENTS

Students from 49 foreign countries are enrolled at the University. Well-qualified international students are welcome at the University where their participation is recognized as an enrichment of educational opportunities for each student. Persons interested in admission procedures for international students should write the Director of International Programs, Bowling Green State University.

CLASSIFICATION OF STUDENTS

Classification of a student as a freshman, sophomore, junior, or senior is determined on the basis of credit hours earned.

A student is classified as a freshman until he has earned 25 per cent of the total credit hours required in his baccalaureate degree program.

A student is classified as a sophomore when he has earned 25 per cent but less than 50 per cent of the total credit hours required in his degree program.

A student is classified as a junior when he has earned 50 per cent but less than 75 per cent of the total credit hours required in his degree program.

A student is classified as a senior when he has earned at least 75 per cent of the total credit hours required in his degree program but has not yet qualified for graduation.

A student who is enrolled for undergraduate course work but who does not have a degree goal is an unclassified undergraduate student. A student who has earned a degree and who desires to register for undergraduate courses without pursuing another degree enrolls as an unclassified undergraduate student.

A student is classified as follows in a baccalaureate degree program requiring a total of 183 quarter hours: freshman, 0-44 hours; sophomore, 45-89 hours; junior, 90-134 hours; senior, 135 hours to graduation.

REGISTRATION FOR CLASSES

The Office of the Registrar is responsible for each student's registration for classes and for the academic records of each student.

Services provided include issuing transcripts of credit upon request of the student, processing applications for teacher certification, obtaining benefits under Veterans Education and Social Security Acts, and handling relations for each undergraduate student with the student's local draft board.

This office also processes an *Application for Readmission* from a former student, evaluates credentials from other colleges and universities, and determines the eligibility of a student for participation in athletics and membership in honor societies.

A student's identification card also is obtained through this office.

Although nearly every freshman enters in September, the University provides the opportunity for a number to enter each year in the winter, spring, and summer quarters.

SUMMER PRE-REGISTRATION

Each freshman or transfer student admitted to the fall quarter is invited to the campus with his parents during the preceding summer. During the two days he is on the campus, the student takes placement, speech and hearing, and academic aptitude tests and attends various meetings with the dean of his college or his faculty adviser. Each student also completes his fall schedule of classes with the aid of the dean. He may purchase his textbooks at this time.

A schedule of events also is planned for the parents. This program includes a campus tour and sessions with academic deans, student personnel deans, and faculty members.

ORIENTATION

The orientation program for every new student includes a convocation, meetings to assist the student in his cultural and academic adjustment to the University, and various social events. During the orientation period, the student completes his registration for classes, learns the procedures for using the library, and is informed about campus organizations and student activities. Much of the program is carried on in small groups with faculty, administrative staff members, and upperclass students serving as discussion leaders.

Orientation activities constitute a regular part of the quarter, and attendance is required of each new student.

TIME OF REGISTRATION

Since late entrance is a handicap to academic achievement, every student is expected to register for classes during the time announced for registration.

No student entering after the close of the first week of a quarter is permitted to carry a full program of courses without the permission of the dean of the college in which he is enrolled.

CHANGES IN REGISTRATION

After the registration period has been completed, all changes must be processed in accordance with the policy of the college in which the student is enrolled. No undergraduate may enroll in a course after seven calendar days from the beginning of classes in any quarter.

An undergraduate who drops a course during the fourth through the sixth week of a quarter receives a grade of *WP* or *WF* according to his standing in the course. A grade of *WF* is assigned to courses dropped after the sixth week of a quarter.

ACADEMIC ADVISING

Counseling and testing services conducted by the University Counseling Center are available without cost to the student. The student is assisted by his college dean and faculty adviser in planning his schedule of classes.

A student entering the University is required to present results of the American College Test (ACT) and may be required to take additional tests on the campus. The results of these tests are used in advising him concerning his course of study, vocational goals, and scholastic progress.

COURSES REQUIRED OF ALL STUDENTS

Every freshman is required to complete satisfactorily English 112 or to give evidence of proficiency in written expression equivalent to that attained by the student who satisfactorily completes the course. No student can be excused from meeting this requirement, nor can the requirement be postponed.

Every student who is a candidate for an undergraduate degree except as noted below must take Health and Physical Education 100 in the three quarters of the freshman year. A student who is granted credit as a result of experiences in the United States Armed Forces need not complete Health and Physical Education 100.

A student who is physically handicapped may be excused from the required courses in health and physical education by obtaining a certificate issued by the University physician and approved by the dean of the college in which he is enrolled.

CHANGE OF COLLEGE

A student who wishes to change his enrollment from one college to another within the University should first explore the requirements of the college in which he wishes to enroll. Then he should obtain approval from the dean's office of the college in which he seeks to enroll. Finally he should have the transfer officially recorded by the dean's office of the college from which he is withdrawing.

ACADEMIC LOAD

A full-time student normally should be registered for 15 to 16 hours per quarter. The academic load of a regular undergraduate student should not be less than 12 hours at any time nor more than 18 hours unless authorized by the dean of the college in which the student is enrolled.

UNIT OF CREDIT

The unit of credit is the quarter hour which is ordinarily earned by one recitation or lecture a week for a quarter although there are exceptions to this rule. Two or three hours of laboratory work a week, depending upon the amount of outside preparation required, carry the same credit as one hour of recitation or lecture although there are exceptions to this rule as well.

TIME OF TAKING COURSES

A student should register for courses as nearly as possible in the order and at the time listed in the *Curricula* and the *Sequence of Courses* outlined in this *Bulletin*. Courses not included in these listings should be taken at the time specified in the *Description of Courses*.

COURSES IN THIRD AND FOURTH YEARS

At least 60 hours of work taken in the third and fourth years must be courses numbered 300 or above except by special permission of the dean of the college in which the student is enrolled. If a senior takes a course numbered from 100-199 (except in the case of foreign language or computer science), he must take an additional hour as a graduation requirement.

GRADUATION

To become a candidate for a baccalaureate degree, the student must file an *Application for Graduation* according to the following schedule:

1. For graduation in December, an application must be filed by the preceding October 10;
2. For graduation in March or June, the deadline for filing an application is the preceding January 15;
3. For graduation in August, the filing date deadline is the preceding June 25.

An application form and information may be obtained at the Office of the Registrar. A student not accepted as a candidate under the above procedure but who qualifies for a degree at the end of a quarter is graduated at the next Commencement.

REPEATING A COURSE

A student may repeat a course in which he has received an F (failing grade) or a low grade with the approval of the dean of the college in which he is enrolled. For all courses that are repeated, the grades and credit hours for both the first and subsequent registrations are counted in computing the student's point average. If the student repeats a course in which he previously earned a passing grade, only the credit hours earned in the latest registration are applicable toward a degree.

WITHDRAWAL OF COURSE FROM SCHEDULE

The University makes every reasonable effort to offer courses as announced, but it reserves the right to withdraw a course from the schedule if it regards the enrollment to be insufficient.

WITHDRAWAL FROM THE UNIVERSITY

A student who wishes to withdraw from the University in good standing must obtain the permission of the dean of the college in which he is enrolled. If he leaves the University without proper notice and permission, he receives a mark of *WF* in all courses. He is not entitled to any refund of fees nor to a certificate of honorable dismissal.

A student who withdraws with permission from the University has a mark of *W* recorded in all courses unless he has previously withdrawn from a course with *WF*. A student who withdraws from the University within three weeks of the end of the quarter is not permitted to enroll for the next quarter except by special permission of his academic dean.

TRANSCRIPTS OF CREDIT

An official transcript of a student's record is issued only for transferring credits to other colleges and universities and for the information of certifying agencies and employers. An official transcript is not issued directly to a student; it is sent to other institutions or agencies at the student's request. A student may, however, obtain an unofficial photostatic copy of the transcript of his record if he so desires. A charge of \$1 is made for each transcript. A transcript is not released for a student who is delinquent on any financial obligation to the University.

GRADING SYSTEM

The following system of marks is used in reporting and recording a student's proficiency in his courses: *A*—excellent; *B*—good; *C*—acceptable; *D*—poor, but passing; *F*—failure.

In a few courses, such as student teaching and Library Science 491, the only marks given are *S*—satisfactory and *F*—failure.

In the Honors Seminars; internship courses; remedial courses; and the required courses in health and physical education, H.P.E. 100, the marks used are *S*—satisfactory and *U*—unsatisfactory. *S* indicates course credit, and *U* indicates no credit.

A student may request the *S-U* grading option in as many as twelve courses in a baccalaureate degree program in addition to courses universally graded on an *S-U* basis. The student is permitted more than one *S-U* option in a quarter providing the number of such registrations does not exceed three in an academic year or four in an academic year and the succeeding summer quarter. The option must be declared at the Office of Registration and Records no later than seven calendar days after the beginning of classes for a quarter. The *S-U* option is permitted in courses taken as fulfillment of major, minor, and group requirements or electives in accordance with standards established by the appropriate undergraduate college and departmental councils. College and departmental standards on *S-U* options are available to the student through his academic adviser.

A grade of *S* is interpreted as falling within the range of *A* to *C* and carries full credit. A grade of *U* is interpreted as *D* to *F* and carries no credit. Neither grade is considered in the accumulative point average.

When a student withdraws from a course with the permission of the dean of his college, the course is marked *W*—withdrawn; *WP*—withdrawn passing; or *WF*—withdrawn failing. (See page 16.)

INCOMPLETE MARKS

The mark of *I*—incomplete—is given when, for some acceptable reason, a student fails to take the final examination or to meet some other definite requirement in a course.

The mark of *I* may be removed and a grade may be substituted for it by a student's making up the deficiencies to the satisfaction of the instructor.

Unless an extension of time is granted by the academic dean, a mark of *I* must be removed by February 15, May 15, August 15, and November 15 of the same year for the fall, winter, spring, and summer quarters respectively.

POINTS AND POINT AVERAGES

To facilitate the averaging of grades, the following quality points are assigned to each mark:

- For each hour of *A*—4 points;
- For each hour of *B*—3 points;
- For each hour of *C*—2 points;
- For each hour of *D*—1 point;
- For each hour of *F* or *WF*—0 points;
- For each hour of *I*—0 points until removed.

A student's point average is obtained by dividing the total number of points earned by the total number of hours undertaken excluding courses in which the marks *S*, *U*, *W*, or *WP* are recorded.

ACADEMIC HONORS

A full-time undergraduate student who demonstrates a high level of excellence in his academic work has his name placed on the Academic Dean's List for his college. The requirement for achieving the Academic Dean's List is a point average of 3.5 or above in the preceding quarter.

The record of each senior with a very high point average is carefully studied by the University Committee on Honors and Awards in order that appropriate recognition and honor may be accorded each student who has achieved outstanding academic success throughout four years of college.

Cum laude signifies a high level of academic achievement: 3.5 accumulative grade average or better and graduation with praise.

Magna cum laude signifies very high level of academic achievement: 3.7 accumulative grade average or better and graduation with great praise.

Summa cum laude indicates the highest level of academic achievement: 3.9 accumulative grade average or better and graduation with great praise.

In the case of transfer credit, each record is studied and evaluated individually. In general, the following principles serve as guides: 1. A student entering the University with up to 100 hours of transferred credit must meet the point average standard for honors in all hours completed, transferred and otherwise, which are considered jointly, with the added stipulation that the point average of all work taken at Bowling Green State University must be of honors quality; 2. A student who transfers more than 100 hours of credit usually is not considered for honors; 3. To be considered for honors, a candidate should have residence of at least one academic year or 45 hours in consecutive summers (attending either one quarter or both of the terms each summer) immediately preceding graduation with the exception that a student with written permission to participate in an approved combination curricula in cooperation with a professional school or college of another institution may be reviewed for honors.

In reviewing the record of a candidate for honors, each case is judged on its own merit to insure that an award reflects outstanding achievement.

MEMBERSHIP IN ACADEMIC HONORARIES

In order to be considered for membership in an academic honorary, a student must:

1. Be in the upper 35 per cent of his class and college;
2. Have completed four quarters or 60 quarter hours;
3. Have completed 24 quarter hours in residence if a transfer student;
4. Rank in the upper 35 per cent of his class and college both on the Bowling Green campus and on the campus from which he is transferring if a transfer student;
5. Meet other requirements as determined by individual honor societies.

The following is a list of the honor societies active at Bowling Green State University along with their areas of interest.

Alpha Epsilon Delta: pre-medical
Alpha Kappa Delta: sociology
Alpha Lambda Delta: freshman women's scholarship
Beta Alpha Psi: accounting
Beta Beta Beta: biology
Beta Gamma Sigma: business administration
Delta Phi Alpha: German
Delta Phi Delta: art
Delta Psi Kappa: women's health and physical education
Epsilon Pi Tau: industrial education and technology
Eta Sigma Phi: classical languages
Kappa Delta Pi: education
Kappa Mu Epsilon: mathematics
Phi Alpha Theta: history
Phi Eta Sigma: Freshman men's scholarship
Phi Kappa Phi: junior-senior scholarship
Phi Upsilon Omicron: home economics
Phi Sigma Tau: philosophy
Pi Delta Phi: French
Pi Omega Pi: business education
Pi Sigma Alpha: political science
Psi Chi: psychology
Sigma Delta Pi: Spanish
Sigma Gamma Epsilon: geology
Sigma Pi Sigma: physics
Sigma Tau Delta: English
Omicron Delta Kappa: men's leadership
Mortar Board: women's leadership

ACADEMIC WARNING

The freshman or sophomore is warned of unsatisfactory progress when his accumulative point hours and quality points indicate that he is deficient from a C (2.0) average by more than 5 quality points.

ACADEMIC PROBATION

The academic standing of a freshman or sophomore is considered unsatisfactory and he is placed on academic probation when his accumulative point hours and quality points indicate that he is deficient from a C (2.0) average by more than 10 quality points.

The academic standing of a junior or senior is considered unsatisfactory and he is placed on academic probation when his accumulative point hours and quality points indicate that he is deficient from a 2.0 average by more than 5 quality points.

A student on probation because of unsatisfactory academic standing must follow a restricted program as follows:

1. His course load must not exceed 16 hours and may be less if so determined by his college dean;
2. He may not take part as a performer, an officer, or an active participant in any intercollegiate activity, meeting, or conference except that an activity begun in any quarter may be completed in the following quarter.

ACADEMIC DISMISSAL

The freshman or sophomore student is academically dismissed from the University when his accumulative point hours and quality points indicate that he is deficient from a 2.0 average by more than 15 quality points.

The junior or senior student is academically dismissed when he is deficient from a 2.0 accumulative average by more than 10 quality points.

A notice of warning, probation, or dismissal is sent by the University both to the student and to his parents or guardian.

A junior or senior who is in good standing at the beginning of the fall quarter may enroll for the winter and spring quarters of the same year without regard to his academic standing at the close of the preceding quarter. Refer to page 23—:
Refund of Fees.

REINSTATEMENT

A student who is dismissed because of unsatisfactory academic standing may enroll for the summer quarter at this University or in the third quarter following his dismissal. If the third quarter is the fall quarter, the enrollment must be at the Firelands Campus or an academic center. He needs to have a total quality point deficiency of not more than 15 points as a freshman or sophomore or not more than 10 points as a junior or senior at the end of the quarter to qualify for reinstatement.

If the enrollment capacity of the University for the next quarter, as determined by University officials, has already been reached when the student becomes eligible for reinstatement, he may apply for readmission for a later quarter.

A student who does not qualify for reinstatement at the end of the quarter but who has reduced his quality point deficiency by as many as four points may enroll for the next quarter providing appropriate space is available.

The student who is academically dismissed may not qualify for reinstatement through attendance at another college or university. Advanced standing credit is not granted for courses completed at another institution during a student's period of suspension from this University.

FEES AND CHARGES

The cost of attending the University depends somewhat on the desires and spending habits of the student.

State appropriations currently provide approximately 45 per cent of the cost of instruction. The remainder is financed by student fees and other charges and contributions. The General Assembly appropriates no funds for board and room or for various student services and activities provided by the University. Such services and activities are financed from student fees and charges.

FEES

Although Bowling Green State University has no tuition fee, a student who is an Ohio resident enrolled for 9 or more hours pays an *Instructional Fee* of \$170 per quarter and a *General Fee* of \$50 per quarter, making a total of \$220.

A student classified as a nonresident who is enrolled for 8 or more hours pays a *Nonresident Fee* of \$300 per quarter in addition to the *Instructional* and *General Fees*.

The *Instructional Fee*, supplemented with state appropriations, finances the instructional programs of the University.

The *General Fee* finances the many student services and activities offered on campus. A part of the fee is allocated for capital improvements.

The Board of Trustees reserves the right to make any changes or adjustments in fees or charges when such changes are deemed necessary.

A previously enrolled student may be denied readmission after payment of fees for several reasons, one of which is the failure to maintain a satisfactory academic standing. In such cases, a full refund is made of all fees paid.

A student who is an Ohio resident who is enrolled for 8 hours or less of credit during any quarter pays a single fee of \$26.25 per hour of credit.

A nonresident of Ohio who is enrolled for 7 hours or less of credit pays a *Nonresident Fee* of \$37.50 per hour (not to exceed the *Nonresident Fee* for a full-time student) in addition to the \$26.25 per hour listed above.

NONRESIDENT FEE

A student classified as a nonresident of Ohio who is enrolled for 8 or more hours is assessed a *Nonresident Fee* of \$300 per quarter (\$900 per academic year) in addition to the *Instructional* and *General Fees*.

The responsibility of indicating proper residence at the time of registration is placed upon the student. If there is any question on the part of the student regarding residence, he should bring the case to the attention of the University Treasurer who may refer the matter to an appropriate committee for review. Any student who registers improperly with respect to legal residence under the rules is required to pay the *Nonresident Fee* and also may be assessed a penalty of \$10. A student who does not pay this fee and/or penalty within 30 days after having been notified of its assessment automatically cancels and nullifies his registration in the University.

The University reserves the right of its officials to make a final decision in any case of disputed residence of a student as a condition of the student's admission. In determining the student's proper residence, University officials consider the following principles as a guide.

1. An adult student, 21 years of age or older, is considered to be an Ohio resident if he has resided in the state for a minimum of 12 consecutive months preceding the date of enrollment or if he is gainfully employed, residing in Ohio, and pursuing a part-time program for instruction if there is reason to believe that he did not enter Ohio from another state for the primary purpose of enrolling in an Ohio public institution of higher education. A teacher in an Ohio school or college is considered a resident of the state as of the effective date of his contract of professional service;
2. A minor student under 21 years of age is considered to be an Ohio resident if his parents or his legal guardian has resided in Ohio for a minimum of 12 consecutive months preceding enrollment, if the parents or legal guardian is residing in Ohio, and if at least one parent or guardian is gainfully employed in Ohio;
3. An emancipated minor under 21 years of age may be considered as an adult student in determining residency provided such minor presents satisfactory evidence that his parents, if living, do not contribute to his support and do not claim him as a dependent for federal government income tax purposes;
4. The residency of a married woman is determined by the rule which would apply to her husband if he were to seek enrollment except that a woman

who would have been classified as an Ohio resident immediately prior to her marriage may continue to be classified as an Ohio resident if she continues to live in the state. A husband's residency is not determined by the rule which applies to his wife;

5. A student classified as a nonresident of Ohio is not reclassified as a resident during his continued period of enrollment unless he satisfies the conditions of items 1 or 2 above;
6. A student classified as a resident of Ohio is considered to have lost his status after he or, in the case of a minor, his parents or legal guardian moves his legal residence to another state. However, the *Nonresident Fee* is not assessed until 12 months after the loss of residency status;
7. A person in military service who entered the service as a resident of Ohio and his dependents are considered residents if they provide proof of continued Ohio domicile or of continuous voting in Ohio;
8. A person in military service and his dependents are considered to be Ohio residents during the period when the actual duty assignment is in Ohio and they actually reside in Ohio;
9. An alien holding an immigrant visa may establish Ohio residency in the same manner as a citizen of the United States. An alien student admitted to the United States on a student visa or another visa is classified as a nonresident student.

SUMMER SCHOOL FEES

The *Instructional Fee* for a student enrolled for 9 or more hours for the full summer quarter is \$170; and the *General Fee* for the full summer quarter is \$50, making a total of \$220.

A nonresident student who is enrolled for 8 or more hours pays a Nonresident Fee of \$300 or \$37.50 per hour for an enrollment of less than 8 hours. For a student who was enrolled prior to the fall quarter of 1970 who is attending Summer School the Nonresident Fee is \$270 for an enrollment of 8 or more hours and \$33.75 per hour for an enrollment of less than 8 hours.

A student may register for courses for the full summer quarter or for one or both terms. If a student has registered for both terms prior to the beginning of the first term, fees are charged as though the student were enrolled for a full summer quarter and are payable in full four days prior to the start of the first term.

If a student enrolls for the first summer term and later registers for the second summer term, the fees are assessed for each term at an hourly rate. A student who registers for 8 hours or less of credit pays \$26.25 per hour. A nonresident of Ohio who is enrolled for 7 hours or less pays an additional *Nonresident Fee* per hour as indicated in a previous paragraph, in addition to the \$26.25 per hour.

Conferences and workshops on the campus with credit of 8 hours or less require a fee of \$26.25 per hour. A nonresident of Ohio who enrolls in a workshop for 7 hours or less pays an additional *Nonresident Fee* per hour as indicated in a previous paragraph, in addition to the \$26.25 per hour.

GRADUATE SCHOOL FEES

The *Instructional Fee* and *General Fee* for graduate study are the same as those listed above for undergraduate study. For information on additional fees, refer to the *Graduate Bulletin*.

EXTENSION COURSE FEES

A fee of \$26.25 is charged for each credit hour of extension work taken by a resident of Ohio.

ACADEMIC CENTER INSTRUCTION

The Ohio student who attends the University at any one of the academic centers and who is enrolled for 9 or more hours pays an *Instructional Fee* of \$150 per quarter and a *General Fee* of \$50 per quarter, making a total of \$200. A student who is an Ohio resident and who enrolls for 8 hours or less during any quarter pays a single fee of \$25 per hour of credit.

The nonresident student attending any one of the academic centers who is enrolled for 8 or more hours pays a *Nonresident Fee* of \$300 per quarter in addition to the *Instructional and General Fees* listed above. A nonresident student enrolled for 7 hours or less pays a *Nonresident Fee* of \$37.50 per hour in addition to the \$25 per hour listed above.

During any quarter a student is registered for a combination of main campus (including extension) and branch or academic center courses, fees are determined as follows: if the number of main campus (including extension) credit hours equal or exceed the off-campus credits, the main campus fees are charged for all courses. Off-campus rates apply when branch and academic center credit hours exceed the main campus credits.

SPECIAL FEES, CHARGES, AND DEPOSITS

An *Application Fee* of \$25 must be paid at the time *Application for Admission* is submitted by a new undergraduate student. This charge is refunded only if the applicant is denied admission or readmission by the University.

A *Change of Registration Charge* of \$3 is made for any change in registration after a schedule of courses has been submitted to the Office of the Registrar unless the charge is waived by the dean of the college in which the student is enrolled.

A *Late Registration Charge* of \$5 is made for each day including Saturdays and Sundays that a student is late in registering at the opening of a quarter or summer term.

An *Automobile Registration Charge* of \$15 a year (September through August) is required of each student when he registers his automobile with the Parking Services Office. Each automobile on campus must be registered and its decal displayed in accordance with instructions. A special registration permit for a two-week period can be obtained for \$2; the second special registration permit is \$3; the third special registration permit is \$4.

A *Credit by Examination Charge* of \$15 is assessed for each special examination.

A *Proficiency Examination Charge* of \$5 is made for special examinations in typing and shorthand which are administered by members of the business education staff for a person seeking to qualify for civil service or other positions.

A *Transcript Charge* of \$1 is made for each transcript of credits.

A *Student Teaching Laboratory Fee* of \$36 is required of the student during the quarter in which he does his student teaching.

An *Applied Music Fee* of \$30 for each one half hour of individual instruction per week is paid by the student. A fee of \$15 is paid by those who take piano class. A student enrolled for applied music has access to practice rooms and equipment without charge in accordance with the schedule and regulations determined by the School of Music.

The student is held responsible for apparatus he loses or damages and for materials he wastes in laboratory classes. The student pays for all materials used in making articles or items that become his personal property.

Fees are charged for student teaching; for private lessons in music; and for remedial instruction in reading, written expression, and speech.

An *Excess Credit Fee* of \$15 is charged beginning with the nineteenth hour each quarter and continuing for every hour thereafter.

PAYMENT OF FEES

All fees and charges are payable in advance of the quarter for which the student is enrolled. The final dates for payment of fees for each quarter are given in the Calendar on the inside back cover of this *Bulletin*. A student who pays his fees after the last day designated for this purpose at the opening of a quarter or after classes begin including summer is assessed a *Late Payment Fee* of \$5 for each day that he is late including Saturdays and Sundays.

Fees are payable at the Bursar's Office on the first floor of the Administration Building between 8 a.m. and noon and 1 p.m. and 5 p.m. Checks and money orders are accepted if they are made payable to Bowling Green State University for the exact amount required for the payment of all fees.

For a student desiring to utilize a credit card system, the BANKAMERICARD plan is honored by the University.

REFUND OF FEES

In case of the voluntary withdrawal of a student from the University in any quarter, fees, except for the *Application Fee*, are refunded on the following basis: during the calendar week in which classes begin, 90 per cent; during the second calendar week, 80 per cent; during the third calendar week, 60 per cent; during the fourth calendar week, 40 per cent; after the fourth week, no refund. A student withdrawing under discipline (see page 37) forfeits all rights to the return of any portion of his fees. However, in the event of academic dismissal, all monies prepaid for a quarter are refunded in full. This schedule pertains to *Instructional, General, and Nonresident Fees* (where applicable); a separate refund schedule for room and board charges is outlined in the *Housing Contract-Acceptance Agreement*. No deduction is granted because of late entrance.

In a change of program involving the dropping of a course in which a *Special Course Fee* has been paid, the fee is refunded in accordance with the schedule given in the preceding paragraph unless the dean of the college in which the student is enrolled authorizes different action. Refunds normally take approximately four weeks to be processed.

RESIDENCE HALLS

The University Housing Office is responsible for the assignment of all students to campus housing accommodations. This office processes all housing applications and roommate requests for assignment to the 20 residence halls and 30 sororities and fraternities on campus and also arranges housing accommodations for summer conferences and institutes.

The Off-Campus Division of the Housing Office publishes a periodic listing of accommodations available for student occupancy and maintains a mediation service to help resolve tenant-landlord disputes. A counselor is available to assist an off-campus student with any difficulties he may have. Referral to legal counsel can also be arranged by this office.

Issuance and cancellation of University meal tickets is coordinated through this office.

PURPOSE AND PROGRAM

University residence halls provide a physical environment designed to further the academic, cultural, and personal development of their resident students. Informal discussions are arranged among students and with University faculty members and community leaders. Recorded and live musical programs are offered, and international wings are maintained for bilingual students in certain residence halls.

Bowling Green is primarily a residential University, and over 8,200 undergraduate students live in residence halls.

An undergraduate student is expected to live in a University residence hall as a condition of enrollment with the following exceptions: a student who commutes from the home of his parents, guardian, or spouse; a student who is 21 years of age who may live in housing of his own choosing (a student who becomes 21 during any quarter may elect at the end of the preceding quarter to live off campus); and a junior or senior student under 21 who has parental consent in advance (a *Parental Consent Form* is available in the Housing Office); a student acquiring junior standing at the end of the fall quarter may elect to live off campus the entire year, and a student acquiring junior standing at the end of the winter quarter may elect to move off campus at the end of the fall quarter.

A freshman or sophomore student signs an annual contract at the time of application. A junior or senior may elect to sign an annual contract, or he may sign a contract for the first quarter only with an option to renew his contract for the remainder of the year. In the event housing facilities become exhausted, however, preference is given to an applicant requesting accommodations for the academic year (three quarters).

Accommodations in University residence halls are available to any University student regardless of race, religion, creed, color, or national origin. The University

expects landlords of off-campus accommodations to practice this same non-discriminatory policy.

The Housing Office maintains a list of rooms and apartments which the University recognizes as adequate housing in terms of health, safety, and non-discriminatory standards. A student who lives off campus, however, does so on his own responsibility; and the University does not undertake to provide social and educational opportunities or the supervision furnished in University residence halls. A contractual arrangement exists between the student and the landlord, exclusive of the University.

As a condition of enrollment, an off-campus student is expected to register his correct community address with the Housing Office before the payment of fees.

ROOM AND BOARD CHARGES

A student who desires to live on campus must apply for housing and sign a *Residential Contract* in the spring or early summer prior to the opening of the fall term. Dates and procedures for payments are outlined in the Contract.

Three Housing Plans, with three different rates, are available to all students. All housing units have been classified under one of three Plans depending upon their respective dates of construction. Plan A includes the most recent units at \$1095.00 for a double room and \$1305.00 for a private room; both rates include board and are for the Academic Year. Plan B is the middle range at \$1035.00 per Academic Year, including board. Plan C includes the older housing units at \$1005.00 per Academic Year, including board.

For the student who lives in a residence hall but eats in a sorority or fraternity house having its own dining facilities, the *room* rental would be the amount of the Plan selected less \$480.00 which is the portion allotted to the board. A student not eating in the University dining hall for the above reason receives a refund for his board charge.

PAYMENT SCHEDULE

Since arrangements for residence on campus must be made prior to the opening of the fall quarter and the University wishes to accommodate as many students as possible, a forfeiture schedule for late cancellations is maintained. This schedule appears in the *Acceptance Agreement* which is provided when the residence hall application is accepted. The *Acceptance Agreement* should be read thoroughly by both a student and his parents or guardian and retained for future reference. A *Residential Contract Card* accompanies the agreement. It must be signed and returned with the initial payment, indicating acceptance of the provisions of the agreement. Payment may be made in full for the entire academic year or in accordance with a deferred plan described in the *Acceptance Agreement*. The initial payment appears on the *Residential Contract Card*.

REFUNDS

Adherence to this payment schedule is a prerequisite for admission. Should it be necessary to withdraw from the University after the *Acceptance Agreement* has been executed, the refund schedule outlined in the agreement is followed.

VACATION PERIODS

During the vacation periods, the residence halls ordinarily are not open to a student because it is at such times that the Maintenance Department can best provide the services necessary to maintain and to improve the facilities.* A student remaining over the Thanksgiving and spring recesses or between terms needs to make special arrangements for off-campus housing during these periods. The Director of Residence Services assists in making these arrangements.

RESPONSIBILITY FOR PERSONAL EFFECTS

During a student's residence in a hall, every effort is made to provide adequate supervision. However, the University cannot assume responsibility for loss or damage to personal effects of the student or other guests of the University. A student usually has his own personal effects listed in the blanket homeowner's insurance policy provided by his parents.

* The University reserves the right to assign, inspect, maintain, and make repairs in residences anytime during the school year.

Generally, each room is completely furnished except for linens, pillows, blankets, and personal toiletries. A linen rental service which is provided by a private laundry is available to a student if he wishes to use it.

CHANGE OF UNIVERSITY ADDRESS

If, for some reason, a student should find it necessary to change his address from a residence hall, room, or an apartment, such a change must be registered and approved by the Director of Residence Services in advance of the proposed move.

OCCUPANCY OF ROOMS

The University Calendar on the back cover of this *Bulletin* lists the dates on which residence halls are available for occupancy.

Each student is required to vacate and have his belongings removed from his residence hall within 24 hours after the close of final examinations for the spring quarter except for the student who receives a degree at the June Commencement. Such a student may occupy his room up to 5 p.m. of Commencement Day.

A student in good standing with the University is not required to clear his room of possessions at the close of the fall and winter quarters unless he has failed to acquire paid housing reservations for the succeeding quarter. A resident who has not paid for additional accommodations, however, is required to vacate his room along with his possessions within 24 hours after the close of quarter examinations.

The University undertakes at all times to maintain wholesome and pleasant living conditions in all its residence halls, and the right is reserved to remove an occupant at any time by recommendation of the Dean of Students.

FOOD SERVICES

Only by special arrangement, based on compelling individual circumstances, is a student permitted to live in a University residence hall without taking his meals on the campus. A student living off campus may purchase a meal ticket for meals in a University dining hall for \$170 per quarter from the Bursar's Office.

STUDENT FINANCIAL AID

The Student Financial Aid Office coordinates all forms of financial aid that are available from the University, the Bowling Green State University Alumni Association, the Development Program: Expanding Horizons, state and national programs, and other sources.

Personal counseling with a student and his parents on various aspects of college financing—short-term and quarter loans to meet emergency educational expenses—is a service which is also provided through this office.

Every student who attends a college or university should have a sound plan for acquiring a college education, including financial arrangements, worked out well in advance. It is advisable for a student who must earn a part of his expenses to discuss his problem personally with a member of the staff of the Student Financial Aid Office.

Bowling Green State University recognizes that not every student and his parents can afford to finance a college education entirely from their incomes and assets. For this reason, the Student Financial Aid Office is available to assist every admitted or enrolled student having need.

Financial aid which the University can provide is limited by the amount of money which is available. In a sense, each student enrolled at Bowling Green State University receives financial aid. The residents of Ohio, as taxpayers, help to support the University and, thereby, offset a sizable portion of the cost of the student's education. Not often can a student expect to have his complete education financed. The various forms of aid which are available from the University are principally scholarships, grants-in-aid, loans, and part-time employment. Scholarships, grants-in-aid, and loans are awarded through the Student Financial Aid Office. Part-time employment, on-campus or off-campus, is available through the Office of Student Employment. This office is designed to assist a student who desires employment as a means of offsetting the costs of obtaining an education.

Financial need can be defined as an inability to meet college expenses from the available resources of the student and his family. Each student and his parents are expected to contribute assistance to the best of their abilities.

Each student making an *Application for Financial Aid* must provide a summary of his parents' financial situation. This summary is provided by and analyzed by the American College Testing Program to determine the amount of support reasonably to be expected from the parents. Consideration in this analysis is given not only to the income of the family but also to the assets, extraordinary indebtedness or expenses, other children in college, number of children, and related information.

The ACT Family Financial Statement (FFS) is completed by the student and his parents and forwarded to the American College Testing Program, Box 1000, Iowa City, Iowa 52240. The University requires this analysis prior to consideration for scholarships, grants-in-aid, Educational Opportunity Grants, and loans.

On the following pages the various forms of assistance are discussed at length. It is beneficial for a student to examine each in detail in an attempt to identify those forms of aid for which he may qualify.

SCHOLARSHIPS

Scholarships are awarded on the basis of high scholastic achievement as well as need. Several scholarships are awarded in recognition of academic achievement without reference to need. The awards are for one year, but the student may reapply in succeeding years. A prospective freshman should rank in the upper 5 per cent of his graduating class for consideration. A continuing student must have a 3.0 cumulative average from his previous academic work at Bowling Green State University.

The following factors are considered in awarding scholarships: 1. High achievement in high school and/or college; 2. Scores on the ACT, CEEB, National Merit Scholarship, and other standardized achievement tests; 3. Performance in community and school activities and good character; and 4. Evidence of need. A student receiving a scholarship from a source other than Bowling Green State University must report the type and amount to this office if the award exceeds \$100.

The Book Scholarship is awarded to full-time students with a 3.6 cumulative grade point average or above. Eligible students must have attempted at least 42 hours, but not more than 171 hours at Bowling Green State University.

The purpose of the Book Scholarship is to recognize those students who have attained an outstanding academic record. This award is based entirely upon academic achievement, and in no way is associated with a student's financial need. It is hoped the award money will be used by the student to build a library which will promote and enhance his academic interests.

School of Art Special Talent Awards to outstanding art majors. These awards, covering Instructional and General Fees, are made annually on a competitive basis to students who show noteworthy development of talent in the visual arts. Information concerning these awards is available from the School of Art.

In addition to University scholarships, other scholarships and awards are available from special sources and are listed below:

Air Force and Army ROTC Scholarships: A sophomore member of the ROTC four-year program is eligible to compete on the basis of academic achievement and military aptitude for a scholarship which covers the full cost of fees during his junior and senior years. In addition, an allowance for books and supplies is paid the student; and he also receives a \$50 per month subsistence allowance. For information, contact a professor of aerospace studies or a professor of military science.

Alice Prout Memorial Scholarship is awarded annually to a woman of junior rank of worthy character and high scholastic achievement whose standing is in the upper 25 per cent of her class.

Alumni Association provides 24 scholarships. Six \$300 scholarships are awarded by each of the three undergraduate colleges and six \$100 scholarships are awarded by the Firelands Campus Committee. Selection is based on academic record and financial need, and consideration is given to a son or daughter of a Bowling Green alumnus.

Alumni National Merit Scholarships are awarded to four incoming freshmen who have high National Merit Scholarship Qualifying Test scores and outstanding academic high school records. May be continued for four years. The University Scholarship Committee selects the recipients.

American Brake Shoe Company Scholarship provides full tuition to a rising junior majoring in accounting, with possible renewal in the senior year. Recommendations are made by the Department of Quantitative Analysis and Control.

Arthur Anderson provides two scholarships to graduate students in accounting. Recommendations are made through the Department of Quantitative Analysis and Control.

Bureau of Vocational Rehabilitation Scholarships are offered to a citizen of Ohio who has a definite physical disability which may be considered an employment handicap. This scholarship pays registration and other fees of a person who qualifies. Detailed information may be obtained by writing the Bureau of Vocational Rehabilitation, Room 309, Hartman Building, 79 East State Street, Columbus, Ohio 43215 or the area office at 503 Gardner Building, Toledo, Ohio 43604.

The NFBA Foundation, Inc. Scholarship is awarded to a student at either the undergraduate or graduate level who is interested in making a career in the food industry. The award of \$750 for the school year 1971-72, or \$250 for each quarter of the regular school year, is based on scholastic ability, character, and financial need. Selection is made by the faculty of the Department of Marketing.

Ernst and Ernst Scholarship provides two scholarships for \$350 each to seniors majoring in accounting. Selection is made by the faculty of the Department of Quantitative Analysis and Control.

General Motors Corporation Scholarships provide from \$200 to \$2,000, depending upon need, to University students selected from scholarship applicants of outstanding promise by the Scholarship Committee.

Griffith Memorial Foundation for insurance education provides one scholarship in the amount of \$150 per year.

Harshman-Cheek Scholarship is an award of \$250 for a rising junior in the College of Business Administration who, on the basis of scholarship and effective campus leadership, shows high promise of success in the business world.

Martin Luther King Scholarship fund provides tuition scholarships (\$650-\$750) and room and board scholarships (\$1,000-\$1,200) to high school graduates from low income families, irrespective of race, color, creed, or national origin. The Martin Luther King Scholarship Committee annually awards one new scholarship and renews two scholarships.

Ohio Society of Certified Public Accountants provides a grant to a rising senior of high scholastic standing and an interest in accounting. Selection is made by the Department of Quantitative Analysis and Control.

Peat, Marwick, and Mitchell provide a \$500 scholarship. Recommendations are made by the Department of Quantitative Analysis and Control.

The Sidney Frohman Scholarship Fund, established by the late Sidney Frohman of Sandusky, provides a number of scholarships each year for rising senior men selected on the basis of scholarship, character, ability, and need. Recipients are designated Sidney Frohman Scholars.

AWARDS

Alpha Delta Pi Alumni Award to a senior in American Studies.

Ann Batchelder Award to an outstanding woman graduating in English literature.

Caroline Nielsen Award to an outstanding student in Latin.

Class of 1926 Award to the top graduate in the College of Education.

Edward J. Karlin Memorial Award to an outstanding student in biology.

Faculty Women's Club Award to the junior woman with the highest accumulative point average.

Fred Gerlach Award to an international student who has achieved high academic standing and made significant contributions to intercultural activities.

Gordon McQuestion Award for outstanding work in chemistry.

Henry Rappaport Award to a rising junior in the College of Business Administration with the highest accumulative point average.

Hubert Porter Stone Award to the rising senior with the highest point average majoring or minoring in library science.

Insurance Agents Award to an outstanding junior in insurance.

Jane Shoemaker Smith Award to an outstanding graduating woman in health and physical education.

John Schwartz Award for an outstanding paper on a historical subject.

Maria Leonard Award to an outstanding senior woman who is a member of Alpha Lambda Delta.

The Nordmann Award to an outstanding senior in the College of Arts and Sciences.

Phi Eta Sigma Award to an outstanding sophomore man for leadership and participation in class and University organizations.

Roger Holliday Award to an international student who has achieved high academic standing and made significant contributions to intercultural activities.

The W. A. Tarr Award to an outstanding graduating senior majoring in geology or geophysics.

Williamson-Jordan Award to an outstanding junior in the College of Education.

GRANTS-IN-AID

A student majoring in music or speech or participating in intercollegiate athletics may possess special talents which may give him consideration for a special talent grant-in-aid. An application for such an award must be made to the head of the department involved.

EDUCATIONAL OPPORTUNITY GRANTS

An Educational Opportunity Grant is awarded to assist a student of exceptional financial need who for lack of financial means of his own or of his family would be unable to attend college otherwise. Primary consideration is given to a student from a family with an annual gross income of \$6,000 or less. This form of aid is not repaid; however, the University must match each grant in an equal amount through a University scholarship or grant-in-aid, a National Defense Student Loan, or campus employment. The applicant must be in good academic standing to apply for an Educational Opportunity Grant.

STUDENT DEVELOPMENT PROGRAM

The Student Development Program represents an area in which Bowling Green is trying to assist its non-white students. Now in its second year, the Program endeavors to aid Blacks and other educationally disadvantaged students by assisting them in meeting their financial and educational responsibilities.

OHIO INSTRUCTIONAL GRANT

The Ohio Instructional Grants Program has been established to provide grants to financially needy students to enable them to attend two-year or four-year public or private schools. The grants are not awarded upon the basis of scholarship, as such, but on the basis of relative financial need.

Eligibility: To be eligible for an Ohio Instructional Grant, a student must:

Be a resident of Ohio;

Be enrolled as a full-time undergraduate at Bowling Green State University;

Maintain a grade point average or obtain other standards of achievement considered by the University to indicate satisfactory progress toward an associate or a bachelor's degree;

Amount of Grant: Because Bowling Green's Instructional and General Fees are less than \$1,000 per year, the grants vary from a minimum of \$50 to a maximum of \$300.

Application: Students interested in applying for an Ohio Instructional Grant must complete the College Scholarship Service Parents' Confidential Statement.

Method of Payment: The student is awarded the Ohio Instructional Grant for which he qualifies through the Financial Aid Office, and the grant is applied toward his Instructional and General Fees one-third of the total each quarter of enrollment.

The above information relative to Ohio Instructional Grants is accurate as of November, 1970, and is subject to future changes by the Ohio Board of Regents.

LAW ENFORCEMENT EDUCATION

The Law Enforcement Assistance Administration of the United States Department of Justice through its Law Enforcement Education Program has allocated funds to Bowling Green State University for loans and grants to undergraduate and graduate sociology majors who enroll in the available criminology and correctional courses before finishing their degrees.

Loan and grant funds are also available to students currently employed by a law enforcement or correctional agency. Students accepting assistance from this source must guarantee that they will seek or continue their employment with a publicly funded law enforcement or correction agency upon completion of their course of study.

All students interested in additional information should contact the Director of Financial Aid.

ASSISTANTSHIPS

The University employs a qualified junior or senior to assist in a department or to serve as a residence hall counselor.

Information about a graduate assistantship in various departments or residence halls is available from the Office of the Graduate School. A graduate student is eligible to apply for the National Defense Student Loan when entering the University in good standing.

EMPLOYMENT

More than one-fourth of the students at Bowling Green State University earn part of their expenses annually through assigned work on campus. Assignments are made by the Office of Student Employment followed by a personal interview between the student and the head of the department or the office where he is to work. Among such positions are departmental and library assistants, custodians, clerks, receptionists, typists, and food service workers.

Part-time positions are also available in the city of Bowling Green. Information about these may be obtained from the Office of Student Employment.

No student who is carrying a full academic load is permitted to work more than 20 hours per week without proper approval. An entering freshman should limit the hours of employment to approximately 10 hours per week until he knows the nature and demands of his academic studies. If his point average is less than 2.0, he should avoid all outside employment and should devote full time to his studies. A freshman who desires campus employment may complete the necessary application while on campus during the summer pre-registration program.

A student whose parents are unable to assist him with his college expenses may be eligible to be employed under the College Work-Study Program. This is partially financed by the federal government, and the work assignment may be in the department of the student's major.

VETERANS AND WAR ORPHANS

Bowling Green State University is approved by the U.S. Veterans Administration for the education and training of veterans and war orphans under Public Laws 634 and 89-358. The programs of study in the three colleges and in the Graduate School are open to either a man or a woman who is eligible for benefits under these laws.

Information may be obtained from the Veterans' Counselor, Registrar's Office,

Administration Building, Bowling Green State University or from any Veterans Administration Office.

STUDENT LOANS

An allocation of funds is made annually by the federal government to Bowling Green State University under the terms of the National Defense Education Act of 1958 to provide a loan for college-related expenses to a student who needs financial assistance. An application for a National Defense Student Loan is made through the Student Financial Aid Office.

This is a long-term loan for a full-time undergraduate or graduate student. A prospective freshman must rank in the upper one-third of his high school graduating class and have a 2.5 cumulative point average for all work attempted in high school. A continuing student must meet the following criteria: a sophomore or junior must have a 2.2 cumulative and previous quarter average; a senior must have a 2.0 cumulative and previous quarter average.

A loan may be granted up to \$1,000 in any fiscal year or \$5,000 for the student's entire college career.

As much as 50 per cent of the loan may be cancelled for any borrower who serves as a full-time teacher in a public or other non-profit elementary or secondary school or an institution of higher education at the rate of 10 per cent per year up to five years of teaching. The loan is cancelled in the case of death or total disability. A special level of cancellation is provided if the borrower teaches in a depressed area or teaches special education as defined by the State Department of Education.

OTHER LOANS

The University has limited funds available for short-term loans to meet emergencies. The maximum amount loaned is \$50, and it must be repaid within one month. The student must be in good academic standing to apply for the loan.

A student may receive a larger loan for a current term, to be repaid within that term, at an interest rate of 4 per cent. The student must have a 2.0 point average or above. These loans are not available to a first-term freshman or a transfer student. Application is made through a conference with a staff member in the Student Financial Aid Office.

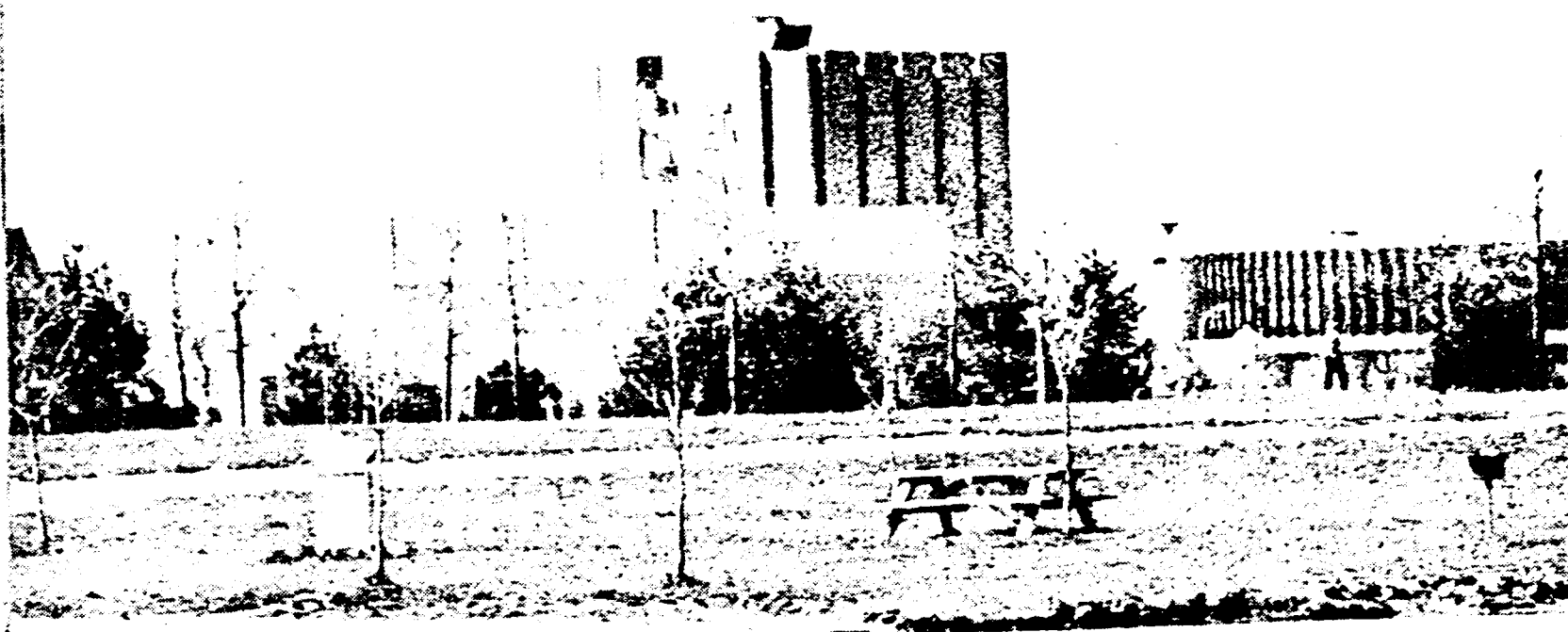
Under provisions of the Higher Education Act of 1965, a student may borrow from his local bank through a program guaranteed by the state of residence. If the family adjusted gross income is less than \$15,000, the interest on the loan may be paid by the federal government while he is a full-time student and for nine months after he leaves the college or university. After that, the borrower pays the interest as well as the principal charges.

TRANSFER STUDENTS

In view of the fact that Bowling Green is seriously limited in the amount of available financial assistance, a transfer student who does not hold an associate degree is not considered for aid until he has attended at least one quarter at Bowling Green State University. A student who has completed an associate degree is eligible for financial aid consideration during the first quarter of attendance. The above limitation on a transfer student does not apply to campus employment or to the renewal of a previously awarded Educational Opportunity Grant, providing the student continues to qualify for consideration.

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STUDENT LIFE AND ACTIVITIES

Social, cultural, and athletic programs are sponsored by various student organizations and academic departments of the University to round out the education of the student. An opportunity for self-government is afforded each student through his elected representative or by his own election to office. Many academic departments and student groups provide additional opportunities for learning through lectures, seminars, and activity programs.

Each voluntary student organization is considered to be a representative agency of student life in its area of interest and activity.

OFFICE OF STUDENT PROGRAMS AND ACTIVITIES

The Office of Student Programs and Activities is the center for student body government, the coordination of the all-campus social program, and Freshman Pre-Registration and Orientation Programs all of which are designed to aid the total development of the student at Bowling Green State University.

Here, through its many volunteer committees, the student is given the opportunity to take an active part in University affairs, creating capable and responsible leadership that enables the student to assist in developing sound policies and procedures in many aspects of University living, especially the community life of the student.

STUDENT BODY ORGANIZATION

An agency through which a student may participate in University administration and government is the student body organization which includes executive officers, Student Council, and Student Court. These bodies function under a definite set of responsibilities and authority delegated by the President of the University and outlined in a constitution adopted by a majority vote of the student body.

Purposes of the student body organization are to provide the student with a wide range of opportunity for responsible participation in the government of the University community and to give the University the advantage of student deliberation and experience in arriving at the soundest possible policies and practices with respect to matters which relate directly and uniformly to each student enrolled in the University. All councils and boards of the student body organization have available the advice of faculty members or administrative officers of the University.

In addition to the student body organization, the qualified student may serve on other policy-determining and administrative councils and committees of the University.

MEMBERSHIP IN UNIVERSITY-RECOGNIZED ORGANIZATIONS

Students are free to organize and join associations to promote their common interests, providing these associations are organized for legal purposes and do not conflict with the University's educational objectives.

Student Council will recognize social, service, and professional organizations based on the following policy:

1. Affiliation with an extramural organization will not of itself disqualify a student organization from institutional recognition;
2. Campus advisers who are members of the faculty or staff are required for any student organization receiving University funds. They are encouraged for all other organizations. Campus advisers may counsel organizations in the exercise of responsibility, but they will not have authority to control the policy of the organization;
3. Student organizations will be required to submit a statement of purpose, criteria for membership, rules of procedures, and a current list of officers. They will not be required to submit a membership list as a condition of institutional recognition;
4. Organizations, including those affiliated extramurally, must be open to all students without respect to race, creed, or national origin.

HONOR SOCIETIES

Student organizations sponsor programs to serve many interests. Heading the list of such groups are honor societies through which the student with a distinguished record in an academic field receives recognition and stimulation.

RELIGIOUS LIFE

Student religious organizations serve a student of any major faith through programs planned and directed by members of individual faiths.

The Religious Council, composed of representatives of recognized campus religious organizations, coordinates and stimulates activities that can be supported by all faiths.

FRATERNITIES AND SORORITIES

At the present time there are 12 national sororities and 21 national fraternities at Bowling Green State University. The living units managed by these groups are located on the campus. A freshman or an upperclass man may pledge a fraternity at the opening of each of the three quarters. A freshman or a transfer woman may pledge at the beginning of the second quarter while an upperclass woman may pledge at the opening of both the first and second quarters.

UNIVERSITY THEATRE

The University Theatre, a division of the Department of Speech, serves as a laboratory for any University student interested in theatre and speech. Through its extensive production program, it enriches the cultural experience of the student body and the community.

The University Theatre production program is staged in two theatres, the Main Auditorium and the Joe E. Brown Theatre. The production program normally consists of 12 major productions including one play for children and a reader's theatre production; student-directed bills of one act plays; and several Theatre Unbound productions, experimental and innovative approaches to new or established scripts. Ample opportunity is available to each University student to participate in the program as a performer or technician.

WBGU RADIO

The University's public FM station, WBGU, provides public service, cultural, and educational programming to the residents of northwestern Ohio. Music of all types, news and educational features, and University athletic events are included in the WBGU program schedule. The station operates daily under license of the Federal Communications Commission on a frequency of 88.1 megahertz with a radiated power of 1,350 watts from studios in South Hall.

WFAL RADIO

Carrier-current WFAL is a student-operated commercial AM radio station broadcasting to the residence halls on campus. The station provides communication to and among students while providing top quality commercial programming designed to meet student interests. The station is heard in the residence halls on any AM radio at 680 kc. WFAL operates throughout fall, winter, and spring quarters. The office and studio are located in South Hall.

THE TELEVISION AND FILM CENTER

Located on South Campus the University Television and Film Center contains WBGU-TV, public television station, closed-circuit instructional television production and distribution facilities, and educational film production operations.

The Center's award-winning staff of more than 20 full-time professional broadcasters and film makers are assisted by graduate assistants, doctoral fellows, and over 50 undergraduate employees.

WBGU-TV, a regional public television station serving northwestern Ohio, broadcasts instructional television programs to elementary and secondary classrooms during the day and cultural and public affairs programs to the general public throughout the evening. It is affiliated with the Public Broadcasting Service (the national public television network) and with the Ohio ETV Network. The station's extensive local program production schedule provides student opportunities for professional production experience both in television and film making.

TELEVISION AND FILM INSTRUCTION

The Closed-Circuit Instructional Television Office serves the campus community with telecourses and a variety of other educational TV and film materials utilized by academic departments. A campus-wide dual TV Cable system is being planned to carry commercial station programming and educational programming to all residence halls. The system will provide opportunity, also, for intra-University communications.

The Center's film-making staff contracts with state and other agencies for film production projects, some of which attain nationwide distribution.

In addition to the Television and Film Center, the Department of Speech building contains complete television and film production facilities. Students enrolled in courses in the Radio-Television-Film area of the Department work in modern radio and television studios and film-making quarters. Professional film-making equipment, including a completely equipped dark room, makes it possible for a student to work in creative, experimental film production. Outstanding student-made films can be aired on the University closed-circuit TV system and on WBGU-TV and may be entered in film festivals.

A new television studio-classroom affords opportunities for faculty and students to conduct research involving videotaping techniques.

FORENSICS

A broad program in forensics, stressing debate, extempore speaking, public address, and interpretative reading, is sponsored by the Department of Speech. Experienced and beginning debate teams travel throughout the nation debating the national collegiate proposition against the teams of other colleges and universities.

MUSIC ORGANIZATIONS

Membership in music organizations is open to every student whether he is majoring in music or not with selection made on the basis of tryouts. These organizations include the A Capella Choir and Collegiate Chorale; Concert, Marching, and Symphonic Bands; the University Chorus; and a number of other vocal and instrumental ensembles, including Collegium Musicum and Jazz Lab Band.

See page 162 for a full listing of ensembles.

STUDENT PUBLICATIONS

The two major campus publications, *The BG News*—the newspaper—and *The Key*—the yearbook—are published under the supervision of a student-faculty committee. *The BG News* serves (to some extent) as a laboratory for the School of Journalism, but any student is eligible for a staff position on either *The BG News* or *The Key*.

INTRAMURAL SPORTS

The intramural program includes approximately 40 different activities. Among these are archery, badminton, basketball, bowling, fencing, golf, handball, field hockey, horseshoes, outing, softball, swimming, tennis, platform tennis, touch football, ice hockey, track, and volleyball.

INTERCOLLEGIATE ATHLETICS

Intercollegiate athletic teams at Bowling Green are nicknamed the Falcons and compete in baseball, basketball, cross-country, football, golf, hockey, lacrosse, soccer, swimming, tennis, track, and wrestling. Women's basketball, golf, gymnastics, hockey, softball, swimming, tennis, track, and volleyball teams compete with teams from other colleges and universities.

New sports activities at the University are first established on a club basis and later receive intercollegiate status. There are club teams in curling, gymnastics, rifle, rugby, and sailing.

The University is a member of the Mid-American Conference, which also includes Kent State University, Miami University, Ohio University, and the University of Toledo in Ohio and Western Michigan University in Michigan.

A student who is in good scholastic standing is eligible to compete in intercollegiate contests. When a student becomes a candidate for a position on any of the teams that compete in intercollegiate contests, it is presumed that he does so with the knowledge and consent of his parents or guardian. Every precaution is taken to safeguard the health of the student who participates in an intercollegiate sport. A physician is always present at intercollegiate contests in the more rigorous sports. Although the University carries a restricted type of insurance on team members, it can guarantee to pay only the cost of first-aid treatment in the event of injury.

UNIVERSITY REGULATIONS

The increasingly complex organization of a growing University dictates that student regulations must be broadly conceived and must vary from college to college. As the academic programs of the colleges change, the regulations that govern the student have to be modified.

The student should be prepared to accept responsibility for his own conduct and the consequences of his success or failure. The University as an institution cannot act *in loco parentis*, nor does it attempt to do so. The University provides a comprehensive program of student services including a Student Medical Center, a Counseling Center, counseling by the Dean of Students and his staff, an Office of Career Planning and Placement, and other counseling services. Each student can, on his own initiative, secure the counseling he needs by communicating with the appropriate office.

CLASS ATTENDANCE

The faculty believes that the activities of the classroom have an essential relationship to learning and to the application of knowledge. It further believes that the serious student seeks to maximize his opportunities to work toward achieving his academic goals by attending classes regularly.

The development of effective student-teacher relationships requires, however, an attendance policy which recognizes the rights and responsibilities of both a student and his instructors and which is flexible and responsive to the wishes of many. On this principle, regulations have been established for the guidance of both a student

and his instructors in working out arrangements which best meet the needs of the effective classroom experience.

A student in 100- and 200-level courses is permitted to be absent without authorization the equivalence of the meetings of each course in one week. The instructor may permit double this number of unauthorized absences for each student in 100- and 200-level courses. A student in 300- and 400-level courses is permitted unlimited absences subject, however, to the qualifying provisions given in the following paragraphs.

In all courses at all levels the instructor has no obligation to give make-up examinations or to review other class work missed by a student because of an unauthorized absence. The student has the obligation to ascertain when tests may be given and when assignments may be due. It is the responsibility of an instructor to make his attendance policy for the course known at the beginning of each quarter and to indicate what class participation is involved in the determination of the course grade. The instructor may warn a student that absences are jeopardizing his standing, may inform the student's academic dean, and may recommend that the student be withdrawn from the course. Exceptions to these policies may be made only by departmental action, and exceptions apply to all sections of a course.

A student may be authorized to be absent from classes for reasons of University-sponsored activities, personal illness when attended by a University physician, death in the immediate family, and other genuine emergencies. Absences for illness are authorized by the Student Medical Center when a student is hospitalized in the Student Medical Center or under treatment at home and presents a certificate to this effect when he returns to school. Absences for University-sponsored activities are authorized by the office of the appropriate dean; absences for other just causes are authorized by the Dean of Students. The authorization is certified by the Registrar, and the student is expected to obtain such certification to show instructors upon returning to class. A student is permitted to arrange to make up major tests and examinations when absences are authorized. The responsibility, however, for making up work missed during absences rests with the student.

A full-time student whose total academic load falls below the minimum credit hours as stated in the *Bulletin* for full-time registration is subject to dismissal from the University whether the reduction is by the student's choice or for excessive absences.

Each instructor maintains attendance records.

The University not only encourages each student to exercise freely the rights but also to assume the responsibilities of academic citizenship.

ACADEMIC HONESTY

One of the objectives of the University Policy on Academic Honesty is to communicate to all members of the University community the conviction of the University and its faculty that cheating and plagiarism are destructive to the central purposes of the University and are universally disapproved. In addition, the policy statement provides procedures for accomplishing these objectives by the student body, faculty, academic deans, and the University Academic Honesty Committee.

Included among these procedures are the following provisions:

1. Each faculty member should include in his introduction to a course a statement of his policies with regard to cheating and plagiarism;
2. Every instance of academic dishonesty must be reported to the dean of the college in which the student is enrolled, to the dean of the college in which the course is taught, and to the Dean of Students either by the instructor or by a student in the class where the incident occurs;
3. Penalties for offenses may range from warning to expulsion; a range of penalties for each particular type of offense is listed in the policy statement;
4. The University Academic Honesty Committee shall have appellate jurisdiction in cases of academic dishonesty. The academic dean assessing a penalty shall inform the student in writing of his right to appeal. An appeal must be initiated in writing within ten days of the date on which the student receives notice of the penalty. An appeal may be based on new evidence or on procedural errors in the proceedings leading to the assessment of the penalty;

5. The complete statement of policy is published in all editions of the *Student and Faculty Handbooks*.

CAUSE FOR SUSPENSION

The University reserves the right to suspend or dismiss a student whenever he fails to observe and support basic University regulations and policies.

Regulations regarding suspension or dismissal for unsatisfactory scholarship are described in the section on *Academic Standing*. (See page 19.)

STUDENT USE OF AUTOMOBILES

The University recognizes that the use of automobiles is a part of the daily living of most Americans and considers it a part of a student's education that he develop habits of responsible citizenship in this respect. However, present congested conditions on campus, limited parking facilities, and the proximity of freshman residence halls to classroom buildings dictate that parking for a car registered by a freshman be limited to designated spaces some distance from the center of the campus. Unless use of a car is necessary to avoid severe hardship, a freshman should not plan to bring one to the campus.

MARRIAGE OF STUDENTS

A student who marries while enrolled in the University is requested to inform the Dean of Students immediately.

POSSESSION OF FIREARMS

Only those firearms which are owned by the United States government and are issued by the military departments and firearms which are owned and are issued by the University are permitted on campus.

ARMY AND AIR FORCE ROTC

A qualified student may earn a commission as a second lieutenant while studying for a college degree by enrolling in the Reserve Officers Training Corps (ROTC). He may choose either the Army or Air Force ROTC at Bowling Green State University. Both Army and Air Force ROTC enroll approximately 300 cadets each.

Under the provisions of the 1964 ROTC Vitalization Act, two programs are offered for both the Army and Air Force.

1. A four-year voluntary program (basic and advanced courses) with ROTC books and uniforms furnished at no cost to the student plus \$50 per month paid to the student during the advanced course (junior and senior years).

Qualified students may apply for the scholarship program which covers University expenses (except room and board) including fees, books, and uniforms plus \$50 per month. The student competes for this scholarship on a national basis while in high school or at Bowling Green State University.

2. A two-year voluntary program (advanced course) during the junior and senior years with ROTC books and uniforms furnished at no cost to the student plus \$50 per month paid to the student.

Prior to starting the two-year program, the student completes a six-week summer field training period at an active military base. This is a substitute for the ROTC basic course. The student is paid a total of approximately \$150 during this training.

An advanced course six-week field training period is taken by each student in the advanced Army ROTC Program following the junior year. The student is paid \$208.80 per month during this training period.

An Air Force ROTC cadet enrolled in the four-year voluntary program only is required to attend four weeks of summer training prior to the junior year. The student is paid \$208.80 per month during this training period.

Additionally, each student attending summer field training is furnished food, housing, uniforms, medical care, and travel expenses to and from camp.

Following successful completion of the ROTC program, the student is commissioned as a second lieutenant in the U.S. Air Force or Army Reserve. At this time, he receives a \$300 uniform allowance.

A student attending a nearby college or university which does not have an ROTC unit may enroll in the advanced ROTC program provided the officials of both institutions and the military department concerned concur.

Enrollment in ROTC is elective, but while enrolled the student must remain a full-time student studying toward a degree. While taking the basic course, the student may withdraw from ROTC and receive academic credit for that portion of the program which he has successfully completed. The student who is out of phase with his normal class progression may enroll in the ROTC program provided he is in good academic standing. A former serviceman may, during his sophomore year, apply for entry directly into the advanced program.

A candidate for the optional two-year Army or Air Force ROTC advanced course should apply for admission in December, normally in his sophomore year. However, any student with six quarters remaining toward the bachelor's degree or higher work at Bowling Green may apply. Selection is based on the results of physical and mental examinations, academic standing, and successful completion of the summer field training prior to enrollment in the advanced course.

Most undergraduate programs allow the student at least 30 hours of electives. From 24 to 30 hours are allowed for the four-year ROTC program. All credits earned in ROTC apply toward graduation.

To help finance cadet corps social activities, the Army and Air Force ROTC cadet councils, at the request of their members, have established an annual activity charge of approximately \$5 per ROTC student, payable in September.

ARMY ROTC

Both the four- and two-year ROTC Programs are available at the University, but the primary Army ROTC Program remains a voluntary four-year course of instruction. The student who elects Army ROTC prepares for leadership positions to which he is assigned soon after entering active duty. A thorough understanding of leadership principles, as well as self-discipline, is required in the preparation of the student entering the Army.

The four-year program is divided into two phases: the basic course which is offered during the freshman and sophomore years, and the advanced course which is offered during the junior and senior years. A freshman may enroll in the basic course and either apply for the advanced course or withdraw from the program at any time during the first two years. A student who applies for the advanced course must be in good academic standing, pass a general aptitude qualification test and general type physical examination, and be accepted for further military education by the Department of Military Science.

Several field trips are scheduled to selected military installations to orient cadets on various aspects of military life.

To enroll in the optional two-year Army ROTC Program, the student must, in addition to meeting the advanced course prerequisites, attend a summer military field training period of not less than six weeks prior to his enrolling in Military Science 301.

When a student has successfully met all requirements for the advanced course and his selection has been approved by the Department of Military Science, he is enlisted in the U.S. Army Reserve as part of his contract agreement. The cadet who is graduated and commissioned is honorably discharged from his enlisted status prior to receiving his commission. He is then required to serve on active duty for a period of two years.

An Army Aviation Flight Training Program leading to a private pilot's license is offered by the University. A selected senior in the Army ROTC who completes the program may apply for 3 hours of credit in Industrial Education and Technology 141, Private Pilot Training. This training is offered at no cost to the student. In addition, the student who successfully completes this program becomes eligible to

apply for further training as an Army aviator after receiving his commission and entering active duty.

The Army ROTC academic program provides a four-year student with a total of 30 hours of credit (33 hours with flight training) and the two-year student with a total of 18 hours of credit (21 hours with flight training). The student who enters the four-year program and completes the basic course but who elects not to enter the advanced course may earn 12 hours of credit.

AIR FORCE ROTC

Male and female students desiring to enroll in Air Force ROTC must meet aptitude requirements. Enrollment is elective, but while enrolled the student must remain a full time student studying toward a degree.

The student who is enrolled in the four-year program takes Aerospace Studies 101, 102, 103 in the freshman year and Aerospace Studies 201, 202, 203 in the sophomore year. He spends two hours per week in ROTC courses for which he receives 1 hour of credit for each quarter. The advanced course student earns 3 hours of credit for each of six quarters of the advanced course.

The entering freshman who wishes to enroll in Air Force ROTC for the four-year program should register for Aerospace Studies 101 during registration. The student who desires to compete for a limited number of spaces in the two-year program should notify Air Force ROTC in Memorial Hall during December of his sophomore year. A freshman entering during mid-year may enroll in Aerospace Studies 102 or 103 as appropriate.

The student who is accepted for the advanced course must be in good academic standing with the University, have earned at least a 2.0 on a 4.0 scale grade point average, have successfully completed the Air Force Officer's Qualifying Test (general knowledge and aptitude) and the Air Force medical examination, be of high moral character, and demonstrate high leadership potential as an officer.

See pages 115, 116 for required courses for both the two-year and four-year programs.

A selected qualified senior in Air Force ROTC may receive 36½ hours of flying training at the University Airport at no cost to himself. The student who successfully completes this training is eligible for a private pilot's license and receives 6 additional hours of credit. A senior Air Force ROTC student who has previously received his FAA private pilot's license is not eligible for this training.

The Air Force ROTC corps training activities, which are part of each course, offer the student many opportunities for practical leadership training and experience in a supervised environment. The activities include an organized cadet corps led by a cadet commander and his staff and organized classroom situations to prepare the student to assume and carry out leadership responsibilities in civilian positions as well as in the U.S. Air Force.

The student who successfully completes the Air Force ROTC program and graduates from the University is commissioned as a second lieutenant in the U.S. Air Force, and should expect to be called to active duty in the Air Force during the year following graduation. He should plan to serve for four years except that officers who elect pilot or navigator training should plan to serve for six years. An officer may elect to serve as a career USAF officer after the initial tour of active duty; or he may return to a civilian career and, at his option, retain a reserve commission. A graduate may delay entry into active duty to attend graduate school.



THE COLLEGE OF ARTS AND SCIENCES

John G. Eriksen, Dean
Allen N. Kepke, Assistant Dean
Donald M. Ragusa, Assistant Dean
Howard L. Shine, Assistant Dean
Ralph N. Townsend, Assistant Dean

Arts and Sciences Council

James Q. Graham, Chairman; Louis C. Graue, Past Chairman; Sheldon Halpern, Secretary; Ralph W. Frank, Joseph J. Mancuso; Brownell Salomon; John G. Eriksen, ex-officio; Allen N. Kepke, ex-officio; Donald M. Ragusa, ex-officio; Howard L. Shine, ex-officio; Ralph N. Townsend, ex-officio.

Arts and Humanities Committee

Brownell Salomon, Chairman; Philip R. Wigg, Secretary; Anthony B. Baynard; Lois A. Cheney; Ramona T. Cormier; Eva-Maria Gabor Parnell; William B. Pepper; Allen N. Kepke, ex-officio.

Science and Mathematics Committee

Joseph J. Mancuso, Chairman; Edgar R. Singleton, Secretary; Ivan E. Den Besten; David L. Fulton; Irwin I. Oster; Lian David Sabbagh; Ralph N. Townsend, ex-officio.

Social Sciences Committee

Ralph W. Frank, Chairman; John T. Greene, Secretary; Edward S. Claflin; J. David Reed; Bernard Sternsher; Lajos Vincze; Donald M. Ragusa, ex-officio.

Academic Appeals Committee

This committee considers student requests for minor deviations from established academic patterns, problems of reinstatement, overload requests, etc. Academic Appeals forms may be obtained in the office of the College of Arts and Sciences.

Academic Advising

Although the adviser and the Dean's Office counsel students and check each student's record, the responsibility for meeting graduation requirements lies with the student and not with the adviser, the department or the Dean. Thorough familiarity with the *General Bulletin* is essential.

ARTS AND SCIENCES

The College of Arts and Sciences is devoted to guiding the student in the development of the creative intellectual ability and concern fundamental to that search for knowledge which is the primary purpose of all educated men and women. Through a curriculum which emphasizes a breadth of intellectual inquiry in the natural sciences, the social sciences, the arts, and the humanities, the student is

brought into contact with the great questions (epistemological, ethical, social, aesthetic, and political) which every man or woman must ultimately consider. As an integral part of this higher learning, the student pursues work in a major field of interest to a level of knowledge that requires him to learn the critical and scholarly methods involved in developing and testing new knowledge.

The program of the College of Arts and Sciences provides an excellent, in many ways the best possible, foundation for any vocation rather than specific training for a particular career. Largely because of this breadth of education, vocational opportunities exist for nearly every graduate of the four-year Arts and Sciences program. Certain professions—medicine, law, etc.—however, require that the student plan to attend a graduate school after receiving the Arts and Sciences degree.

DEGREES OFFERED

Three degrees are offered by the College of Arts and Sciences:

- Bachelor of Arts
- Bachelor of Science
- Bachelor of Fine Arts

GENERAL REQUIREMENTS FOR A DEGREE

In addition to specific requirements listed on the following pages, a candidate for any degree in the College of Arts and Sciences must meet these general requirements:

1. Satisfy the University entrance requirements;
2. Complete in residence at least 45 hours of credit immediately preceding graduation;
3. Earn a minimum of 183 hours of credit including 3 hours in health and physical education;
4. Complete the requirements as stated in the *General Bulletin* for his course of study. If a dropped student is readmitted, he shall follow the requirements of the *General Bulletin* current at the time of readmission. A student who withdraws and later returns may continue to follow the requirements current when he was first admitted, provided that the *General Bulletin* is no more than four years old. A student who transfers to the College of Arts and Sciences from another college will follow the requirements of the *General Bulletin* current at the time of transfer.

Courses may be counted toward the required 183 credits if they are:

1. Required or recommended in the student's major or minor;
2. Basic courses in health and physical education—H.P.E. 100 and 200—or basic or advanced courses in Air Force or Army ROTC Programs;
3. Offered by Departments or divisions marked with an asterisk in the *Description of Courses*, namely: Art—except 343, 352, 353; Biology; Chemistry; Computer Science; Economics—except 409, 444, 461; English; Geography; Geology; German and Russian; History; Honors; Mathematics—except 241, 242; Music—except 351, 352, 353, 354, 355, 356, 456, and courses in pedagogy; Philosophy; Physics; Political Science; Psychology; Romance Languages; Sociology; Speech—except 425, 435; Statistics—in Department of Quantitative Analysis and Control.

A maximum of 20 hours not meeting these specifications may be included in the 183 hours required for the degree offered by the College of Arts and Sciences. Courses marked *not for Arts and Sciences credit* may be elected under this provision.

The student also must earn a point average of at least 2.0 in all courses undertaken, and he must complete 60 or more hours of credit in courses numbered 300 and above.

A candidate for graduation must file an *Application for Graduation* with the Registrar. An application blank for this purpose may be obtained at the Registrar's Office. See page 16 for deadlines for *Application for Graduation*.

SPECIAL STATUS PRIVILEGES

The student in the College of Arts and Sciences who has demonstrated superior ability and motivation in his college work may petition the office of the Dean of the College of Arts and Sciences for Special Status after one year in the University. Admission to Special Status will permit exceptions to certain regular academic patterns for the purpose of enriching and individualizing a student's academic program. A student, however, will normally be expected to meet the group requirements of the College. In most cases, Special Status is granted when the student's intellectual goals cannot be met within the framework of the major-minor structure of any one department. The written petition for Special Status must be accompanied by a written recommendation from the student's adviser. In addition, a reasonably detailed program indicating the courses and seminars to be taken in the future should be included.

SPECIFIC REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

Each student must complete the group requirements listed below as nearly as possible in the freshman and sophomore years and must satisfy the requirements for a major and a minor area of specialization as outlined on page 44. Every student, however, must take English and health and physical education in the first year. If known, the major or minor may be started in the first year; but selection of the major may be made as late as the junior year.

Group Requirements

Group I: *English Composition.* Each student is required to complete English 112 or to demonstrate by examination that he has a proficiency in written expression equivalent to that attained by the student who completes that course. Speech 102 is recommended for each student.

Group II: *French, German, Italian, Latin, Russian, Spanish.* Each student is required to demonstrate a proficiency equivalent to completion of French 202, German 202, Italian 202, Spanish 202, Russian 202, or Latin 202. This may be satisfied by:

1. Completing the course in college;
2. Passing an examination in the language;
3. Having completed four years of study of one language in high school;
4. Having been graduated from a high school where all instruction was conducted in a language other than English.

Credit toward a degree is not granted for less than 10 hours in 100-level courses in the same language nor for a 100-level foreign language course which duplicates credit earned in high school.

Group III: *Mathematics and Science.* Each student must complete both 1 and 2;

1. At least 12 hours elected from biology, computer science, chemistry, geology, physics, or physical geography (including Geography 125, 126, 127, 213, 404, 471) including at least three laboratory courses in the same science;*
2. One of the following:
 - a. Three and one-half years of high school mathematics or equivalent proficiency as demonstrated on a placement test;
 - b. Mathematics 122, 124, or 130;
 - c. Mathematics 121, Philosophy 205 or 206.

Group IV: *Economics, Geography, History, Political Science, Psychology, Sociology.* Each student is required to complete six courses selected from at least three of these areas with at least three courses in one area.

Group V: *Art, Literature (American, English, or foreign), Music, Philosophy, Speech.* Each student is required to complete one course in literature (American, English, or foreign) and four additional courses from at least two of the following areas:

* Biology 101, 104 or Chemistry 111, 112 suffice to meet this laboratory requirement. Science courses numbered 100 do not apply upon a student's degree requirements if he also has credit for the introductory laboratory course in the same science.

Art 101, art history; American, English, or foreign literature; music appreciation, music history, music literature; philosophy (except Philosophy 205 or 206 used to apply to Group III); drama, history of public address. A list of courses approved for the Group V requirements is available in the office of the College of Arts and Sciences.

SPECIFIC REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE

Each student must complete the group requirements listed below as nearly as possible in the freshman and sophomore years and must satisfy the requirements for a major and minor area of specialization as outlined below. Every student, however, must take English and health and physical education in the first year. If known, the major or minor may be started in the first year, but final selection of the major may be made as late as the junior year.

The student must satisfy the requirements for a major area of specialization in biology, chemistry, computer science, geology, mathematics, physics, or psychology and a minor area of specialization as outlined below.

Group Requirements

Group I: *English Composition.* Each student is required to complete English 112 or to demonstrate by examination that he has a proficiency in written expression equivalent to that attained by the student who completes that course. Speech 102 is recommended for each student.

Group II: *French, German, Italian, Latin, Russian, Spanish.* Each student is required to demonstrate a proficiency equivalent to completion of French 202, German 202, Italian 202, Spanish 202, Russian 202, or Latin 202. This may be satisfied by:

1. Completing the course in college;
2. Passing an examination in the language;
3. Having completed four years of study of one language in high school;
4. Having been graduated from a high school where all instruction was conducted in a language other than English.

Group III: *Biology, Chemistry, Computer Science, Geology, Mathematics, Physics, Psychology.*** A student is required to complete a minimum of 65 hours of credit in two or more of these fields including:

1. A major in biology, chemistry, computer science, geology, mathematics, physics, or psychology;
2. A minimum proficiency in mathematics equivalent to Mathematics 130 or four years of high school mathematics.

Group IV: *Economics, Geography, History, Political Science, Psychology, Sociology.* Each student is required to complete four courses in one or more of these areas. A student who includes psychology courses in Group III may not include psychology courses in this group.

Group V: *Art, Literature (American, English, or foreign), Music, Philosophy, Speech.* Each student is required to complete one course in literature (American, English, or foreign) and three additional courses from at least two of the following areas: Art 101, art history; American, English, or foreign literature; music literature; philosophy; drama, history of public address. A list of courses approved for the Group V requirements is available in the Office of the College of Arts and Sciences.

MAJOR AND MINOR PATTERNS FOR THE DEGREES OF BACHELOR OF ARTS AND BACHELOR OF SCIENCE

By the middle of the second year, each student selects a major and a minor subject. The number of hours required for a major or minor varies with departmental

**** Science courses numbered 100 do not apply upon a student's degree requirements if the student also has credit for the introductory laboratory course in the same science. Psychology credits may be applied to this group only by a student majoring or minoring in psychology and may not exceed 36 of the 65 credits.**

requirements but is at least 48 hours in the major and 30 hours in the minor except as indicated in the following sections. In arranging courses in the minor field, a student should consult the department concerned.

Major or minor programs are available in the following Departments:

Art; Biology; Business Administration; Chemistry; Computer Science; Economics; English; French;

Geography; Geology, Geophysics, or Geochemistry; German; History; Home Economics; Journalism-minor;

Latin; Library Science-minor; Mathematics; Music; Philosophy; Physics; Political Science; Psychology; Russian; Sociology; Spanish; Speech.

An interdepartmental minor in the area of recreation may be elected. The program is described on page 50.

An interdepartmental planned program of 63 hours minimum in American Studies may be elected. No minor is required. Major requirements are listed below, and the program is described on page 111.

An interdepartmental planned program of 68 hours in International Studies may be elected. The program is described on page 111.

An interdepartmental planned program of 65 hours minimum in Popular Culture may be elected. No minor is required. Major requirements are listed below, and the program is described on page 113.

An interdepartmental minor in science is available for the student seeking the degree of Bachelor of Science. The program is described on page 50.

MAJOR AND MINOR SUBJECTS

The following outlines represent the usual sequences; but these may be modified, upon the recommendation of the department, to meet the needs of the student.

AMERICAN STUDIES. Planned Program—no minor required: This interdepartmental program requires 63 hours minimum including the following 6-9 hours of basic courses in each of the departments involved: Art 457, either Art 444 or 456; English 303, 304, 305; History 205, 206; Philosophy 101, 415; Political Science 201, 202. A second requirement is a field of concentration of 23 hours (including the basic courses) in one of the five departments. An additional 4 hours of the 63 must be devoted to a senior seminar in the department of concentration. The remainder of the individual program is composed of electives approved by the American Studies adviser. See page 111.

ART. Major: *First Year*—Art 102, 103, 112, 145, 146. *Second Year*—Art 205, 211, 245; 261 and 263; 371 and 373; 377. *Third and Fourth Years*—3 hours of art history, electives in art.

Minor: *First Year*—Art 102, 103, 112, 145, 146. *Second Year*—Art 245, electives in art. *Third and Fourth Years*—3 hours of art history, electives in art.

ART HISTORY. Minor: Art 145, 146, 245, electives in art history. Total: 30 hours.

BIOLOGY. Major: *First Year*—Biology 106, 107. *Second Year*—Biology 208, 213, 251. *Third and Fourth Years*—a minimum of 15 hours at the 400-level and electives in biology. One course in organic chemistry (with laboratory) is required. Biochemistry, calculus, and physics are recommended.

Minor: *First Year*—Biology 106, 107. *Second Year*—Biology 208, 213, 251. *Third and Fourth Years*—electives in biology. Two quarters of laboratory chemistry are required.

BUSINESS ADMINISTRATION. Major: *First Year*—Statistics 111, Quantitative Analysis and Control 160. *Second Year*—Accounting 221, 222; Economics 201, 202; Statistics 212. *Third Year*—Economics 303/311; Finance 341; Management 300; Marketing 300. *Fourth Year*—Business Law 301; Business Administration 405. Total: 51 hours.

Minor: *First Year*—Statistics 111, Quantitative Analysis and Control 160. *Second Year*—Economics 201, 202; Accounting 221, (222). *Third Year*—Finance 341; Management 300; Marketing 300. *Fourth Year*—Business Administration 403. Total: 35-39 hours.

CHEMISTRY. The following basic courses are required of each chemistry major: Chemistry 121, 122, 123, 201 or 131, 132, 133, 450—the preferred sequence for one who meets the requirements; 310—except in the least rigorous major, 343, 344, 345. Additional chemistry courses required for each of three levels are listed in the following paragraphs.

A.C.S. Major: the American Chemical Society minimum standards for professional training require Chemistry 431, 433, 435; at least 3 quarter hours of credit in Chemistry 432, 434, 436; 350 or 450; 346 or 430; 451; 460, 461; and two advanced courses selected from Chemistry 413, 414, 430, 440, 445, 511, 512, 514, 515 or approved 400-level courses in physics and mathematics. To complete this program, a student should take physical chemistry before his senior year. Mathematics 333 (or Physics 341); Physics 131, 232, 233, one year of German or Russian are also required.

A Major: a student who wishes to complete a more limited major, but one that is adequate for advanced study at a later time, should take Chemistry 431, 433, 435; 432, 434; electives from Chemistry 413, 414; 430; 445; 451; 460, 461. Mathematics 232 is required. German or Russian should be selected as the foreign language. Total: 48 hours of chemistry.

B Major: a student who desires a still less rigorous major in chemistry as the basis for a profession other than chemistry or for less technical employment may meet the minimum requirements for a major by completing additional chemistry courses as follows: 1. At least one course in physical chemistry—Chemistry 352 or 431, 432. Other courses selected from the following: Chemistry 307 or 445, 310, 350, 413, 430, 433, 434, 435, 436; 3. At least one 400-level chemistry course. Total: 48 hours.

A chemistry major specializing in biochemistry may find the following sequence of biology courses desirable: Biology 106, 107, 251 to be followed by selected courses in physiology, bacteriology, immunology, or advanced genetics.

Minor: *First Year*—Chemistry 121, 122, 123 or 131, 132, 133. *Second Year*—Chemistry 201, electives in chemistry. *Third and Fourth Years*—electives in chemistry.

COMPUTER SCIENCE. Major: Computer Science 101, 202, 203, 304, 305, 306, 307, 408; any two of the following: Computer Science 409, 410, 411, 451, 452, 490.

Minor: Computer Science 101, 202, 306, 408, 490, and two additional computer science courses.

ECONOMICS. Major: *Second Year*—Economics 201, 202; Statistics 111, 212 or equivalent. *Third Year*—Economics 302, 303, 311, electives in economics. *Fourth Year*—electives in economics.

Minor: *Second Year*—Economics 201, 202. *Third Year*—Economics 302, 303, 311. *Fourth Year*—electives in economics.

ENGLISH. Major: English 112 or equivalent; English 202; one of the following: English 203, 204, 207, 308; English 301; any two of the following: English 303, 304, 305; any two of the following: English 309, 310, 311; at least one course from each of three of the following groups. The program must include one 400-level course in English. Minimum total: 48 hours.

Minor: English 112 or equivalent; English 202; one of the following: English 203, 204, 207, 308; English 301; any two of the following: English 303, 304, 305; any two of the following: English 309, 310, 311; one 400-level course from each of two groups—English 380 or 407 may be substituted for one of these. Minimum total: 44 hours.

Group I: English 306, 312, 314, 400, 482; **Group II:** English 315, 401, 406, 408, 410; **Group III:** English 317, 318, 331, 332, 415, 416; **Group IV:** English 320, 322, 323, 325, 409, 419, 430, 435.

FRENCH. Major: French 351 or 352, 361, 362, 371, 372, electives including a minimum of five 400-level courses. Total: at least 33 hours beyond French 202.

Minor: French 361, 362, 371, 372, electives. Total: at least 21 hours beyond French 202.

GEOGRAPHY. Major: *First Year*—Geography 125, 126, 127. *Second, Third, and Fourth Years*—Geography 321, 322, 350, 410; two of the following: Geography

341, 342, 343, 344, 345, 346, 347, 348, 349; three of the following: Geography 213, 225, 230, 402, 411, 412, 413, 425, 426, 430, 451, 452.

Minor: *First Year*—Geography 125, 126, 127. *Second, Third, and Fourth Years*—Geography 321, 322, 350; one of the following: Geography 341, 342, 343, 344, 345, 346, 347, 348, 349; one of the following: Geography 213, 225, 230, 402, 404, 411, 412, 413, 425, 426, 451, 452.

A geography major may elect to specialize in cartography. Such a student should also take Mathematics 130, 131; Statistics 111.

A geography major who is interested in economic geography should elect Geography 225, 402, 426; Statistics 111.

GEOLOGY. Major—B.S.: 40 hours above the 100-level courses including Geology 302, 303, 307, 308, 309, 311, 312, 320, 321, 412. Geology 494 taken at Bowling Green (or the equivalent in geology field work with the approval of the Undergraduate Committee of the Department) also is required. A student majoring in geology for the B.S. degree is required to complete Chemistry 121, 122, 123 or Chemistry 131, 132; Mathematics 131; Physics 110, 211.

A student with a concentration in paleontology must complete the requirements for the equivalent B.S. degree in geology plus a minor in biology.

A student may elect to specialize in geophysics. Such a student should take the following courses: Geology 307, 308, 309, 311, 320 or 321, 494; Chemistry 131, 132; Physics 131, 232, 233, 334, plus a minimum of four additional hours of upper level courses; Mathematics 131, 231, 232, plus a minimum of four additional hours of upper level courses; Computer Science 101.

A student may elect to specialize in geochemistry. Such a student should take the following courses: Geology 307, 308, 311, 312, 320, 321, 411; Mathematics 131, 231, 232; Physics 131, 232, 233, 334; Chemistry 131, 132, 133, 201; either Chemistry 306, 431, 432, 433, 434, 435, 436 or Chemistry 343, 344, 345, 346. No minor is required.

Major—B.A.: 40 hours above the 100-level including Geology 494.

Minor: 30 hours in geology.

GERMAN. Major: 30 hours in courses beyond German 202.

Minor: 18 hours in courses beyond German 202.

HISTORY. Major or Minor: *First Year*—History 152, 153. *Second Year*—History 205, 206. *Third and Fourth Years*—electives in history chosen in consultation with adviser (8 hours must be chosen from ancient and/or medieval history although 4 hours of Asian civilization may be substituted in partial fulfillment of the requirement; 4 hours must be chosen in American or Latin-American history).

HOME ECONOMICS. Major: core courses in Home Economics 103, 105, 205, 301, 303, 320 and either a *concentration in foods* consisting of Home Economics 206, 210, 211, 212, 307, 311, 324 or a *concentration in clothing* consisting of Home Economics 101, 102, 203, 204, 207, 304, 310, 325.

Minor: Home Economics 103, 105, 205, 207, 303, 320, 324, 325.

A student interested in merchandising (clothing and home furnishings) should take the core courses; a concentration in clothing; and the following recommended courses: Art 101, 103, and/or 112; Business Administration 102, 303; Economics 201, 202; Marketing 300, 410, 430; Psychology 201; Sociology 101; Speech 102.

A student interested in interior decoration should take the core courses; a concentration in clothing; and the following recommended courses: Art 101, 103, 112; Home Economics 406; and as many business administration and art courses as possible.

A student interested in professional costume designing should take the core courses; a concentration in clothing; Art 101, 103, 104, 112; and one or more courses in art history.

A student interested in journalism associated with home economics should take a major in home economics and a minor in journalism.

INTERNATIONAL STUDIES. Planned Program: An interdisciplinary program for the undergraduate who wishes to pursue a concentrated course of studies in preparation for research, teaching, or administrative specializations in the areas of East Asia, Latin America, the Middle East, the Soviet Union, and Eastern Europe.

A student specializing in the areas of East Asia, the Middle East, the Soviet Union, or Eastern Europe completes 20 hours of basic courses—History 153, Political Science 101, Economics 201, Geography 230, and Sociology 231—together with 25 hours of courses in his area of specialization to be chosen in consultation with his major adviser. To insure maximum exposure to the intellectual and literary traditions of the area of his choice, the student must complete 9 hours of courses above the 202-level in an appropriate language—German, Russian, or French. The student also is encouraged to take advantage of appropriate programs of study abroad sponsored by Bowling Green or other universities which can contribute to his familiarization with his major area of interest. An appropriate minor is chosen in consultation with the International Studies adviser.

A student who wishes to specialize in the Latin-American area completes courses appropriate to that area to a total of 50 hours. A list of approved courses may be obtained from the office of International Education or from the Latin-American area program adviser, J. R. Thomas. The student chooses Spanish as his foreign language and an appropriate minor in consultation with his adviser.

JOURNALISM. Minor: *First Year*—Journalism 103, 104. *Second Year*—Journalism 211. *Third and Fourth Years*—Journalism 302, 402, 405, two electives in journalism. Total: 30 hours.

LATIN. Major: courses beyond Latin 202. Up to 7 hours may be taken from 480, 481, 485, 486. Total: 32 hours. Minor: courses beyond Latin 202. Total: 20 hours.

LIBRARY SCIENCE. Minor only: Library Science 203, 403, 407, 408, 491, electives in library science. A student may not take both Library Science 351 and 352. Total: 26 hours.

MATHEMATICS. Major: Mathematics 131, 231, 232, 332, 333, 339 and six additional courses at the 300 and 400-level including 403, 465 and at least one two-quarter sequence.

Minor: Mathematics 131, 231, 232, 332, 333 and two additional courses at the 300 and 400-level.

Suggested program: *First Year*—Mathematics 131, 231, 232 and Computer Science 101. *Second Year*—Mathematics 332, 333 and 339; 334 and 337 are recommended for a strong program. *Third Year*—Mathematics 403, 404 and 441; several electives are recommended for a strong program. *Fourth Year*—Mathematics 421, 465 and 466; 461 and 467 are recommended for a strong program.

MUSIC. See Bachelor of Music program, pages 99-106.

Major—music theory: *First Year*—Music 107, 108, 109, applied music in piano. *Second Year*—Music 201, 202, 203, 204, 205, 206, 218, 219, 220, applied music in piano. *Third Year*—Music 304, 403, applied music in piano. *Fourth Year*—Music 315, 316, 318, 409, applied music in piano.

It usually requires 8 hours in piano to meet the requirements for a major in music theory. In some cases it may require more, or less, according to the technical proficiency of the student. A description of these standards may be obtained from the Director of the School of Music.

Major—applied music: *First Year*—Music 107-108-109, applied music in chosen instrument or voice. *Second Year*—Music 201-202-203, 204-205-206, 218-219-220, applied music. *Third Year*—Music 304, 403, applied music. *Fourth Year*—Music 301 or 318, 409, applied music.

The requirement for a major in applied music is 24 hours in voice or in one instrument.

Note: a theory or applied music major is required to participate six quarters in either Music 200 or 400 or a combination of the two.

Minor: *First Year*—Music 107, 108, 109, applied music. *Second Year*—Music 201, 202, 203, 204, 205, 206, 218, 219, 220, applied music. A student minoring in music must take a minimum of 9 hours in applied music.

PHILOSOPHY. Major: *Second Year*—any two of the following courses: Philosophy 101 (preferred), 202, 205, 206. *Third and Fourth Years*—any three of the following courses: Philosophy 310, 311, 312, 313; 12 hours of philosophy at the 400-level; electives in philosophy.

Minor: *Second Year*—one of the following courses: Philosophy 101 (preferred), 202, 205, 206. *Third and Fourth Years*—any two of the following courses: Philosophy 310, 311, 312, 313; 4 hours of philosophy at the 400-level; electives in philosophy.

PHYSICS. Major: *First and Second Years*—Physics 131, 232, 233, 334. *Third and Fourth Years*—courses from the 300- or 400-level. Minimum total: 48 hours.

Minor: *First and Second Years*—Physics 131, 232, 233, 334. *Third and Fourth Years*—15 hours from 300- or 400-level courses in physics.

It is recommended that a student majoring or minoring in physics take Chemistry 121, 122, 123 or 131, 132, 133 and Engineering Drawing 104, preferably in his first year. Mathematics 333 should be completed by the end of the student's sophomore year.

POLITICAL SCIENCE. Major: 48 hours. Political Science 101, 290, 400, one course in three of the following areas of political science: political theory, public administration, public law, American government, comparative government, and international relations. Credit towards the major is given for either Political Science 201 or 202 but not for both. A major may take eight hours of advanced courses in his sophomore year.

Minor: 30 hours. 8 hours of freshman-sophomore courses including Political Science 101 and 22 additional hours.

POPULAR CULTURE. Planned Program. No minor required. This interdepartmental program consists of a minimum of 65 hours from the Popular Culture program and the following departments and courses: English 111 or 112; 113, 260, 370, 372, 421, 424, 425, 442, 495; Education 371, 490; Geography 230; History 419, 434, 435, 436; Home Economics 310; Health and Physical Education 424; Journalism 435; Music 401, 417, 418, 419, 420; Marketing 410, 411, 412; Philosophy 204, 317, 323; Political Science 341; Psychology 440; Sociology 407, 416, 432, 441; Speech 245, 262, 341, 363, 364, 463. For a minor program the student should have a minimum of 30 hours from the above group or from others approved by the Director of the Center for the Study of Popular Culture. See page 113.

PSYCHOLOGY. Two curricula are available to a prospective major in psychology: a Bachelor of Arts program and a Bachelor of Science program. The former is primarily designed for the student who is interested in psychology as the focus of a liberal education, while the latter is designed for the student who is preparing for graduate study.

Bachelor of Arts. Major: 45 hours in psychology and 36 hours in a minor or in cognate fields. A psychology major may minor in any department in which Arts and Sciences credit is given. A student who elects a cognate minor should select his courses from at least three of the following fields in addition to the Arts and Sciences group requirements: biology, chemistry, computer science, economics, mathematics, philosophy, physics, sociology.

First Year—Psychology 201. *Second Year*—Psychology 270, 271, 290. *Third Year*—at least two 300-level laboratory courses and electives in psychology. *Fourth Year*—at least 15 hours of 400-level courses and electives in psychology.

Bachelor of Science. Major: 45 hours in psychology and 36 hours in cognate fields in place of a minor in a second department. The 36 hours in cognate fields should be selected from at least three of the following fields in addition to the Arts and Sciences group requirements: biology, chemistry, economics, mathematics, physics, sociology, philosophy. The basic group requirements for the B.S. program are on page 44. The Psychology Department departs from these in the following

aspects: Group III—a minimum of 65 hours must be completed in two or more of the following fields: biology, chemistry, geology, mathematics, physics, psychology. No more than 36 hours of psychology may be applied to this group. Each student must demonstrate proficiency equivalent to completion of Mathematics 232. Additional preparation in mathematics is advisable for a student planning advanced graduate work in psychology. Particularly recommended are Mathematics 332, 333, 337, 403, 404, 409, 410, 441, 442; Group IV—psychology courses may not be applied; Group V—courses in logic and the philosophy of science are recommended.

First Year—Psychology 201. *Second Year*—Psychology 270, 271, 290. *Third Year*—at least three 300-level laboratory courses and electives in psychology.

Fourth Year—Psychology 470, at least four other 400-level courses, electives in psychology.

Minor: 30 hours in psychology.

RECREATION. Minor only: At least 30 hours as follows: Art 343; H.P.E. 123, 204, 301; at least one course from each of the following groups: English 161, 162, 342, 421; H.P.E. 322, 326, 431; Music 317, 351, 352, 353; Sociology 101, Psychology 305; Speech 141, 202, 243.

RUSSIAN. Major: 30 hours in courses beyond Russian 202, and including Russian 317, 318, and 319.

Minor: 18 hours beyond Russian 202.

SCIENCE. Minor only: for the student who receives the degree of Bachelor of Science. In place of a conventional minor a student may bring his total in Group III to 80 hours by following a program approved by his major adviser. No more than 50 hours in the major field may be applied to this requirement.

SOCIOLOGY. Major: Sociology 101, 306, 307, 351, 403, 452, one senior seminar (Sociology 480), electives in sociology.

Minor: 30 hours in sociology. Students who anticipate further study in sociology are advised to follow the listing of courses required for a major in sociology.

Electives are to be chosen upon the advice of the adviser. In a special case where the needs of the student require it, a limited substitution of courses in related behavioral science departments may be permitted in the major requirements.

SPANISH. Major: Spanish 351 or 352, 361, 362 or 363, 371, 373, electives including a minimum of five 400-level courses. Total: at least 33 hours beyond Spanish 202.

Minor: Spanish 361, 362 or 363, 371, 373, electives. Total: at least 21 hours beyond Spanish 202.

SPEECH. Core curriculum for a speech major with a concentration in rhetoric-communication, radio-television-film, or theatre: Speech 102, 141, 201, 202, 203, 223, 360.

A student in rhetoric-communication also is required to take Speech 103, 303, 304 or 405, 312, 314, 402. Recommended courses are Speech 110, 302, 304, 310, or 405.

A student in radio-television-film also is required to take Speech 262, 361, 363, 368 or 463, 464 or 465, 468; Journalism 104, 211, 330. Recommended courses are Education 428; English 207; Speech 226, 243, 341.

A student in theatre also is required to take Speech 241 or 344, 243, 341, 342, 347 or 348, 4 hours of electives in theatre. Recommended courses are English 203, 301, 325, 401, 410; Speech 226; courses in art, philosophy, and dance.

Major: Speech and Hearing Therapy: *First Year*—Speech 102, 201, 223, 226. *Second Year*—Speech 202, 203, 324, 330. *Third Year*—Speech 325, 331, 332, 422, 433. *Fourth Year*—Speech 328, 424, 426. Recommended courses are Speech 456; Psychology 270, 305.

Minor: Speech and Hearing Therapy: *First Year*—Speech 102. *Second Year*—Speech 223, 226. *Third Year*—Speech 324, 325, 330, 331, 332. *Fourth Year*—Speech 424, 433.

A student taking a major or minor in speech and hearing therapy must take Psychology 201 and 204 in the second year.

Minor: General: *First Year*—Speech 102, 141. *Second Year*—Speech 202, 203, 360. *Third and Fourth Years*—Speech 423, electives in speech.

PRE-PROFESSIONAL PROGRAMS

The College of Arts and Sciences provides four kinds of pre-professional programs:

1. *Four-Year Curricula*. These curricula, leading to the bachelor's degree, are planned to prepare the student for admission to a graduate or professional school for further specialized study. Curricular requirements and arts and sciences preparation for some special fields of work are discussed on pages 51-52.

2. *Arts-Professional Curricula*. This is offered in cooperation with the professional schools and colleges of other institutions of higher learning. The student spends three years at Bowling Green before entering a professional school. Upon satisfactory completion of his first year in the professional school, he is granted a bachelor's degree by Bowling Green. These programs are outlined on pages 52-54.

3. *Pre-Professional Preparation*. From two to three years of pre-professional study may be completed at Bowling Green. The student then transfers to a professional school or college. Appropriate programs for certain professions are outlined on pages 55-57.

4. *Combined Curricula*. The student may obtain both an arts and sciences degree and an education degree at Bowling Green. See page 57-58.

A student who expects to receive a degree by completing one of these curricula must meet all of the requirements for the degree including major, minor, and group requirements.

FOUR-YEAR PRE-PROFESSIONAL CURRICULA

Preparation for Business

The College of Arts and Sciences offers a major or minor in either economics or business administration leading to the degree of Bachelor of Arts. The student interested in a career in business should consult the programs offered by the College of Business Administration.

Preparation for College Teaching

The student who wishes to prepare for a career in college teaching should plan on attendance at a graduate school. He should bear in mind that many graduate schools require a reading knowledge of French, German, or Russian or of two of these languages. He may find it advantageous to take the combined baccalaureate-master program described below.

The student who is preparing for high school teaching should register in the College of Education unless he elects the combined arts-education curriculum described on page 57.

Preparation for Correctional Work

A student interested in preparing for teaching, research, or practice in criminology and correctional work should major in sociology and should expect to engage in graduate study in correctional work later in his career. For further information, the student should consult the Department of Sociology.

Preparation for Economic Biology

Preparation for a career in pest control, public health and sanitation, or various areas of wildlife work should be based on a major in biology with considerable work in chemistry. A minor in business administration or economics may be useful to the student who is interested in the business aspects of pest control. Summer employment opportunities with the pest control industry, the U.S. Fish and Wildlife Service, federal agencies, and local or state health units are available. The economic biology curriculum is approved by the Ohio Association of Public Health Sanitarians.

Preparation for Graduate Study

All programs of the College of Arts and Sciences may be used as preparation for entrance to a graduate school. The student should bear in mind that a reading

knowledge of one or two modern languages chosen from French, German, or Russian is often required for the doctorate. A knowledge of statistics may be useful.

For early admission to the Graduate School, see page 109.

Combined Baccalaureate- Master Program

An undergraduate capable of maintaining high grades can take his undergraduate degree in the middle of his fourth year by carrying an average of 17 hours for 11 quarters. The resulting total of 187 hours is 4 more than the required minimum for the undergraduate degree. These 4 hours might be taken as graduate credit and followed by a full quarter of graduate study. A candidate for a graduate degree may not become a candidate for a degree in an undergraduate college without the permission of the Dean of the Graduate School.

Preparation for Careers In Home Economics

The College of Arts and Sciences provides a variety of programs in home economics. The usual arts and sciences curriculum is followed with a major or minor in home economics. A student who is interested in teaching home economics in the school or in work as an agricultural extension agent should pursue a program in the College of Education.

Preparation for Library Work

The Bachelor of Arts degree is usually required for admission to a school of library science. A minor in library science is available in the College of Arts and Sciences. The student completing such a minor can obtain a professional degree in library science in one additional year in an approved professional school. The major should be chosen from such fields as English, history, political science, and sociology; for work in special libraries, a major or electives in the sciences may be useful. At least two years each of French and German are strongly recommended.

Preparation for Professional Work In Mathematics and the Sciences

Professional work in the sciences is available to a student with a strong undergraduate degree program. A student whose academic record permits should consider graduate training.

The Department of Chemistry offers a program which meets the requirements of the American Chemical Society for professional recognition of a graduate.

Preparation for Public Administration

A student should consult with the Department of Political Science to plan a program of courses in political science and related fields.

Preparation for Religious Work

Most schools of religion recommend that a student have a broad, general education before starting professional training. The major and minor may be chosen from any area of study. A reading knowledge of at least one foreign language is essential.

Preparation for Social Work

A student interested in preparing for teaching, research, or practice in social work should major in sociology. A minor in psychology is recommended. A student should expect to engage in graduate study in social work later in his career. For further information, the student should consult the Department of Sociology.

ARTS-PROFESSIONAL CURRICULA

It is strongly recommended that the student who expects to enter a professional school first complete a four-year course in the College of Arts and Sciences. Experience has shown that a student with the broad training thus obtained is more likely to be a leader in his chosen profession.

A student may desire, however, to secure the degree of Bachelor of Arts or Bachelor of Science, as well as a professional degree, but may be unable to give the time necessary for the completion of both programs. Therefore, combination arts-

professional curricula are offered which enable him to shorten the time required for the two degrees.

The arts-education curriculum described on page 57 is given in cooperation with the College of Education.

Other combination curricula are offered in cooperation with the professional schools and colleges of other institutions. These enable the student to shorten the time required for securing the two degrees by substituting the first year of work in a professional college for the fourth year of the course in arts and sciences. These courses vary in length from five to seven years—the first three years being taken in the College of Arts and Sciences and the remainder in an approved professional school. Upon the satisfactory completion of the work of the first year in the professional college, the student is granted the degree of Bachelor of Arts or Bachelor of Science by Bowling Green State University.

Permission to graduate from one of these combination curricula must be obtained from the Dean before the end of the junior year. A student in these curricula must:

1. Earn a minimum of 140 hours either in residence or by advanced standing including 3 hours in health and physical education; at least 90 hours must have been taken on campus at Bowling Green in the student's last two academic years prior to his entering the professional school;
2. Earn a point average of at least 2.5 in all courses undertaken in residence;
3. Meet the group requirements of the degree sought;
4. Meet the major and minor requirements of the general curriculum selected.

Preparation for Dentistry

Many dental schools advise the student to complete four years of arts and sciences study before applying for admission. Usually, either biology or chemistry is used as the major; and the other is used as the minor. However, other majors and minors are possible.

Recommended Course Sequences: Biology 106, 107, 431, 432, 433; Chemistry 121, 122, 123 or Chemistry 131, 132, 133; Chemistry 201, 343, 345; Mathematics 130 or 131; Physics 110, 211, 212, 213; Psychology 201. In addition to these courses, a student should plan to take: 1. The required courses to complete a major and minor; 2. Group requirements for the degree sought; 3. H.P.E. requirements and electives. Total: 183 hours.

Preparation for Law

Most accredited American law schools require a college degree for admission although some accept a student with three years of college work. All accredited law schools in Ohio require the bachelor's degree, and such a degree is a prerequisite to taking the Ohio Bar Examination.

Beyond the minimum requirements for admission, law schools emphasize the value of a broad, general program of arts and sciences for the prospective law student. They believe that, ideally, his training should be as comprehensive as the great variety of problems and subjects he will deal with both as a man and as a lawyer.

From a professional point of view, law schools stress the importance of acquiring certain skills and abilities rather than any particular body of knowledge. Among these are facility in writing and speaking, logical reasoning, and the use of abstract concepts. Since the student can develop these skills in a great variety of courses, there is no basis for prescribing any rigid and detailed "pre-law curriculum" or any particular major.

Law schools often emphasize the special value of any course in which considerable writing is required. A course in accounting is frequently recommended and may be required either in the undergraduate school or in the law school for a basic understanding of the business and financial concepts and terms with which the lawyer must deal. American government helps acquaint the student with the basic legislative, administrative, and judicial processes of our society.

Finally, there is much to be said for the pre-law student's taking one law course taught by the case method as an undergraduate simply so he may discover early whether his tastes and aptitudes lie in this direction.

Preparation for Medicine

Admission to medical school is selective and is dependent upon scholarship and aptitude as indicated by the scores attained on the Medical College Admission Test. The student should include in his pre-medical program a course of study to prepare him for admission to medical school and for admission to an appropriate graduate school or for an industrial, government, or teaching position in case his first choice cannot be realized. To meet the requirements for admission to most medical schools, the Bachelor of Science curriculum outlined on page 44 can be modified to include the required courses and still provide the student with enough depth in at least one area for graduate work or for career opportunities if he should not attend medical school. Since medical schools generally expect about twice as much preparation in chemistry as in biology and lesser amounts in physics and mathematics, generally a student elects a major in chemistry and a minor in biology. However, a student may want to reverse this order or elect a major in mathematics or physics.

The pre-medical student is urged to confer frequently with his adviser, particularly with respect to planning prerequisite courses for the Medical School Admission Test and for meeting the admission requirements of the medical school of his choice. Each applicant to a medical school is assisted by the Pre-Professional Recommendation Committee at the time of his making applications.

Recommended Course Sequences: Biology 106, 107; Chemistry 121, 122, 123, 201 or 131, 132, 133; English 112; German 101, 102, 103; Mathematics 130, 131, 231, 232; Physics 110, 211, 212, 213 or 131.

In addition to these courses a student should plan to take: 1. The required courses to complete a major and minor; 2. Group requirements for the degree sought; 3. H.P.E. requirements and electives. Total: 183 hours.

Preparation for Medical Technology

The requirement for this profession is from three to four years of basic college work, followed by at least 12 months of laboratory training in an approved medical technology school or hospital. A high scholastic average usually is required. Pre-professional training should include biology, general chemistry, quantitative analysis, and organic chemistry. Physics is highly recommended.

Because many schools require a degree for entrance, the student is advised to take four years of basic college work. The curriculum outlined below leads to the degree of Bachelor of Science with a major in biology and a minor in chemistry. Other majors and minors are possible with the approval of the adviser.

The arts-professional program, leading to the Bachelor of Science degree with three years at Bowling Green followed by satisfactory completion of the year in medical technology and certification of successful attainment in the examination of the Registry of Medical Technologists, requires formal approval of the Dean prior to entering the professional school. To be eligible for this program, a student must complete nine quarters (at least 135 hours) in an approved program at Bowling Green with an accumulative point average of at least 2.5. The year of professional work must be taken in a school of medical technology with which Bowling Green State University is affiliated or which is specifically approved. Up to 45 hours of credit may be transferred from the professional school to apply toward the degree. Of these, 18 hours may be used toward a college major or minor in biology; and 7 hours may be applied toward a major or minor in chemistry. Grades of less than C cannot be transferred.

A student sometimes may be admitted to a school of medical technology at the end of three years of college work without qualifying for the arts-professional program, but he will not be eligible for a bachelor's degree without further college credits.

Recommended Course Sequences: Biology 106, 107, 331, 332, 413, 419; Chemistry 121, 122, 123, 201, 306, 307, 352; Mathematics 130; Physics 110, 211, 212, 213.

In addition to these courses, a student should plan to take: 1. The required courses to complete a major and minor; 2. Group requirements for the degree sought; 3. H.P.E. requirements and electives. Total: 183 hours.

To provide a coordinated arts-medical technology program, the College of Arts and Sciences is affiliated with the following schools of medical technology: St. Rita's Hospital, West High at Baxter Street, Lima, Ohio 45807; Toledo Hospital, North Cove Boulevard, Toledo, Ohio 43606; University Hospitals of Cleveland, Institute of Pathology, 2085 Adelbert Road, Cleveland, Ohio 44106; The Youngstown Hospital Association, Youngstown, Ohio 44504; Good Samaritan Hospital, 1425 West Fairview Avenue, Dayton, Ohio 45406. Information concerning the programs may be obtained from the director of each of these schools for medical technology or from the Dean of the College of Arts and Sciences at Bowling Green State University.

PRE-PROFESSIONAL PREPARATION

Preparation for Engineering

Many engineering schools follow a five-year program leading to an engineering degree. The courses offered at Bowling Green closely parallel those of most engineering schools during the first year. By careful selection of electives during the second year, a student can very profitably spend two years studying here without lengthening the time required to obtain a degree in engineering. The two-year curriculum outlined below is planned for the student who expects to transfer to a college of engineering at the end of two years.

Since the requirements in different colleges and in different fields of engineering vary considerably, the student should plan his schedule to meet the requirements of the institution and branch of engineering in which he expects to receive his degree.

A student who enters from high school with less than four years of mathematics must make up that deficiency immediately and, therefore, probably cannot complete the curriculum below in two years. Any student who does not have a better than average aptitude for mathematics and quantitative reasoning should not consider entering the pre-engineering curriculum.

Recommended Course Sequences: Chemistry 121, 122, 123; Computer Science 101, 202; Economics 201, 202; Industrial Education and Technology 104; English 112; Mathematics 131, 231, 232, 332, 333; Physics 131, 225, 232, 233, 334; H.P.E. 100; electives. Total: 93 hours.

Arts-Engineering Program

Bowling Green does not offer the specialized engineering courses needed for an engineering degree. However, all of the basic science and general education courses required in an engineering curriculum are available; and credit for them may be transferred to an engineering school. A student who wishes to earn a Bachelor of Science degree from Bowling Green in addition to an engineering degree may do so by meeting the requirements for the arts-professional program as outlined on pages 52-55. Under this plan, the student attends this University for approximately three years and then enters the selected engineering school from which credits are transferred to complete the requirements for the Bowling Green degree, usually at the end of the first year in engineering school. This might extend the usual time required to earn the engineering degree by one semester or quarter or several summer sessions, but the additional college work and degree would represent valuable accomplishments for the student.

Because of the differing specialized needs of the several branches of engineering, each student's program under the arts-engineering plan has to be planned individually almost from the beginning to assure coordination with the engineering school curriculum. The program for the first two years is similar to that listed above, and the third year is planned for each student in cooperation with the chosen engineering school where advance judgment about admission should be secured.

The arts-engineering plan is considered in conjunction with any engineering school. The following Colleges of Engineering have indicated their willingness to design plans for individual students: Michigan State University, Purdue University, New York University, Ohio Northern University, University of Michigan.

Preparation for Nursing

Schools of nursing may be classified according to whether their programs lead to a diploma, to a two-year associate degree, or to a bachelor's degree. A license to practice as a registered nurse is obtained by passing a state examination. College

work is not usually required to enter a diploma school of nursing although it may be encouraged. Schools of nursing with degree programs may admit a student following graduation from high school or after one or two years of general college studies. A pre-nursing student should ascertain the requirements of the school she plans to enter as early as possible. A list of accredited schools of nursing may be obtained from the National League for Nursing, 10 Columbus Circle, New York, New York 10019.

Recommended Course Sequences: Biology 101, 106, 107; Chemistry 111, 112 or 121, 122, 123 as required by some schools; English 112; Psychology 201; Sociology 101, 202; H.P.E. 100. Other courses should be selected to meet the requirements of the nursing school.

Preparation for Occupational Therapy

Occupational therapy, an auxiliary medical service in which normal activities are used as remedial treatment in the rehabilitation of patients, is being used increasingly in hospitals, schools, rehabilitation centers, and related institutions. Such therapy is prescribed by physicians and applied by the trained therapists as part of the treatment for an adult or a child in the areas of orthopedics, psychiatry, tuberculosis, general medicine, and surgery. The demand for registered occupational therapists so exceeds the supply that excellent opportunities exist for a person who is professionally trained.

The student should follow the first two years of the Bachelor of Science program (page 44). A student planning to attend Ohio State University should include Art 101, 112 as electives.

In preparing for a career in occupational therapy, the student should complete two years of pre-professional courses, two years of academic instruction in an approved professional school, and 10 months of clinical training.

Preparation for Optometry

Requirements for admission to the schools and colleges of optometry vary. Typically, they include courses in English, mathematics, physics, chemistry, and biology. Requirements of specific schools should be examined before taking courses for transfer to them. A list of accredited schools and colleges of optometry in the United States can be obtained from the American Optometric Association, 7000 Chippewa Street, St. Louis, Missouri 63119.

The following two-year pattern coordinates with the program of the School of Optometry of Ohio State University.

Recommended Course Sequences: Biology 106, 107; Chemistry 121, 122, 123, 203, 307 or 343, 344, 345; English 112; Mathematics 130, 131, 231; Physics 110, 211, 212, 213; H.P.E. 100; electives. Total: 93 hours.

The amount of foreign language to be taken depends on the requirements of the professional school and the student's high school preparation. A student who does not need foreign language courses should substitute those courses which meet the requirements of the professional school he plans to enter. History 153 is recommended for a student who plans to enter the School of Optometry of Ohio State University.

All schools of optometry require physics, but some require no mathematics beyond that needed for physics. Physics 110 has a prerequisite of a working knowledge of trigonometry.

Preparation for Osteopathy

Since the requirements and recommendations for entrance to schools of osteopathy are essentially the same as those for medical school, the student is referred to page 54.

Preparation for Pharmacy

All accredited colleges of pharmacy require five years of study to qualify for the pharmacy degree. Two years of the five-year requirement may be satisfied at this University by completing the pre-pharmacy curriculum outlined below. The state boards of pharmacy usually require a period of practical experience in

pharmacy. The student should request information concerning requirements for a certificate to practice pharmacy from the board of pharmacy in the state in which he wishes to practice. In Ohio this information may be obtained from the Secretary, State Board of Pharmacy, Wyandotte Building, 21 West Broad Street, Columbus 43215.

Since colleges of pharmacy vary in their requirements, a pre-pharmacy student should ascertain the requirements of the school he plans to enter before he selects the courses for the second year. The program outlined below prepares the student for transfer to the College of Pharmacy at Ohio State University. It is now possible to enter the College of Pharmacy at Ohio State University after a one year pre-pharmacy program.

A list of accredited colleges of pharmacy may be obtained from the American Association of Colleges of Pharmacy, 1507 M Street N.W., Washington, D.C. 20005.

Recommended Course Sequences: Biology 106, 107, 413; Chemistry 121, 122, 123, 201, 343, 344, 345; English 112; Mathematics 130, 131; Physics 110, 211, 212, 213; H.P.E. 100; electives chosen from the social sciences, literature, and philosophy. Total: 93 hours.

Preparation for Veterinary Medicine

Colleges of veterinary medicine require two years of pre-veterinary medical work for admission; however, often a student is advised to apply after a third year of work or after securing a bachelor's degree. The two-year pre-veterinary medical program which follows is typical, but colleges of veterinary medicine vary greatly in their requirements. The student should obtain information as early as possible about the requirements of the school where he plans to transfer. A list of accredited colleges of veterinary medicine in the United States can be obtained from the American Veterinary Medical Association, 600 South Michigan Avenue, Chicago, Illinois 60605.

The College of Veterinary Medicine of Ohio State University requires for admission courses in animal husbandry and related areas which cannot be taken at Bowling Green. It is possible for the student who plans a three-year pre-veterinary medical program to defer them temporarily by substituting advanced biology courses, but it may be more advantageous for the student to transfer after one year to the Agriculture-Veterinary Medicine Program at Ohio State University.

Recommended Course Sequences: Biology 106, 107, 213, 251; Chemistry 121, 122, 123, 306, 307; English 112; Mathematics 130—Mathematics 124 is acceptable for a student who enters with prerequisite for physics; Physics 110, 211, 212, 213; H.P.E. 100; electives selected to meet the requirements of the college of veterinary medicine to be entered. Total: 93 hours.

COMBINED CURRICULA

Arts-Education Curriculum

The student who desires to take an arts and sciences degree to qualify for certification to teach in the public schools may: 1. Take his work in education after graduation or 2. Qualify for the combined degree program outlined below. On the basis of his accumulative point average, a student may register in both the Colleges of Education and Arts and Sciences for the combined degree as soon as he is eligible.

The student in the dual-degree program leading to the Bachelor of Arts or Bachelor of Science degree from the College of Arts and Sciences and the Bachelor of Science in Education degree from the College of Education must:

1. Secure permission of the Deans of both Colleges before the end of the junior year;
2. Maintain an accumulative point average of 3.0 or better based upon at least two quarters of work at Bowling Green;
3. Complete the requirements* of both Colleges for the degrees sought;

* See pages 42-44 and 81-85.

4. Earn at least 214 hours including the course or courses in teaching methods.

By careful selection of electives, the program in both Colleges can be completed in 12 quarters plus one summer. The superior student may increase the number of subjects to be carried each quarter and complete the program in less time.

Certification To Teach in the Public Schools

The student who holds a bachelor's degree in arts and sciences may become certified to teach in the public schools of Ohio with a four-year Provisional Certificate by fulfilling the state requirements for such certification. These requirements differ with the teaching field chosen. A list of these requirements and degree-holder program applications are available in the Office of the College of Education.

Several institutions including Bowling Green offer graduate programs whereby an arts and sciences graduate may take work leading both to certification to teach in the public schools and a master's degree. Announcement of such programs may be inspected in the Office of the Graduate School.



THE SCHOOL OF ART

Willard F. Wankelman, Director

SPECIFIC REQUIREMENTS FOR THE BACHELOR OF FINE ARTS DEGREE

The requirements for the degree of Bachelor of Fine Arts include completion of:

1. The indicated hours of credit from each of five groups or areas of knowledge listed below;
2. Completion of 56 hours in basic courses in drawing, design, ceramics, history of art, sculpture, painting, and prints;
3. Completion of a major area of specialization in art history, ceramics, crafts, design, painting, prints, or sculpture;
4. The completion of enough additional courses in art to total 80 hours. Programs of study leading to the Bachelor of Fine Arts degree are outlined on page 61.

The student who plans to teach art in the public schools should follow the program on page 61 and register in both the College of Arts and Sciences and the College of Education. Completion of this curriculum qualifies the student to receive a teaching certificate in art and the degree of Bachelor of Fine Arts.

Group Requirements

Group I: *English and Speech.* Each student is required to complete English 112 or to demonstrate by examination that he has a proficiency in written expression equivalent to that provided in the course. Each student is required to complete Speech 102.

Group II: *French, German, Italian, Latin, Russian, Spanish.* The student is required to demonstrate a proficiency equivalent to completion of the highest intermediate course (202) in a foreign language. This may be satisfied by: 1. Completing the course in college; 2. Passing an examination in the language; 3. Having completed four years of study of one language in high school; 4. Having been graduated from a high school where all instruction was conducted in a language other than English.

Credit toward a degree is not granted for less than 10 hours in 100-level courses in the same language nor for a 100-level foreign language course which duplicates credit earned in high school.

Group III: *Biology, Chemistry, Geology, Mathematics, Physics.* Each student must complete two courses in one or more of these subjects, at least one quarter of which must be in a science with laboratory experience. Credit for 100-level science courses does not apply on this group requirement if the student also has credit for an introductory laboratory course in the same science.

Group IV: *Economics, Geography, History, Political Science, Psychology, Sociology.* Each student must complete three courses in one or more of these subjects.

Group V: *English Composition, Literature (American, English or foreign), Music, Philosophy, Speech.* Each student must complete one course in literature (American, English, or foreign) and an additional four courses from at least three of the areas listed in this group. A list of courses approved for the Group V requirements is available in the office of the College of Arts and Sciences.

Art Requirements

Basic Area: each student is required to complete Art 102, 103, 104, 112, 145, 146, 205, 206, 211, 212, 245, 261, 263, 371, 373, 377, two art history electives.
Specialization Area: each student is required to complete at least 18 hours in art history, ceramics, crafts, design, painting (oil, water, or both), prints, or sculpture. A student should consult each quarter with his major area instructors concerning his progress and course sequence. No 100-level course may be applied toward the completion of major art area requirements.

BACHELOR OF FINE ARTS PROGRAM

Art History, Ceramics, Crafts, Design, Painting, Prints, or Sculpture Major

Recommended Sequence of Art Courses.

First Year: Art 102, 103, 104, 112, 145, 146.

Second Year: Art 205, 206, 211, 212 or 213, 245, 261, 263, major art areas.

Third Year: Art 371, 373, 377, art history, major art area.

Fourth Year: art history, major art area, art electives.

Sequence of Major Art Areas.

Art History. Second Year: Art 245. *Third Year:* Art 444, 451, 456.

Fourth Year: Art 457, electives in art history to total 6 hours.

Ceramics. Second Year: Art 263, 363. *Third Year:* Art 364, 463.

Fourth Year: Art 463 (repeat).

Crafts. Second Year: Art 363, 364. *Third Year:* Art 321, 322. *Fourth Year:*

Art 265, elective in crafts.

Design. Second Year: Art 211, 212, 213. *Third Year:* Art 311 (repeat).

Fourth Year: Art 411.

Painting. Second Year: Art 371 or 373, 372 or 374. *Third Year:* Art 372 (repeat) or 374 (repeat). *Fourth Year:* Art 471 or 473 (repeat).

Prints. Second Year: Art 377, 378. *Third Year:* Art 378 (repeat). *Fourth Year:* Art 477 (repeat).

Sculpture. Second Year: Art 261, 361. *Third Year:* Art 361 (repeat), 461.

Fourth Year: Art 461 (repeat).

BACHELOR OF FINE ARTS CURRICULUM

Teacher Preparation: Ceramics, Crafts, Design, Painting, Prints, or Sculpture Major

This is a combined Arts and Sciences and Education curriculum which leads to the Bachelor of Fine Arts degree and to certification for the teaching of public school art. The program outlined below may be completed in four years by summer study. This summer study may be reduced for the student who has had two or more years of high school credit in the foreign language elected in college.

Recommended Sequence of Courses:

First Year—Art 102, 103, 104, 112, 145, 146; English 111, 112; foreign language (amount of credit required depends on high school preparation of the student); Speech 102; two courses of science or mathematics (one of which must be a laboratory course); H.P.E. 100.

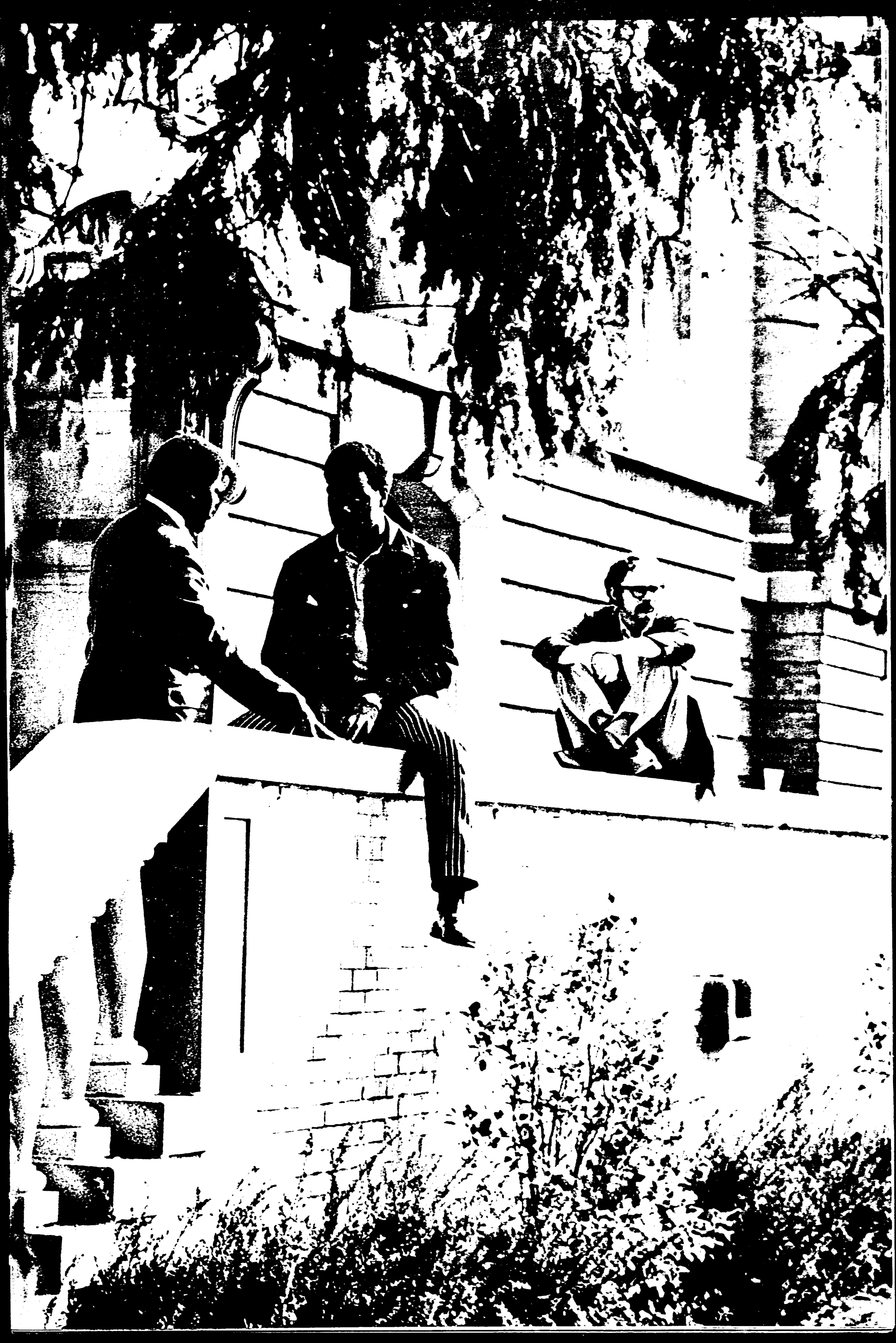
Second Year—Art 205, 206, 211, 212, 213, 245, 261, 361, 363, 371; foreign language or electives; Psychology 201; Education 302.

Third Year—Art 321, 352, 353, 373, 372 or 374, 377, 378, art history elective, major art area; literature elective; Group IV—Sociology 101, six hours of electives other than psychology; Group V—three courses (one course in art history is applied to this requirement).

Fourth Year—professional concentration (one quarter); student teaching (one quarter); art history, major art area.

The major art area and two courses of art electives—crafts—may be completed in an additional quarter or in summer study if necessary.

A student who follows this curriculum registers each quarter in both the Colleges of Arts and Sciences and Education and has his program approved by appropriate advisers. This program may be continued after the freshman year only with the approval of the School of Art staff. The student who must take two years of foreign language and who follows a program in aerospace studies or in military science needs to take more than the usual time to complete this program.



THE COLLEGE OF BUSINESS ADMINISTRATION

Karl E. Vogt, Ph.D., *Dean*

Harry S. Lasher, Ph.D., *Assistant Dean*

Marie R. Hodge, M.B.A., *Assistant to the Dean*

Harvey E. Donley, Ph.D., *Director, Graduate Studies in Business*

Glenn H. Varney, M.B.A., *Director, Management Center*

William R. Hoskins, D.B.A., *Director of International Business Programs*

James L. Galloway, M.A., *Director, College Internship Program*

Department of Business Education, Mearl R. Guthrie, Ph.D., *Chairman*

Department of Business Law, Robert G. Riegler, J.D., *Chairman*

Department of Economics, Donald L. Sternitzke, Ph.D., *Chairman*

Department of Finance and Insurance, William H. Fichthorn, Ph.D., *Chairman*

Department of Management, Warren C. Waterhouse, Ph.D., *Chairman*

Department of Marketing, Maurice I. Mandell, D.B.A., *Chairman*

Department of Quantitative Analysis and Control, Edwin C. Bomeli, Ph.D., *Certified Public Accountant—Ohio, Chairman*

The School of Journalism, Joseph A. Del Porto, Ph.D., *Director*

Department of Aerospace Studies, Col. Mario A. Garuti, B.S., *Chairman*

Department of Military Science, Col. Alfred W. Kirchner, B.S., *Chairman*

Executive Committee

M. Lee Goddard—1971, chairman; John R. Davidson—1973, secretary; Lloyd Helms, 1971; Karl Rahdert, 1971; Bruce Edwards, 1972; John Holmes, 1972; William Schmeltz, 1973; Milton Wilson, 1973; Richard Harris, undergraduate student representative; David Cox, graduate student representative; Karl E. Vogt, ex-officio

Curriculum Committee

Raymond Barker—1971, chairman; Milton Wilson—1973, vice-chairman; Kenneth Green—1972, secretary; Donald Plasterer, 1971; Joseph Del Porto, 1972; Warren Waterhouse, 1972; M. Neil Browne, 1973; Willard Galliard, 1973; Thomas Depler, student representative; Karl E. Vogt, ex-officio.

THE FIELD OF BUSINESS

The business world has grown in complexity in recent years. Significant developments in quantitative decision theory, the behavioral sciences, and computer technology have made it necessary for a person contemplating career objectives in administrative positions to be adequately prepared in a wide variety of related disciplines. Similarly, a future executive must have a high-quality professional education in business theory and practices.

Business is a broad area of human endeavor. Primarily, it is concerned with the production and distribution of goods and services which are needed and desired. A person who contemplates a career and anticipates success in business leadership has a great challenge before him.

ACADEMIC OBJECTIVES OF THE CURRICULA IN BUSINESS ADMINISTRATION

The foremost consideration in all curricula in business administration is to provide each student with a broad, liberal education. Thus, many of the degree requirements are in the humanities, the sciences, and the social sciences. The courses in business administration are designed not only to foster professional competency but also to develop the whole individual as a responsible, useful citizen in society.

Professional education in business administration should not be confused with vocational education. These curricula are not designed to train a technician. Rather, they serve to develop the capabilities of a student so that he may assume a position of leadership and responsibility in the administration of business. To accomplish these ends, instruction in business administration places emphasis on developing the student's ability to think and to make decisions.

ORGANIZATION OF THE COLLEGE

The College of Business Administration consists of seven Departments of instruction in business administration and a School of Journalism. The seven Departments—Business Education, Business Law, Economics, Finance and Insurance, Management, Marketing, and Quantitative Analysis and Control—offer 20 undergraduate sequences and a comprehensive graduate program covering the major phases of business activity. Undergraduate sequences are available in the fundamental fields of business education (office management, secretarial administration), business pre-law, economics, finance, insurance, management (with concentrations in administrative science, production and operations management, personnel management and industrial relations, procurement and materials management), marketing (with concentrations in advertising, market research, retailing, and selling and sales management), and quantitative analysis and control (with concentrations in accounting, business statistics, and information systems). Interdepartmental majors are offered in environmental administration,* general business, and international business. The student who satisfactorily completes one of these curricula receives the degree Bachelor of Science in Business Administration. Descriptions of individual programs in business begin on page 66.

The School of Journalism offers professional training in five areas—news-editorial, photojournalism, magazine journalism, public relations, and broadcast journalism. The student who satisfactorily completes one of these curricula receives the degree Bachelor of Science in Journalism. Descriptions of the journalism programs begin on page 77.

The Departments of Aerospace Studies and Military Science are assigned to the College of Business Administration for administrative purposes. These Departments offer every qualified male student of the University the opportunity for receiving a limited amount of military leadership training while pursuing his principal academic objectives. The student who successfully completes the advanced course is commissioned a second lieutenant in the U.S. Air Force Reserve or the U.S. Army Reserve upon graduation. (See page 37.)

To provide for a sound foundation and a broad appreciation of the world of business, a student is required to complete a common core of basic business courses. These courses provide the student with a background of the interrelationships of the various functional areas of business and with a knowledge of the tools necessary for decision-making.

Each curriculum provides the student with an opportunity for examining some particular discipline in sufficient depth to develop an acceptable level of competency in the field. Finally, a substantial amount of latitude is provided in all curricula to permit the student to elect additional courses to round out his total educational experience.

Thus, the curricula in business administration provide the student with:
(a) A total educational experience; (b) A breadth of understanding of the business world; (c) A depth of knowledge in a particular business field. The degree in business administration serves as preparation not only for assuming a position of

* Curriculum available in the Office of the Dean.

responsibility in business and society but also for graduate study in business administration, law, and public administration.

STANDARDS OF PERFORMANCE AND ACCREDITATION

To meet the challenges of the business world the academic program of the College of Business Administration requires high standards of performance. The emphasis of the programs is designed to provide an intellectual challenge to a student who wishes to assume the responsibility for tomorrow's business leadership.

The College of Business Administration is a fully accredited member of the American Association of Collegiate Schools of Business. Such accreditation is given only to schools which maintain the highest standards of performance. Degrees granted by such accredited colleges are widely recognized by both major businesses and graduate schools.

Credit by transfer from a two-year, fully accredited institution is not accepted for most business courses which require junior or senior standing at Bowling Green. However, should the transfer student feel he has sufficient background in the subject matter of any course, he may, at his election, take an examination for credit in the course. Successful completion of this exam results in his transfer credit for that course being accepted.

Credit by transfer from a four-year, fully accredited institution is accepted for most courses.

REQUIREMENTS FOR GRADUATION

A candidate for the degree of Bachelor of Science in Business Administration must complete the following requirements for graduation:

1. Complete in residence at least 45 hours of credit immediately preceding graduation;
2. Earn a minimum of 183 hours of credit including 3 hours of health and physical education;
3. Earn a point-hour average of at least 2.0 in all courses undertaken in residence;
4. Meet the group requirements in general and professional education and other requirements pertaining to individual areas of professional specialization on the following pages.

A candidate for graduation must file an *Application for Graduation* with the Registrar. See page 16 for deadline dates. Forms may be obtained at the Registrar's Office.

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION CURRICULUM

GENERAL EDUCATION REQUIREMENTS:

Group I: *Communication Arts.* Each student is required to complete English 111, 112. A freshman with high entrance scores in English may be exempt from English 111 but must take English 112 or 112H. Each student also is required to complete Speech 102.

Group II: *Mathematics, Science, and Quantitative Measurements.* Each student is required to complete Mathematics 124/131 and 125/231; Statistics 111; Quantitative Analysis and Control 160; 8 hours of science (lab or non-lab) or Mathematics at the 200-level or above (with the exception of Mathematics 210, 241-245).

Group III: *Social and Behavioral Sciences.* Each student is required to complete 13 hours from the Departments of Geography (excludes Geography 125, 126, 127, 213), History, Political Science, Psychology, and Sociology.

Group IV: *Humanities.* Each student is required to complete 9 hours of credit from an approved list of humanities courses in the areas of art, foreign language, literature, music, philosophy, and theatre. A list of acceptable courses is available in the College of Business Administration Office or from a faculty adviser.

Group V: *Non-Business Electives.* Each student is required to complete at least 13 additional hours in non-business fields. An academic adviser assists each student in selecting courses which broaden or deepen his general education.

Group VI: Pre-Professional Core. Each student is required to complete in his sophomore year Accounting 221, 222; Economics 201, 202; Statistics 212. Total: 20 hours.

PROFESSIONAL REQUIREMENTS

Group VI: Professional Core. Each candidate for the degree of Bachelor of Science in Business Administration is required to complete a common core of professional courses as follows: Business Administration 303 (4); Finance 341 (4); Management 300 (4); Marketing 300 (4); Business Law 301 (4); Quantitative Analysis and Control 380 (4); Management 360 (4); Economics 302/304, 311/303 (8); Business Administration 405 (4). Total: 40 hours.

Group VII: Professional Specialization. Requirements in the area of professional specialization are listed on the following pages. Total: 20-24 hours.

Group VIII: Free Electives. The remainder of the academic program consists of free electives to meet the student's specific educational objective. These electives should be selected in consultation with the student's adviser. Some areas of professional specialization specify certain courses which, in the opinion of the faculty, have a special importance. A student may cross college lines in meeting this requirement and take academic work in any of the departments of the University.

THE CURRICULA

The pages which follow show how and when group requirements may be met for the degree Bachelor of Science in Business Administration. Wherever possible, 100-level courses should be taken during the freshman year; 200-, during the sophomore year; 300-, during the junior year; and 400-, during the senior year. Following these levels is particularly important in core courses. Each of the specializations and concentrations within a specialization is different in its requirements; therefore, each is given in its entirety to permit the student to see his specialization as an integrated whole and to follow the requirements with ease. The Roman numerals refer to the groups to which the courses are applicable.

ACCOUNTING

A curriculum for the student who elects accounting as the area of specialization. A student may complete the minimum of 23 hours as outlined in the curriculum which follows. He also may, beginning in the third year, elect additional courses in accounting and related areas to prepare him more specifically for areas of concentration within the accounting field such as auditing, taxes, and government; cost and systems; or management advisory service. Quantitative Analysis and Control 160, 380 and Accounting 221, 222 are business-core courses which are required of each business administration degree student.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; Speech 102 (4) I; Statistics 111 (4) II; electives (26-30). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Accounting 321 (4) VII; Accounting 322 (4) VII; Accounting 331 (4) VII; Accounting 332 (4) VII; Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 302 (4) VI; Economics 303/311 (4) VI; Finance 341 (4) VI; Management 300 (4) VI; Marketing 300 (4) VI; Quantitative Analysis and Control 380 (4) VI. Total: 48 hours.

Fourth Year—Accounting 451 (3) VII; accounting electives* (4) VII; Management 360 (4) VI; Business Administration 405 (4) VI; electives (27). Total: 42 hours.

Electives: Group II—science/mathematics electives (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VIII—free electives (25).

* At least 4 hours must be selected from Accounting 421, 422, 423, 424, 429, 431, 439, 441, 442, 452, 491. A student planning to take the CPA examination is encouraged to elect Accounting 421, 422, 429, 441, 442, 452.

ADMINISTRATIVE SCIENCE

A curriculum for the student with a strong background in science and mathematics who is interested in a position in the expanding field of operations research, industrial management, or management systems analysis.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Mathematics 131, 231 (10) II; Quantitative Analysis and Control 160 (3) II; Speech 102 (4) I; Statistics 111 (4) II; electives (16-20). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Accounting 331 (4) VII; Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 303/311 (4) VI; Finance 341 (4) VI; Management 300 (4) VI; Management 360 (4) VI; Marketing 300 (4) VI; Quantitative Analysis and Control 380 (4) VI; Economics 304 (4) VI; electives (6). Total: 45 hours.

Fourth Year—Management 426 (4) VII; Management 441 (4) VII; Management 442 (4) VII; Management 465 (4) VII; Statistics 301 (4) VII; Business Administration 405 (4) VI; electives (21) V-VIII. Total: 45 hours.

Electives: Group II—science sequence (8) in one of the following: Biology 104, 106, 107; Chemistry 121, 122, 123; Physics 110, 211, 212, 213; Geology 103, 104, 105; Group III—social sciences (13) Psychology 201, 303; Sociology 101; Political Science 201; Group IV—humanities (9); Group V—non-business (13-17); Mathematics 232, 332, 333, 441; Group VIII—other electives (25) 400-level statistics courses; Accounting 332; Industrial Education and Technology 114; Engineering Drawing 104; Management 470; Economics 401, 402; Statistics 302.

ADVERTISING: MARKETING

A marketing curriculum for the student who is interested in a career in advertising in a commercial or industrial establishment or in an advertising agency. For other marketing curricula, see marketing research, retailing, and selling and sales management.

First Year—English 111, 112 (4-8) I; H.P.E. (3); mathematics requirement—(10) II; Quantitative Analysis and Control 160 (3) II; Speech 102 (4) I; Statistics 111 (4) II; electives (16-20). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 302/304 (4) VI; Economics 303/311 (4) VI; Marketing 300 (4) VI; Marketing 401 (4) VII; Marketing 410 (4) VII; Quantitative Analysis and Control 380 (4) VI; electives (13). Total: 45 hours.

Fourth Year—Management 300 (4) VI; Management 360 (4) VI; Business Administration 405 (4) VI; Finance 341 (4) VI; Marketing 403 (4) VII; Marketing 411 (4) VII; Marketing 412 (4) VII; Marketing 420 (4) VII; electives (13). Total: 45 hours.

Electives: Group II—mathematics/science (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VIII—free electives (24).

BUSINESS PRE-LAW

A curriculum to prepare the student for professional training in a law school, recognizing the business and economic emphasis of the practice of law while providing the breadth of training and the philosophical background which is conducive to success in a law school program.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) II; Statistics 111 (4) II; English 161/162/204 (4) VIII; electives (12-16). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Political Science 201/History 205 (4) VII; Statistics 212 (4) VI; English 207 (4) VII; electives (17). Total: 45 hours.

Third Year—Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 303/311 (4) VI; Finance 341 (4) VI; Management 300 (4) VI; Marketing

300 (4) VI; Economics 302/304 (4) VI; Speech 303 (4) VII; Quantitative Analysis and Control 380 (4) VI; electives (9). Total: 45 hours.

Fourth Year—Business Administration 405 (4) VI; Business Law 491 (4) VII; Economics 303/331/332 (4) VIII; Business Administration 403 (4) VII; Management 360 (4) VI; electives (25). Total: 45 hours.

Electives: Group II—science/mathematics (8): laboratory or non-laboratory science, biology, chemistry, geology, physics, physical geography; Group III—social sciences (13): economic geography; history; political science; psychology; sociology; Political Science 202; History 432, 433, 458; Group IV—humanities (9) list in Dean's office or adviser's office; Group V—non-business (13-17); Group VIII—free electives (20).

BUSINESS STATISTICS

This program is designed for a student with a good mathematical background. It is an excellent preparation for graduate study in any area of business or economics. This curriculum is also for the student who is interested in a career in statistical analysis and research in government or business.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Mathematics 131, 231 (10) II; Quantitative Analysis and Control 160 (3) II; Speech 102 (4) I; Statistics 111 (4) II; electives (11-20). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Mathematics 232 (5) VIII; Statistics 212 (4) VI; Statistics 313 (4) VII; electives (16). Total: 45 hours.

Third Year—Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 303/311 (4) VI; Finance 341 (4) VI; Management 300 (4) VI; Marketing 300 (4) VI; Statistics 402 (4) VII; Statistics 301/302/403/406/410 (4) VII; Economics 302/304 (4) VI; Quantitative Analysis and Control 380 (4) VI; electives (5). Total: 45 hours.

Fourth Year—Business Administration 405 (4) VI; Management 360 (4) VI; Statistics 301/302/403/406/410 (8) VII; electives (29). Total: 45 hours.

Electives: Group II—science/mathematics (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VIII—free electives (18): Mathematics 332, 333, 441, 442; Economics 402; Business Administration 404; Quantitative Analysis and Control 480. For further information, a student should consult his adviser.

ECONOMICS

The Economics curriculum is designed for the student who wishes to prepare for graduate studies in economics or business administration or who desires professional training for a career as an economist in civil service or private enterprise. The program aims to acquaint the student with techniques used for the analysis of modern economic problems and to develop in him an ability to exercise sound judgment in evaluating public economic policies.

First Year—English 111, 112 (4-8); H.P.E. (3); Quantitative Analysis and Control 160 (3); mathematics requirement (10); Speech 102 (4); Statistics 111 (4); electives (16-20). Total: 48 hours.

Second Year—Accounting 221 (4); Accounting 222 (4); Economics 201 (4); Economics 202 (4); Economics 311 (4); Statistics 212 (4); electives (21). Total: 45 hours.

Third and Fourth Years—Total: 90 hours.

Professional Courses (40): Business Administration 303 (4); Business Administration 405 (4); Business Law 301 (4); Economics 302 (4); Economics 303 (4); Finance 341 (4); Management 300 (4); Management 360 (4); Marketing 300 (4); Economics 301 or 401 (4).

Area of Specialization (24): Depending upon his needs, the student may follow either a general program of study or concentrate in a particular area of economics. The student who wishes a general approach should, in consultation with his

adviser, elect six courses from the following: Economics 301, 304, 321, 322, 323, 331, 332, 341, 351, 361, 371, 372, 401, 402, 414, 423, 424, 443, 447, 451, 452, 453, 459, 460, 471, 473, 474, 475, 476, 491, 495. For students who are interested in acquiring some depth in a particular area, the following course sequences plus sufficient electives are recommended:

Theory: 301, 304, 401, 402, 473.

Labor: 321, 322, 323, 423, 424.

Money and Public Finance: 331, 332, 414, 475.

Transportation and Regulated Industries: 341, 443, 446, 447.

International Economics: 351, 451, 452.

Regional/Urban Economics: 361, 459, 460, 461.

Economic Systems and Economic Development: 371, 372, 453, 474.

Public Economic Policy: 322, 323, 341, 414, 471, History 404.

Electives: 26 hours.

Electives: mathematics and science (8); social and behavioral sciences (13); humanities (9); non-business (13-17); free electives (24-32).

FINANCE

A curriculum for a student who is interested in the financial management of a business enterprise, a financial institution such as a commercial bank or savings and loan association, mutual funds, an insurance company, or investment analysis and management.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; electives (16-25). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Accounting 321 (3) VIII; Accounting 322 (3) VIII; Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 303/311 (4) VI; Economics 302/304 (4) VI; Finance 341 (4) VI; Finance 430 (4) VII; Management 300 (4) VI; Marketing 300 (4) VI; Quantitative Analysis and Control 380 (4) VI; electives (3). Total: 45 hours.

Fourth Year—Management 360 (4) VI; Business Administration 404/Economics 414 (4) VIII; Business Administration 405 (4) VI; Finance 450 (4) VII; Finance 451 (4) VII; Finance 460 (4) VII; finance electives (7-8) VII; electives (13-14). Total: 45 hours.

Electives: Group II—mathematics/science (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VII—finance (8): Finance 431, 433, 461, 470; Accounting 439; Group VIII—free electives (14-15): Business Law 418; Insurance 361; Economics 303, 331, 414, 451, 461.

GENERAL BUSINESS

A curriculum for the student who desires to obtain a broad business background with a minimum of specialization or who desires to tailor a program to his specific needs.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; electives (16-25). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—area of specialization* (8) VII; Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 302 or 304 (4) VI; Economics 303/311 (4) VI; Finance 341 (4) VI; Management 300 (4) VI; Marketing 300 (4) VI; Quantitative Analysis and Control 380 (4) VI; electives (5). Total: 45 hours.

Fourth Year—area of specialization* (16) VII; Management 360 (4) VI; Business Administration 405 (4) VI; electives (21). Total: 45 hours.

* Twenty-four hours must be selected from the following areas: accounting, business education, economics, finance, insurance, management, marketing, quantitative analysis and control, or statistics with not more than 12 hours in any one area. Include only courses that may be used to fulfill requirements in an area of specialization.

Electives: Group II—mathematics/science (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VIII—free electives (24).

PRODUCTION AND OPERATIONS MANAGEMENT

A curriculum designed for the student preparing for a career in production management. This curriculum introduces the student to the concepts and methods utilized in the production and operations areas.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; electives (16-25). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 303/311 (4) VI; Economics 304 (4) VI; Management 300 (4) VI; Management 354 (4) VII; Management 360 (4) VI; Marketing 300 (4) VI; Finance 341 (4) VI; Quantitative Analysis and Control 380 (4) VI; electives (5). Total: 45 hours.

Fourth Year—Business Administration 405 (4) VI; Accounting 331 (4) VII; Management 330 (4) VII; Management 441 (4) VII; Management 442 (4) VII; Management 470 (4) VII; electives (22) V-VIII. Total: 45 hours.

Electives: Group II—science/mathematics (8); Group III—social sciences (13): Psychology 201, Sociology 101, Political Science 101; Group IV—humanities (9); Group V—non-business (13-17): Psychology 305, 352; Political Science 421, 422; Sociology 301, 415; Group VIII—free electives (24): Management 305, 426, 430, 455, 458, 465; Quantitative Analysis and Control 312, 403; Mathematics 232; Economics 321.

INFORMATION SYSTEMS

A curriculum for the student who is interested in a position as a systems analyst or in a position using the application of electronic computers to business problems. Emphasis is placed upon the use of the computer in a quantitative business environment. Provision is made through electives within the major (minimum of 24 hours) for application of the computer to one of the functional areas of business such as accounting, economics, finance, management, marketing, or statistics.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Mathematics 131, 231 (10) II; Quantitative Analysis and Control 160 (3) II; Speech 102 (4) I; Statistics 111, 212 (8) II; electives (12-21). Total: 48 hours.

Second Year—Accounting 221, 222 (8) VI; Economics 201, 202 (8) VI; Quantitative Analysis and Control 260 (4) VII; electives (25). Total: 45 hours.

Third Year—Management 300 (4) VI; Finance 341 (4) VI; Business Administration 303 (4) VI; Quantitative Analysis and Control 380 (4) VI; Economics 303/311 (4) VI; Business Law 301 (4) VI; Marketing 300 (4) VI; major elective* (4) VII; electives (13). Total: 45 hours.

Fourth Year—Quantitative Analysis and Control 471 (4) VII; Quantitative Analysis and Control 460 (4) VII; Quantitative Analysis and Control 472 (4) VII; major elective* (4) VII; Business Administration 405 (4) VI; Economics 302/304 (4) VI; Management 360 (4) VI; electives (17). Total: 45 hours.

Electives: Group II—science/mathematics (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17): English 207; Mathematics 232, 332, 403, 404; Computer Science 305, 306, 307, 408, 409; Speech 103; Group VIII—free electives (24): same as Group V plus all statistics courses; Accounting 331, 332, 431, 451, 452; Economics 301, 331, 351, 361, 401, 402,

* Eight hours (Group VII) must be selected from a specific functional area in business such as accounting, economics, finance, management, marketing, or statistics in consultation with an adviser. Courses from the selected area must form a cohesive group. A student is encouraged to use some of his free electives to deepen his understanding of the functional area selected.

424, 459; Finance 430, 431, 450, 460, 470; all management courses; Marketing 420; Quantitative Analysis and Control 480; Business Administration 404.

INSURANCE

A curriculum for the student who wishes to prepare for a career in the field of life insurance or property and casualty insurance.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; electives (16-25). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 311 (4) VI; Economics 302/304 (4) VI; Finance 341 (4) VI; Insurance 361 (4) VII; Insurance 467 (4) VII; Management 300 (4) VI; Marketing 300 (4) VI; Quantitative Analysis and Control 380 (4) VI; electives (5). Total: 45 hours.

Fourth Year—Management 360 (4) VI; Business Administration 405 (4) VI; Business Law 413/415 (4) VIII; Insurance 463 (4) VII; Insurance 465 (4) VII; Insurance 469 (4) VII; Insurance 470 (4) VII; Sociology 412 (3) VIII; electives (13). Total: 45 hours.

Electives: Group II—mathematics/science (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VIII—free electives (16): Economics 321, 361, 460, 461; Finance 430, 431, 443; Business Law 413, 415.

INTERNATIONAL BUSINESS

A curriculum for the student preparing for a foreign assignment or a position in the international division of a company. An international major should develop professional competence in one functional area of business and one geographic area through his selection of elective courses. A list of suggested electives is available from the faculty adviser.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; History 153 (4) VII; electives (12-21). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Business Administration 303 (4) VI; Economics 302/304 (4) VI; Economics 303/311 (4) VI; Economics 351 (4) VII; Quantitative Analysis and Control 380 (4) VI; Political Science 372 (4) VII; Business Law 301 (4) VI; Finance 341 (4) VI; Management 300 (4) VI; Marketing 300 (4) VI; electives (5). Total: 45 hours.

Fourth Year—Management 360 (4) VI; Business Administration 390 (4) VII; Business Administration 405 (4) VI; Business Administration 440 (3) VII; Business Administration 450 (3) VII; electives (27). Total: 45 hours.

Electives: Group II—science/mathematics (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VIII—free electives (26): 10 hours of a foreign language must be selected (proof of language competence equivalent to elementary college-level proficiency satisfies this requirement).

MARKETING RESEARCH

A marketing curriculum for the student who wishes to prepare for research responsibilities in a marketing department of a manufacturing plant, an advertising agency, or a research service organization. For other marketing curricula, see advertising, retailing, and selling and sales management.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; electives (16-25). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 302/304 (4) VI; Economics 303/311 (4) VI; Marketing 300 (4) VI; Marketing 401 (4) VII; Marketing 420 (4) VII; Quantitative Analysis and Control 380 (4) VI; electives (13). Total: 45 hours.

Fourth Year—Management 300 (4) VI; Management 360 (4) VI; Business Administration 405 (4) VI; Finance 341 (4) VI; Marketing 403 (4) VII; Marketing 421 (4) VII; Statistics 301 (4) VII; Statistics 403 (4) VII; electives (13). Total: 45 hours.

Electives: Group II—mathematics/science (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VIII—free electives (24).

OFFICE MANAGEMENT

A curriculum for the student who wishes to specialize in the planning, organization, and control of office work. This curriculum also introduces the student to the subdivisions of records management, forms design and control, systems and procedures, and data processing. This program and a specified amount of practical office experience enables a student to qualify for a professional certificate in office management issued by the Administrative Management Society.

First Year—Business Education 112 (3) VII; English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; electives (13-22). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Business Education 211 (3) VII; Business Education 220 (3) VII; Business Education 230 (3) VII; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (16). Total: 45 hours.

Third Year—Business Education 335 (3) VII; Business Law 301 (4) VI; Economics 302/304 (4) VI; Economics 303/311 (4) VI; Finance 341 (4) VI; Management 300 (4) VI; Marketing 300 (4) VI; Quantitative Analysis and Control 380 (4) VI; electives (14). Total: 45 hours.

Fourth Year—Business Administration 303 (4) VI; Business Administration 405 (4) VI; Business Education 455 (3) VII; Management 354/459 (4) VII; Management 360 (4) VI; electives (26). Total: 45 hours.

Electives: Group II—mathematics/science (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VIII—free electives (26).

PERSONNEL MANAGEMENT: INDUSTRIAL RELATIONS

A curriculum for the student who is preparing for a career in personnel management and industrial relations including manpower management, applied behavioral sciences, motivation, human relations, organization theory, wage and salary administration, industrial health and safety, employee services, grievance procedures, and collective bargaining.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; electives (16-25). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 303/311 (4) VI; Economics 304 (4) VI; Finance 341 (4) VI; Management 300 (4) VI; Management 354 (4) VII; Management 360 (4) VI; Marketing 300 (4) VI; Quantitative Analysis and Control 380 (4) VI; electives (5). Total: 45 hours.

Fourth Year—Business Administration 405 (4) VI; Management 459 (4) VII; Management 465 (4) VII; Management 470 (4) VII; electives (8) VII; electives (21) V-VIII. Total: 45 hours.

Electives: Group II—science/mathematics (8); Group III—social sciences (13): Psychology 201, Sociology 301, Political Science 201; Group IV—humanities (9); Group V—non-business (13-17): Psychology 305, 352; Political Science 421, 422; Group VII—(8) Economics 321, 423; Management 458, 465; Psychology 352, 452, 453; Political Science 421, 422; Group VIII—free electives (24): Management 305, 330, 426, 441, 442, 471; Economics 321, 423.

PROCUREMENT AND MATERIALS MANAGEMENT

A curriculum for the student who is interested in the area of procurement and materials management. The course of study includes an integrated approach to the functions of procurement, materials control, traffic, and shipping and receiving activities.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; electives (13-17). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 303/311 (4) VI; Economics 304 (4) VI; Finance 341 (4) VI; Management 300 (4) VI; Management 330 (4) VII; Management 360 (4) VI; Marketing 300 (4) VI; Quantitative Analysis and Control 380 (4) VI; electives (5). Total: 45 hours.

Fourth Year—Business Administration 405 (4) VI; Management 430 (4) VII; Management 442 (4) VII; Management 459 (4) VII; Management 470 (4) VII; Economics 341 (4) VII; electives (25). Total: 45 hours.

Electives: Group II—science/mathematics (8) laboratory or non-laboratory science; Group III—social sciences (13): Psychology 201; Political Science 101, 201; any suitable history course; Group IV—humanities (9) see list in Dean's Office; Group V—non-business (13-17): Mathematics 232, 332; Industrial Education and Technology 114; Group VIII—free electives (25): Business Law 416; Economics 443; Management 305, 441.

RETAILING: MARKETING

A marketing curriculum for the student who wishes to prepare for managerial responsibilities in retailing. For other marketing curricula, see advertising, marketing research, and selling and sales management.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; electives (16-25). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 302/304 (4) VI; Economics 303/311 (4) VI; Marketing 300 (4) VI; Marketing 401 (4) VII; Marketing 430 (4) VII; Quantitative Analysis and Control 380 (4) VI; electives (13). Total: 45 hours.

Fourth Year—Management 300 (4) VI; Management 360 (4) VI; Business Administration 405 (4) VI; Finance 341 (4) VI; Marketing 403 (4) VII; Marketing 410 (4) VII; Marketing 420 (4) VII; Marketing 436 (4) VII; electives (13). Total: 45 hours.

Electives: Group II—mathematics/science (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VIII—free electives (24).

SECRETARIAL ADMINISTRATION

A curriculum for a student desiring to prepare for administrative level secretarial responsibilities in business or industrial establishments, professional offices, or government agencies.

The student develops competency in secretarial skills, office procedures and management, data processing, communications, and decision making.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; electives (16-25). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Business Education 210* (3) VII; Business Education 211 (3) VII; Business Education 220 (3) VII; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (16). Total: 45 hours.

Third Year—Business Education 312* (3) VII; Business Education 313 (3) VII;

* A student with insufficient or no training in shorthand or typewriting must elect the beginning or intermediate course.

Business Education 314 (1) VII; Business Law 301 (4) VI; Economics 302/304 (4) VI; Economics 303/311 (4) VI; Finance 341 (4) VI; Management 300 (4) VI; Marketing 300 (4) VI; Quantitative Analysis and Control 380 (4) VI; electives (10). Total: 45 hours.

Fourth Year—Business Administration 303 (4) VI; Business Administration 405 (4) VI; Business Education 401 (5) VII; Business Education 455 (3) VII; Management 360 (4) VI; electives (25). Total: 45 hours.

Electives: Group II—mathematics/science (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VIII—free electives (24).

SELLING AND SALES MANAGEMENT: MARKETING

A marketing curriculum for the student who is interested in salesmanship or sales management. For other marketing curricula, see advertising, marketing research, and retailing.

First Year—English 111, 112 (4-8) I; H.P.E. (3); Quantitative Analysis and Control 160 (3) II; mathematics requirement (10) II; Speech 102 (4) I; Statistics 111 (4) II; electives (16-25). Total: 48 hours.

Second Year—Accounting 221 (4) VI; Accounting 222 (4) VI; Economics 201 (4) VI; Economics 202 (4) VI; Statistics 212 (4) VI; electives (25). Total: 45 hours.

Third Year—Business Administration 303 (4) VI; Business Law 301 (4) VI; Economics 302/304 (4) VI; Economics 303/311 (4) VI; Marketing 300 (4) VI; Marketing 340 (4) VII; Marketing 401 (4) VII; Quantitative Analysis and Control 380 (4) VI; electives (13). Total: 45 hours.

Fourth Year—Management 300 (4) VI; Management 360 (4) VI; Business Administration 405 (4) VI; Finance 341 (4) VI; Marketing 403 (4) VII; Marketing 410 (4) VII; Marketing 420 (4) VII; Marketing 441 (4) VII; electives (13). Total: 45 hours.

Electives: Group II—mathematics/science (8); Group III—social sciences (13); Group IV—humanities (9); Group V—non-business (13-17); Group VIII—other electives (24).

ASSOCIATE IN APPLIED BUSINESS*

TWO-YEAR EXECUTIVE SECRETARIAL DEGREE PROGRAM

A student who is interested in secretarial administration may prefer a shorter program than the four-year curriculum leading to the degree of Bachelor of Science in Business Administration. Upon the completion of this program, the student receives the Associate in Applied Business degree. If a student should decide to continue his education after completing one or two years of this program, he may apply full credit for all courses satisfactorily completed toward the four-year degree program in secretarial administration.

First Year—English 111, 112 (4-8); H.P.E. (3); Business Administration 102 (4); Business Education 101 (4); Business Education 111** (3); Business Education 112** (3); Business Education 210 (3); Business Education 211 (3); Business Education 213** (3); Business Education 214** (3); Business Education 215** (3); Business Education 220 (3); Business Education 230 (3); electives (2-6). Total: 48 hours.

* A candidate for the degree of Applied Business must complete at least 45 hours in residence immediately preceding graduation, earn a point average of at least 2.0 in course work taken in residence, meet the requirements as listed above, and earn a minimum of 93 hours of credit including 3 hours of health and physical education.

** A student graduating from high school in business education who has had the beginning-level courses in typewriting and/or shorthand should enroll in the advanced-level courses. The student with two semesters of high school typewriting and/or shorthand should enroll in Business Education 112 and/or 214. The student with four semesters of high school typewriting and/or shorthand should enroll in Business Education 210 and/or 215. A student who chooses to enroll in lower-level courses does not receive credit toward his two-year program for such courses. A student not taking the beginning-level courses in typewriting and/or shorthand must substitute electives in place of the beginning courses to complete a minimum of 93 hours for graduation.

Second Year—Accounting 221 (4); Accounting 222 (4); Economics 201 (4); Business Education 240 (4); Business Education 311 (3); Business Education 312 (3); Business Education 314 (1-3); Business Education 321 (3); Business Education 401 (5); Business Administration 303 (4); Business Law 301 (4); electives (4-6). Total: 45 hours.

Suggested Electives: Economics 202, Home Economics 105, humanities, mathematics, Political Science 201, Quantitative Analysis and Control 160, sciences, Speech 102.

BUSINESS ADMINISTRATION-EDUCATION

A candidate who has met all the requirements for the degree Bachelor of Science in Business Administration also may qualify for the degree Bachelor of Science in Education and for an Ohio certificate to teach by completing the combined curriculum including the general and specific graduation requirements for each college. See page 97.

The student who desires to pursue the combined program must register in the College of Education as well as in the College of Business Administration and must maintain a 3.0 average or better. To receive the degree of Bachelor of Science in Education, the student must complete the comprehensive major, the distributive education major, or the basic business major in business education. The basic business major requires a non-business minor or a distributive education minor. See page 86. In addition, the student must take Psychology 201, Education 302, appropriate methods courses, meet the group requirements in general education, and participate in a quarter of professional concentration which includes student teaching—Education 331.

A student interested in teaching business or distributive education in high school should consult with the Department of Business Education in planning his program.



THE SCHOOL OF JOURNALISM

Joseph A. Del Porto, Ph.D., *Director*

THE FIELD OF JOURNALISM

Modern journalism encompasses the mass communications media—newspapers, consumer magazines, business and industrial publications, technical periodicals, trade and professional publications, radio and television. Needed in a highly-diversified profession are trained news reporters and editors for weeklies, dailies, the wire services, radio and television; specialists in photojournalism; public relations practitioners; editors for a wide range of magazines; writers in special fields such as science, business, education, medicine, politics; and competent administrators to manage the editorial, advertising, and business functions of publications and other mass communications services.

The student who plans a career in professional journalism must have a broad education based on the social sciences, humanities, and natural sciences. He must understand the social, political, and economic role of the mass media in a democratic society. He must be skilled in the professional techniques demanded by employers. To provide the opportunity to achieve these goals is the purpose of the School of Journalism.

TRAINING AND FACILITIES

The *BG News*, the daily campus newspaper, provides opportunities to gain experience in reporting, editing, advertising, and management. In addition, a student has an opportunity to work on the *Key*, BGSU's yearbook, and to prepare newscasts for the University's radio and television stations, WBGU-FM and WBGU-TV. The School of Journalism has laboratories for reporting and editing, photography, and graphics of communication. A summer internship program provides professional training for a qualified major on the staff of a daily or weekly newspaper, magazine, radio station, college news bureau, or public relations department of a business or industry.

PROFESSIONAL ASSOCIATIONS

The School of Journalism has an undergraduate chapter of Sigma Delta Chi, national men's journalism society; Sigma Phi, a women's journalism group; and the Public Relations Student Society of America which is open to either a man or a woman. It is a recipient of Reader's Digest Foundation funds which pay travel expenses for a student researching a story away from the campus. Contacts with numerous professional organizations are maintained through individual faculty memberships. The School of Journalism serves as secretariat for the Northwestern Ohio Newspaper Association and the Northwestern Ohio District Journalism Association.

SPECIALIZATION: FIVE SEQUENCES

In addition to other requirements, each journalism major chooses one of five areas of specialization called sequences. The news-editorial sequence is generally associated with training for reporting and editing positions on weekly or daily newspapers and the wire services. Photojournalism combines skills in writing and photography to convey a message in words and pictures. Public relations includes inter-group communications and relating the interests of business, industry, government, and public and private institutions to each other and to society. Broadcast journalism aims at competence in the electronic media of radio and television. Magazine journalism is concerned with the writing, editing, and publishing of these media. A student interested in teaching is referred to requirements for a journalism major in the College of Education.

REQUIREMENTS FOR GRADUATION

A candidate for the degree of Bachelor of Science in Journalism must:

1. Complete at least 45 hours of work in residence immediately preceding graduation;

2. Earn a minimum of 183 hours of credit either in residence or by advanced standing; these hours must include 3 hours of health and physical education and a course in beginning typewriting for a student who did not have typewriting in high school. A student may be excused from the typewriting requirement by passing a proficiency test; 60 of the hours must be in 300- and 400-level courses;
3. Earn a point average of at least 2.0 in all courses undertaken in residence;
4. Complete 76 hours of general requirements as listed below;
5. Complete the 26 credits in the core journalism courses listed below and 20 or more as listed in a specific sequence; no more than 50 credits in journalism may be counted toward the 183 required for the baccalaureate degree;
6. Complete a minor of at least 30 hours in one field other than journalism, of which 20 hours must be in 300- or 400-level courses; choice of a minor field should be made in consultation with the student's adviser after careful consideration of the individual's career goals. An interdepartmental minor is encouraged but must be approved by the Director of the School of Journalism

GENERAL COURSE REQUIREMENTS

Economics (8); English 111, 112 (4-8); health and physical education (3); history (12); literature (8); political science (8); psychology and/or philosophy (8); science (12); sociology (9). Total: 72-76 hours.

CORE COURSES IN JOURNALISM

103. Introduction to Mass Communications (4); 104. Introduction to News Writing (3); 107. Introduction to Photojournalism (4); 211. Reporting (3); 302. Copy Editing (4); 402. Law of Journalism (4); 405. History and Ethics of Journalism (4). Total: 26 hours.

SEQUENCE REQUIREMENTS

NEWS-EDITORIAL: Journalism 310. Graphics of Communication (4); Journalism 312. Reporting of Public Affairs (4); Journalism 315. Press Management (4); journalism electives (8). Total: 20 hours.

PUBLIC RELATIONS: Journalism 303. Industrial Editing (4); Journalism 310. Graphics of Communication (4); Journalism 340. Principles of Public Relations (4); Journalism 440. Public Relations Techniques (4); journalism elective (4). Total: 20 hours.

PHOTOJOURNALISM: Journalism 303. Industrial Editing (4); Journalism 307. Photographic Communication (4); Journalism 310. Graphics of Communication (4); Journalism 407. Color Photography (4); journalism elective (4). Total: 20 hours.

BROADCAST JOURNALISM: Journalism 312. Reporting of Public Affairs (4); Journalism 330. Radio-Television News (4); Speech 363. Television Studio Operations and Programs (3); Speech 368. Radio Workshop (2); Speech 463. Producing and Directing for Television (3); Education 428. Utilization of Educational Media (4); journalism elective (4). Total: 24 hours.

MAGAZINE JOURNALISM: Journalism 303. Industrial Editing (4); Journalism 304. Feature Writing (4); Journalism 404. Magazine Article Writing (4); Journalism 416. Magazine Publishing (4); journalism elective (4). Total: 20 hours.

NOTE: in addition to the above, there are special sequence requirements as follows: in public relations, Marketing 300, 410, and Speech 312; in photojournalism, Art 101, 211.

ELECTIVES: A student should note that a substantial number of electives can be taken along with the above required courses. For example, a student taking the news-editorial sequence and minoring in a subject such as political science has 39 hours remaining for electives. In some cases, the student may complete the equivalent of a second major.

CHANGES: Any change in program requirements or course prerequisites must have approval of the Director of the School of Journalism.



THE COLLEGE OF EDUCATION

Theodore J. Jenson, Ph.D., *Dean*

David G. Elsass, Ed.D., *Associate Dean*

Vergil K. Ort, Ph.D., *Assistant Dean*

Robert J. Keefe, Ed.D., *Assistant to the Dean*

Jane Krone, M.S., *Assistant to the Dean*

Fred Pigge, Ph.D., *Coordinator, Center for Educational Research and Services*

Department of College Student Personnel, Gerald L. Saddlemire, Ed.D., *Chairman*

Department of Education, William J. York, Ed.D., *Chairman*

Department of Home Economics, Georgia Halstead, Ph.D., *Chairman*

Department of Industrial Education and Technology, Jerry Streichler, Ph.D., *Chairman*

Department of Library Science, Louise F. Rees, M.A., *Chairman*

Men's Department of Health and Physical Education

Samuel M. Cooper, Ed.D., *Chairman*

Women's Department of Health, Physical Education, and Recreation,

Annie Clement, Ph.D., *Chairman*

Academic Appeals

William Harrington; James Richardson; Gerald Saddlemire; D. G. Elsass, *ex-officio*.

Advisory and Policy Council

Forrest Creason (Vice Chairman), George Horton (Vice Chairman Elect), Joyce Myles (Secretary), Thomas Bach, Richard Bowers, Helen Calaway, Mearl Guthrie, Louise Rees, Gerald Saddlemire, Wallace Terwilliger, Beverly Zanger, T. J. Jenson (*ex-officio*) (Education representative to be elected by Department).

Curriculum Committee

Mary Amos, Irvin Brune, Annie Clement, Mary Glenn, George Horton, Robert Keefe, Joyce Myles, D. G. Elsass (*ex-officio*).

Secondary Education Committee

Robert Austin, Paul Haas, Verlin Lee, Michael Moore, Diane Pretzer, Wallace Terwilliger, Robert Keefe (Chairman).

Selection and Screening Committee (Student Teaching)

Richard Bowers, Mary Cunningham, Suzanne Donnell, George Horton, Robert Keefe, Harland Lehtomaa, Bernard Rabin, Ronald Smith, Genevieve Stang, Galen Stutsman, Mary Watt, William York, William Harris (Chairman), Vergil Ort (*ex-officio*).

AIMS AND PURPOSES

The function of the College of Education in the general program of the University is to provide pre-service education for a teacher or for a major in applied music

or industrial technology. The College believes that these needs can best be served by providing concurrently for the student:

1. A program of general education designed to develop the knowledge, understandings, skills, abilities, and attitudes which are the common possessions of an educated person as a citizen in a free society;
2. Advanced study in one or more areas of specialized interest;
3. A program of professional educational experiences.

To make possible the realization of these objectives, the College of Education maintains a close working relationship with the other colleges of the University in matters pertaining to curricular offerings, with the public schools of Bowling Green and northwest Ohio for laboratory facilities, and with the vocational schools and technical colleges for cooperative activities.

DEGREES OFFERED

Bachelor of Science in Education
Bachelor of Science in Technology

General Requirements for the Degree

In addition to the specific requirements listed on the following pages, a candidate for any degree must fulfill these general requirements:

1. Earn a minimum of 183 hours of credit including 3 hours in health and physical education;
2. Complete in residence at least 45 hours of credit immediately preceding graduation;
3. Complete 60 or more hours of credit in courses numbered 300 and above;
4. Have an accumulative point average of at least 2.0 in all courses undertaken;
5. Meet the requirements for the degree listed in the following pages pertaining to curricula, prerequisites, laboratory experiences, personal fitness, and other regulations; responsibility rests with the student in meeting these requirements.

A candidate for graduation must file an *Application for Graduation* with the Registrar. See page 16 for deadlines for applying for graduation. Application blanks for this purpose and for Ohio teacher certification may be obtained at the Registrar's Office.

A candidate for graduation must file credentials of personal data with the Office of Career Planning and Placement not later than the second week of his final quarter or summer semi-quarter.

Group Requirements

To insure a general education background in addition to the teaching specialization, a student is required to complete 63 hours of credit from the four areas of knowledge indicated below as group requirements. Insofar as possible, group requirements should be completed during the freshman and sophomore years.

Group I: *Composition, Literature, and Speech*. Each student must complete English 112 or equivalent, a literature course in English, and Speech 102. A student is considered to have demonstrated acceptable performance in English skills if he has received a grade of C or better in English 112. A student who receives a D in English 112 must repeat the course until he earns a grade of C. Furthermore, the student is required to present evidence of freedom from speech defects as certified by the Department of Speech. Minimum total: 12 hours.

Group II: *Science and Mathematics*. Each student must complete 14 hours of credit in course work selected from the areas of biology; chemistry; computer science; physics; geology; mathematics; and Geography 125, 126, 127, 213. Such course work must be in at least two sciences or a science and mathematics. Mathematics 241, 242 are applicable only for an elementary education major. Minimum total: 14 hours.

Group III: *Social Sciences*. Each student must complete 14 hours of course work in the social sciences. Courses may be selected from the areas of economics, geography, history, political science, psychology and sociology. The course work

must be in at least two social science areas and be in addition to Psychology 201, which is required as a part of the professional sequence. Minimum total: 14 hours.

Group IV: *Fine and Applied Arts.* Each student is required to complete 9 hours of credit in one or more of the following fields: art, business education, crafts, drama (including radio, television), foreign language, home economics, industrial education and technology, library science, literature (in addition to that in Group I), modern dance, music, and philosophy. No graduation credit is allowed for less than two quarters of a beginning foreign language. Minimum total: 9 hours.

Total Group Requirements. Each student pursuing the Bachelor of Science in Education degree or majoring in music education under the Bachelor of Music degree must complete the minimum requirements within each of the four groups described above. A student desiring to obtain either a Bachelor of Music or Bachelor of Science in Technology degree and not qualifying for teacher certification must fulfill each group requirement as prescribed in the particular program. However, each student in the College of Education must obtain a minimum of 63 hours of credit from Groups I, II, III, and IV. The remaining hours after the individual group minimums have been satisfied may be taken from any one or more of the groups but cannot include those courses required in the student's primary major. Minimum total: 63 hours.

BACHELOR OF SCIENCE IN EDUCATION

A student who meets the requirements for graduation in one of the four-year curricula in the College of Education is granted the degree of Bachelor of Science in Education. A candidate for a degree must meet the following requirements for graduation:

Professional Requirements

The required professional courses parallel the general education and the major-minor, subject-matter emphasis during the first three years of the student's program. Such course work is supplemented with directed observations and participation in a school situation, case studies of children, and community-field project activities.

One quarter of the senior year is devoted to student teaching. During this period, the student devotes full time to participation and teaching under the guidance of a supervising teacher and campus staff members.

To supplement the professional subjects and their related laboratory contacts, two types of experience are required of each student. The first type involves *work experience* with children outside the school situation. The second type is in the nature of *field experience*.

Work Experience. This may be a single experience or a variety of experiences. It may be obtained in a group or individual situation that involves working with and/or giving leadership to such group activities as Boy Scouts, Girl Scouts, 4-H Clubs, Camp Fire Girls, youth groups, Sunday School teaching, church, playground recreational activities, story-hour sessions. It is suggested that these experiences be started during the freshman year and be continued through the junior year. A minimum of 60 hours of work experience is required, and each student must account for these experiences when he preregisters for student teaching.

The Field Experience. There are to be two field experiences. Both are to involve the student in school programs during the school year. The first is to be during the freshman year or prior to the sophomore year, and the second is to be prior to or during the junior year. Each experience is to be arranged by the student with a school system of the student's choice, and each experience should be in a different setting. Forms giving detailed directions may be obtained from the Office of Student Teaching.

Student Teaching Program

Student teaching is the culminating experience in the student's program of teacher education. For this reason it is usually reserved for the last year of the student's work on campus, but it may be taken as early as the last quarter of the junior year if the appropriate pre-student teaching sequence has been completed.

Eligibility for Quarter of Student Teaching

To be eligible for an assignment in student teaching the student must:

1. Have completed 125 hours of college credit including the prerequisite professional courses and be in good standing;
2. File an application for student teaching with the Director of Student Teaching not later than the first month of the quarter preceding anticipated student teaching;
3. Possess an accumulative point average of 2.0 in all work undertaken and 2.25 in the major field; he must meet and maintain this standard for one quarter prior to his teaching assignment;
4. Demonstrate acceptable performance in oral and written English—see Group I requirement, page 81;
5. Present evidence of freedom from speech defects;
6. Present evidence of physical fitness; during the quarter preceding student teaching, a student must report to the Student Medical Center for a physical examination;
7. Give evidence of good moral character, desirable personality traits, and professional attitudes; student teaching may be deferred by the Dean and upon the recommendation of the Selection and Screening Committee of the College of Education;
8. Present evidence of having completed 60 hours of work experience with children and laboratory experience of the types designated above;
9. Present evidence of having participated in a field experience.

Student teaching is provided in a quarter of professional concentration. During this time, the student is assigned to one situation for a full-time experience. Here he progresses from observation and directed participation to full-time responsible teaching. The student is guided in studies of child development, specific teaching skills, and the planning of a balanced program of learning situations. He is expected to participate in the curricular, extracurricular, and professional activities of the school.

A student in physical education, music, or art ordinarily teaches in both elementary and secondary schools. Programs for the student in public school music are individually planned to give proper balance or concentration on vocal or instrumental experience.

Other Requirements

All other requirements in addition to the major, minor, and group requirements are indicated in the respective curriculum outlines and in supplementary directive sheets which are available to the student from the Program Advisement Office.

Requirements pertaining to certificates for teaching are based on Section 3319.22 of the Revised Code of Ohio Statutes and regulations of the State of Ohio Department of Education.

Laboratory Facilities

The resources of the public school system of Bowling Green are available to the University for observation, junior experience, field experiences, student teaching, a reasonable amount of professional experimentation (student and faculty), and a limited amount of student testing. All requests for laboratory experiences in the public schools of Bowling Green are to be cleared through the Office of Student Teaching. In addition, the University can make arrangements for student teaching in nearby communities, greater Toledo, Sandusky, and metropolitan Cleveland. The student is assigned to a school in one of these communities on a full-time basis.

This cooperation of the immediate school community and of many schools in the area offers a realistic and educationally sound opportunity to a student teacher.

Certification Regulations

Upon completion of the degree program and on recommendation of the Dean of the College of Education the student is entitled to an Ohio Provisional Certificate to teach in the field or fields of his preparation; however, this certification process

must be initiated by the student at the time he applies for graduation. Ohio teaching certificates are not transferable to other states. A student who plans to teach in another state is expected to assume responsibility for selection of subjects which meet certification requirements in that state. Assistance in the latter can be obtained from the Academic Program Advisement Office located in Suite 365 of the Education Building.

Two kinds of certificates for teaching in the Ohio public elementary schools are available to the graduate of an approved curriculum. One is valid for grades 1 to 8 in elementary schools. The other certificate, for kindergarten-primary, is valid for teaching in kindergarten and in grades 1 to 3.

An applicant for the Provisional Elementary or Kindergarten-Primary Certificate is required to complete the curriculum outlines below. A student desiring the Kindergarten-Primary Certificate is required to do his student teaching on the kindergarten or primary level and to complete Education 342 and 357.

The elementary education curriculum also is designed to serve the needs and interests of the student who wishes to qualify for both the elementary and secondary certificates. A student who desires this program of *dual certification* must complete in addition to the elementary curriculum outlined below a major or two minors as a part of the four-year program. The sequence of courses for the major and minor areas is listed on pages 85-90. Certification for the dual program is applicable only for teaching in Ohio.

A student who wishes certification for the teaching of educable mentally retarded children should follow curriculum listed on page 96. The completion of the curriculum entitles the student to the Ohio Provisional Special Certificate for the teachers of slow learning children.

A student desiring both a Provisional Elementary Certificate and the Special Certificate for teachers of educable mentally retarded children should follow the regular elementary pattern and complete the 27 hours in the latter major.

A student with interest confined to high school teaching should follow curriculum specifications which begin on page 85.

A student who desires both a High School Provisional Industrial Arts certificate and a certificate for teachers of the educable mentally retarded should follow Plan IV in Industrial Education and Technology.

The teaching fields for which a student may qualify for a Provisional High School Certificate at Bowling Green State University are the following: art; basic business; biology; business education—comprehensive major: accounting—basic business, distributive education, salesmanship—merchandising, stenographic—typing; chemistry; computer science*; earth science; English; French; general science;

Geography; German; health education; health and physical education; history and political science; home economics—vocational; industrial education and technology; international studies; journalism; Latin; library science; mathematics;

Music—vocal and instrumental; physical science; physics; Russian; science—comprehensive major; social studies—comprehensive major; Spanish; speech—general; speech and hearing therapy.

A student preparing to teach in the high school selects a major subject and a minor subject and follows the *General Curriculum* outlined on page 85. Requirements are listed under *Major or Minor Fields of Study*, pages 85-90. Upon the successful completion of one of these curricula and graduation from the University, the student becomes eligible for: 1. An Ohio Certificate to teach both his major and his minor subject in junior and senior high school or 2. An Ohio Special Certificate to teach his major in the elementary and secondary school. The major and minor subjects are his teaching fields.

Elementary Education Curriculum

The curriculum listed below leads to the Bachelor of Science in Education degree and a Provisional Certificate for teaching in the elementary grades.

First Year—Art 101 (3); Biology 104 (5); English 112 (4); Geography 121, 122 (6); Group II—geology, chemistry, physics (4); H.P.E. 100 (3); H.P.E. 109,

* Not certifiable in Ohio.

110 (5); History 151, 152, or 153 (4); Speech 102 (4); elective or minor (8).
Total: 46 hours.

Second Year—History 205, 206 (8); literature elective in English (4); Mathematics 241, 242 (9); Group II—geology, chemistry, physics* (4); Psychology 201 (5); Group III (3); electives or minor (12). Total: 46 hours.

Third Year—Art 343 (3); Education 302 (4); Education 351** (4); Education 352** (3); Education 353** (3); Education 355** (3); Education 356** (3); English 342 (5); H.P.E. 342 (3); Music 351, 352, 353 (6); Speech 423 (4); Group III—elect two from economics, sociology, political science (6). Total: 47 hours.

Fourth Year—Education 381 (15); Education 402 (4); Education 408 (4); Education 409 (4); electives or minor (18). Total: 45 hours.

No more than 9 hours of elective courses in professional education may be applied by an elementary major toward the minimum of 183 hours required for graduation; exceptions to this are methods courses specifically required as a part of a second teaching field that has been declared by the student.

General Curriculum

This curriculum is for the student who is primarily interested in teaching academic subjects in secondary schools. The student pursuing a specialized teaching major such as art, health and physical education, home economics, industrial education and technology, music, speech and hearing therapy, or special education should consult the appropriate program presented on the following pages.

The student who is interested in both elementary and secondary certification should follow the elementary curriculum and integrate into it the required courses listed under the specific secondary teaching major.

First Year—English 112 (4); H.P.E. 100 (3); Group II (8-10); Group III (8-12); Speech 102 (4); Group IV (3-6); major and/or minor (12-18); group selections or electives (0-8). Total: 48 hours.

Second Year—literature elective in English (3-5); Psychology 201 (5); Group II (4-10); Group III (6-8); Group IV (3-6); major and/or minor (12-24); group selections or electives (0-9). Total: 45 hours.

Third Year—Education 302 (4); curriculum and methods (4-5); group selections or electives (0-8); major and/or minor (20-37). Total: 45 hours.

Fourth Year—Education 381 (15); Education 402 (4); Education 408 (4); Education 409 (4); major and/or minor (18). Total: 45 hours.

MAJOR AND MINOR FIELDS OF STUDY

AMERICAN STUDIES. Major—no minor required: An interdepartmental program including either 36 hours of English or 40 hours of history and political science. The student must include in his program Art 457, Art 444 or 456; two courses selected from English 303, 304, or 305; History 205, 206; Political Science 201, 202; Philosophy 101, 415. In addition, a senior seminar of 4 hours in the department of concentration—English or history—is required. At least one-half of the major courses must be on the 300- or 400-level. The electives in the field of specialization are selected with the approval of the major adviser. A major is certified in the teaching field of English or history. See page 111.

ART. Major—no minor required—special certificate: see special curriculum, page 90.

Minor: *First Year*—Art 102, 103, 104, 112, 145, 146. *Second Year*—Art 205, 211, 245, 261. *Third and Fourth Years*—Art 371, 377. Total: 38 hours. Elementary education majors expecting to be certified to teach art at the elementary level must also take Art 352 and enough art electives to total 45 hours.

* Different physical science than first year.

** A student may enroll in only three of these required courses each quarter; however, all five must be completed prior to student teaching.

BIOLOGY. Major: Biology 106, 107. *Second Year*—Biology 208, 213, and 251. In addition, it is recommended that at least one course be taken in each of the areas of botany, microbiology, and zoology. Additional courses may be selected to complete the major. One course in organic chemistry is required. Biochemistry and physics are recommended. Total: 45 hours.

Minor: Biology 106, 107. *Second Year*—Biology 208, 213, and 251. The Department recommends that the student take at least one course each in the areas of botany, microbiology, and zoology. Additional courses may be selected to complete the minor. One year of laboratory chemistry is recommended. Total: 30 hours.

BUSINESS EDUCATION. Major—Comprehensive with Shorthand—no minor required: *First Year*—Business Education 101. *Second Year*—Accounting 221, 222; Economics 200 or 201; Business Education 210*, 211, 220, 230, 240, 311*. *Third Year*—Business Education 311, 312, 314, 321, 352, 354, 356, 358; Business Administration 303; Business Law 301; Marketing 300. *Fourth Year*—Business Education 335 or 455, 401, 462, 466; Marketing 340, 410, or 430. Total: 84 hours.

BUSINESS EDUCATION. Major—Comprehensive without Shorthand—no minor required: *First Year*—Business Education 101. *Second Year*—Accounting 221, 222; Economics 200 or 201; Business Education 210*, 211, 220, 230, 240. *Third Year*—Business Education 314, 321, 352, 354, 358; Business Administration 303; Business Law 301, 302; Marketing 300. *Fourth Year*—Business Education 335 or 455, 462, 466; Marketing 340, 410, or 430. Total: 75 hours.

Major—Distributive Education: *First Year*—Business Education 101. *Second Year*—Business Education 240; Economics 200. *Third Year*—Business Education 314, 364; Marketing 300, 340. *Fourth Year*—Business Education 461, 462, 463 or 465, 491; Marketing 410, 430, 436. A minor is recommended. Total: 53 hours.

BUSINESS EDUCATION. Minor—Bookkeeping and Basic Business: *Second Year*—Accounting 221, 222; Economics 200 or 201, 202; Business Education 240. *Third and Fourth Years*—Business Education 321, 352, 354; 7 hours of approved electives in accounting, business law or economic geography. Total: 36 hours.

Minor—Distributive Education: *Third Year*—Business Education 364; Marketing 300. *Fourth Year*—Business Education 461, 462, 463 or 465; Marketing 340 and 430, 410, or 436. Total: 28 hours.

BUSINESS EDUCATION. Minor—Sales-Communication: *Second Year*—Business Education 240. *Third Year*—Business Administration 303; Business Education 321, 364; Marketing 300, 340. *Fourth Year*—Marketing 430, 436. Approved elective in accounting, advertising, economic geography, office procedures, office machines or typing. Total: 34 hours.

BUSINESS EDUCATION. Minor—Stenography and Typing: *Second Year*—Business Education 210*, 211, 215*, 220. *Third Year*—Business Education 311, 312, 356, 358; Business Administration 303. *Fourth Year*—Business 335 or 455, 401. Total: 34 hours.

CHEMISTRY. Major: *First Year*—Chemistry 121, 122, 123 or 131, 132, 133. *Second Year*—Chemistry 201. *Third and Fourth Years*—Chemistry 343, 344, 345; 352 or 431, 432; additional courses from Chemistry 307 or 445; 310; 321; 413; 430; 433; 434; 435; 440; 460; 461. Total: 41 hours.

Minor: *First Year*—Chemistry 121, 122, 123 or 131, 132, 133. *Second, Third, and Fourth Years*—Chemistry 201; 306; 307 and 308 or 352. A qualified student may elect Chemistry 343 instead of 306; Chemistry 344, 345 instead of 307, 308; Chemistry 431, 432 instead of 352. Total: 30 hours.

COMPUTER SCIENCE. Minor: Computer Science 101, 202, 306, 408, 490, one elective course in computer science. Total: 24 hours.

* A student with insufficient or no training in shorthand or typewriting must elect the beginning or intermediate course.

EARTH SCIENCE. Major: *First Year*—Geology 103, 104, 105. *Second and Third Years*—Geography 125, 213; Geology 110, 304, 305, 306. *Fourth Year*—Geology 493 and electives in Geology. Total: 46 hours. Biology 101, 104 are strongly recommended as are two courses in any combination from chemistry, physics, or mathematics.

Minor: Geology 103, 104, 105, 110, 304, and 305 or 306; Geography 125, 213. Total: 32 hours.

ELEMENTARY EDUCATION. Major—no minor required, but a student is encouraged to take a sequence leading to a minor: see special curriculum, pages 90-97.

Second Year—Education 302; Mathematics 241, 242; Music 351, 352, 353 or 354.

Third Year—Art 343; Education 351, 352, 353, 355, 356; English 342; H.P.E. 342.

Total: 42 hours.

ENGLISH. Major: English 112 or the equivalent; English 202, 207, 301; any two of the following: English 303, 304, 305; any two of the following: English 309, 310, 311; English 380; two courses selected from two different groups listed below, at least one of which must be a 400-level course. Minimum total: 49 hours.

Minor: English 112 or equivalent; English 202, 207, 301; any two of the following: English 303, 304, 305; any two of the following: English 309, 310, 311; English 380; at least one 400-level course selected from the groups below.

Minimum total: 45 hours.

Group I: English 306, 312, 314, 400, 482; Group II: English 315, 401, 406, 408, 410; Group III: English 317, 318, 331, 332, 415, 416; Group IV: English 320, 322, 323, 325, 409, 419, 430, 435.

FRENCH. Major: French 351, 352, 353, 361, 362, 371, 372, electives beyond French 202 to total a minimum of 33 hours, plus Education 373.

Minor: French 351, 352, 353, 361, 362, 371, 372, electives beyond French 202 to total a minimum of 24 hours, plus Education 373.

GEOGRAPHY. Major: *First and Second Years*—Geography 125, 126, 127. *Third and Fourth Years*—Geography 321, 350, 442; two electives from Geography 341, 342, 343, 344, 345, 346, 347, 348; two electives from Geography 213, 225, 230, 402, 404, 410, 411, 412, 413, 425, 426, 430, 451, 452; 9 hours of electives in geography. Total: 45 hours.

It is recommended that the geography major in education elect Geology 103 as part of his Group II requirements.

Minor: Same as above minus two free electives. Total: 36 hours.

GERMAN. Major: courses beyond German 202 which must include German 317, 318, and 417; Education 373. Total: at least 31 hours of German beyond 202 (or equivalent).

Minor: at least 25 hours of German courses beyond German 202 and Education 373, including German 317, 318, and 417. Total hours of German beyond 202: 25 hours.

HEALTH EDUCATION. Minor: *First Year*—Biology 101, 104; H.P.E. 109, 110. *Second Year*—Home Economics 207. *Third and Fourth Years*—Biology 331, 332; H.P.E. 313, 346, 409. Total: 40 hours.

HEALTH AND PHYSICAL EDUCATION. Major—no minor required—special certificate: see special curriculum, page 91.

Minor: *First and Second Years*—men or women—H.P.E. 109, 110; women—H.P.E. 101, 102, 103, 201, 202, 203 to include soccer, foundations of physical education, swimming, and pertinent electives; H.P.E. 113, 210; men—any two courses from H.P.E. 105, 106, 107, 261-270. *Third and Fourth Years*—men or women—Biology 331, 332; H.P.E. 352, 409, 412; women—H.P.E. 313; men—H.P.E. 302, 310. Women's total: 45 hours. Men's total: 42 hours.

HISTORY AND POLITICAL SCIENCE. Major: *First Year*—History 151, 152, 153. *Second Year*—History 205, 206; 8 hours from Political Science 101, 201, 202. *Third and Fourth Years*—20 hours to be chosen from courses numbered 300 and above in consultation with the adviser; not less than 4 hours must be in American or Latin-American history; 4 hours in European, African, or Asian history; 4 hours of political science chosen from courses numbered 300 and above. Total: 48 hours.

Minor: *First Year*—History 151, 152, 153. *Second year*—History 205, 206; 8 hours from Political Science 101, 201, 202. *Third and Fourth Years*—12 hours of electives in history of which 4 hours must be in American or Latin-American history and 4 hours must be in European, African, or Asian history. Total: 40 hours.

HOME ECONOMICS. Major—no minor required: see special curriculum, page 91.

Minor: *First Year*—Home Economics 101, 102, 103. *Second Year*—Home Economics 210, 211, 212. *Third and Fourth Years*—Home Economics 205, 207, 303, 320, 352; 6 hours of electives. Total: 45 hours.

INDUSTRIAL EDUCATION AND TECHNOLOGY. Major—no minor required—Special Teaching Certificate (Plans I-II) Provisional High School Certificate (Plans III-IV). Dual major with Special Education (Plan IV).

Minor: (Does not guarantee certification) *First Year*—Industrial Education and Technology 104, 113, 114, 152, 191. *Second Year*—Industrial Education and Technology 208, 214, 235, 252, 291. *Third Year*—Industrial Education and Technology 316, 352, 449. Total: 46 hours.

INTERNATIONAL STUDIES. Major—no minor required: an interdepartmental program of 68 hours for the student interested in a career in international affairs. The major is comprised of a core program of 37 hours—Economics 351; Geography 452; History 205, 206 or History 437, 438; History 453, 454; Political Science 301, 371, 372; 9 hours of a modern foreign language beyond courses numbered 202; 22 hours of specialization in either international law and government or a foreign area—East and South Asia, Latin America, Middle East and North Africa, Soviet Union, Sub-Saharan Africa, Western Europe, or other approved areas. The electives in the field of specialization are selected with the approval of the major adviser. See page 111.

The following basic courses also are required of a major and should be completed before the end of the sophomore year: History 153; Economics 201, 202; Political Science 201; Geography 230 or 121, 122; sociology electives. A major is certified in the teaching field of social studies.

JOURNALISM. Major: *First Year*—Journalism 103, 104, 107. *Second Year*—Journalism 211. *Third and Fourth Years*—Journalism 302, 310, 312, 315, 402, 405, 414, one elective in journalism. Total: 46 hours.

Minor: *First Year*—Journalism 103, 104. *Second Year*—Journalism 211. *Third and Fourth Years*—Journalism 302, 402, 405, 414, one elective in journalism. Total: 30 hours.

LATIN. Major: 32 hours beyond Latin 202 and Education 373. Up to 7 hours may be taken from 480, 481, 485, 486.

Minor: 20 hours beyond Latin 202 and Education 373.

LIBRARY SCIENCE. Major: Library Science 203, 351 or 352, 403, 407, 408, 491 or student teaching (at the discretion of the Department); any of the following: Library Science 342*, 355*, 401, 404, 405, 411, 420*, 421*, 422**, 427**, 428**, 441, 442**, 490 to total 42 hours exclusive of student teaching or 491. The major in library science is planned to meet the needs of the student who wishes to qualify

* Not open to a student with credit for English 342, 421, 442.

** Not open to a student with credit for Education 420, 422, 427, 428.

for the Ohio Special Certificate. Total: 42 hours exclusive of student teaching or Library Science 491.

Minor: Library Science 203, 351 or 352, 403, 407, 408; any of the following: Library Science 342*, 355*, 401, 404, 405, 411, 420**, 421*, 427**, 428**, 441, 442*, 490, 491***. Suggested major: elementary education, English, history, foreign language, social studies. Total: 26 hours.

MATHEMATICS. Major: Mathematics 131, 231, 232, 332, 333, 339; 402, 405, or 431; 403, 421, 441 and at least one elective at the 300- or 400-level. Total: 47 hours.

Minor: Mathematics 131, 231, 232, 333, 339; 402, 405 or 431.

Suggested program: *First Year*—Mathematics 131, 231, 232 and Computer Science 101. *Second Year*—Mathematics 332, 333 and 339; 334 and 337 are recommended for a strong program. *Third Year*—Mathematics 402, 403 and 441; several electives are recommended for a strong program. *Fourth Year*—Mathematics 421 and 465; 466 and an additional elective are recommended for a strong program.

MUSIC EDUCATION. Three program options under the Music Education major are approved by the College of Education for certification and are offered by the School of Music. These include choral, classroom, and instrumental preparation programs and are described on page 104 under the School of Music. Students pursuing any one of these majors for certification shall be registered both in the College of Education and the School of Music and shall receive the Bachelor of Music degree.

MUSIC MAJOR. See Bachelor of Music program, pages 99-106.

MUSIC MINORS

Minor—Elementary Education: Music 107-108-109, 201-202-203, 207, 255; 3 hours of applied music—class or private piano and/or voice; 2 hours of large ensembles. Open only to an elementary education major. Total: 35 hours.

Minor—Secondary Instrumental: *First Year*—Music 107-108-109; 2 hours of applied music in instruments. *Second Year*—Music 201-202-203, 204-205-206, 207, 218-219-220, 255; 2 hours of applied music in instruments. *Third and Fourth Years*—Music 355 or 356; 400. Total: 55-56 hours.

Minor—Secondary Vocal: *First Year*—Music 107-108-109; 2 hours in applied music in piano or voice or both. *Second Year*—Music 201-202-203, 204-205-206-207, 218-219-220, 255. *Third and Fourth Years*—Music 355 or 356; 400. Total: 54 hours.

PHYSICAL SCIENCE. Major: *First Year*—Chemistry 121, 122, 123 or 131, 132, 133, Physics 110. *Second, Third and Fourth Years*—Physics 131, 232, 233 or 211, 212, 213; Chemistry 201, 306; electives in physical science. The qualified student may elect Chemistry 343 instead of Chemistry 306. Total: 42 hours.

Minor: *First Year*—Chemistry 121, 122, 123 or 131, 132, 133; Physics 110. *Second Year*—Physics 131, 232, 233 or 211, 212, 213. *Third and Fourth Years*—at least 8 hours chosen from Chemistry 201; Physics 302, 303, 304. Total: 35 hours.

PHYSICS. Major: Physics 131, 232, 233, 334 or 110, 211, 212, 213; additional electives on the 300- or 400-level. Total: 36 hours.

Minor: Physics 131, 232, 233, 334 or 110, 211, 212, 213; additional electives on the 300- or 400-level. Total: 27 hours.

RUSSIAN. Minor: At least 25 hours of Russian courses beyond Russian 202 and Education 373, including Russian 317 and 318. Total hours of Russian beyond 202: 25 hours.

* Not open to a student with credit for English 342, 421, 442.

** Not open to a student with credit for Education 420, 422, 427, 428.

*** Only for a student not taking student teaching.

Second Year—Art 205 (3); Art 245 (3); Art 211, 212, 213 (9); Art 261, 361 (6); Art 263, 321 (6); English literature (4); Psychology 201 (5); Group III (3); minor or electives (3); Group II (3-4). Total: 45-46 hours.

Third Year—Art 371 (3); Art 373 (3); Art 372 or 374 (3); Art 377, 378 (6); art electives—crafts (6); art elective (3); Art 352, 353 (6); Education 302 (4); group selection or minor (3-4); Group II (4-5); Group III (3-4). Total: 44-46 hours.

Fourth Year—art history elective (3); Group III (3-4); Education 402, 408 (8); Education 331 (15); Education 409 (4); group selection or minor (6); electives (6). Total: 45-46 hours.

Health and Physical Education Curriculum (Men)

First Year—Biology 104 (5); English 112 (4); H.P.E. 101, 102, 103 (3); H.P.E. 105, 106, 107, 109, 110 (14); Group III (7-8); Speech 102 (4); electives or minor (8-9). Total: 45-47 hours.

Second Year—Biology 331, 332 (10); H.P.E. 204 (3); sports skills H.P.E. 261-270 (6-12); literature course in English (4); Psychology 201 (5); Group III (6-7); Group IV (3); electives or minor (5-7). Total: 42-51 hours.

Third Year—H.P.E. 302, 303, 307, 310, 352, 354 (23); Education 302 (4); group selections, electives, or minor (18). Total: 45 hours.

Fourth Year—Education 402, 408 (8); Education 331 (15); Education 409 (4); H.P.E. 409, 412 (8); group selections, electives, or minor (10). Total: 45 hours.

Health, and Physical Education, and Recreation Curriculum (Women)

First Year—Biology 104 (5); English 112 (4); H.P.E. 101, 102, 103 (3); H.P.E. 109, 110 (5); H.P.E. 113, 114 (6); Physics 100 (4); Group III (8); Speech 102 (4); electives or minor (6-7). Total: 45-46 hours.

Second Year—Biology 331, 332 (10); H.P.E. 204, 210, 212, 214 (14); Psychology 201 (5); literature course in English (4); Group III (3); H.P.E. 201, 202, 203 (3); electives or minor (7-8). Total: 46-47 hours.

Third Year—H.P.E. 308, 352, 354 (11); H.P.E. 302, 313, 409 (13); H.P.E. 317, 324 (8); Group III (4); Education 302 (4); group selections, electives, or minor (5-7). Total: 45-46 hours.

Fourth Year—Education 402 (4); Education 331 (15); Education 408, 409 (8); H.P.E. 412 (4); group selections, electives, or minor (14). Total: 45 hours.

Home Economics Curriculum

Plan I. Home Economics Curriculum in Education

A student who completes the following curriculum is qualified for teaching in home economics departments in approved high schools. The student also may be certified by the vocational division of the State Department of Education for teaching home economics. A student who is interested in agricultural extension work also should follow this curriculum.

First Year—Art 101 (3); Chemistry 111, 112 (8); English 112 (4); H.P.E. 100 (3); Home Economics 101, 102 (6); Home Economics 103, 105 (9); Group II (5); Speech 102 (4); Group III (3-4). Total: 47-48 hours.

Second Year—Chemistry 306 (5); Home Economics 203, 205 (7); Home Economics 206* (4); Home Economics 210, 211, 212 (9); literature elective in English (4); Psychology 201 (5); Group III (3-4); Sociology 101 (3); group selections and electives (4-5). Total: 45-46 hours.

Third Year—Home Economics 303, 307, 311 (13); Home Economics 320, 321, 322 (9); Home Economics 352 (5); Education 302 (4); Group III (3-4); group selections and electives (11-12). Total: 45-47 hours.

Fourth Year—Education 331 (15); Education 402, 408 (8); Education 409 (4); Home Economics 405 (5); Home Economics 406* (4); group selections and electives (9-15). Total: 45-47 hours.

* Either Home Economics 206 or 406 may be used to meet certification requirements.

Plan II. Home Economics Curriculum for Foods and Nutrition

Three majors in Foods and Nutrition, two leading to a Bachelor of Science in Technology and one to a Bachelor of Science in Education are offered in the Department of Home Economics.

Concentration A: (Dietetics)

A student who completes the course work outlined below will qualify for Internship in a Dietetic Association approved program and for national registration and membership in that association after completion of an internship.

First Year—Biology 104, (5); Chemistry 121, 122, 123** (15); Economics 200 (4); English 112 (4); Home Economics 210 (3); H.P.E. 100 (3); Math 124*** (5); and Speech 102 (4).

Second Year—Chemistry 306, 307 (10); Education 302 (4); Home Economics 205, 206, 211, 212 (14); literature elective in English (4); Psychology 201 (5); Quantitative Analysis and Control 221 (4); Group III Sociology selection (3) and electives (2).

Third Year—Biology 331, 332 (10); Home Economics 307, 331, 332, 333, 320, 321 (20); Industrial Education and Technology 301 (5); Management 305, 354 (8); and electives (9).

Fourth Year—Biology 413 (5); Home Economics 405, 431, 432, 433, 435, 489 (30); Group IV selection and electives (11).

Summer—Three (summers of): Home Economics 289, 389, 489**** (consecutively).
Concentration B: (Management in Food Service Industry)—183+15 quarter hours of work experience.

A student who completes the program described below is qualified to work in food production, sales, and service in institutions or restaurants at the management level. The flexibility of this curriculum would permit the student to strengthen existing competencies in food science, food sales, and service. Industrial experience is gained through supervised summer field experience in cooperation with student employment in a job related to the goals of the student.

First and Second Year—Same as Concentration A above.

Third Year—Biology 331, 332 (10); Business electives (3); Home Economics 307, 320, 331, 332, 333 (17); Industrial Education and Technology 301 (5); Management 305, 354 (8); and Group IV selections (3).

Fourth Year—Biology 413 (5); Business electives (9); Home Economics 405, 431, 443 (14); and Industrial Education and Technology 308 (5); electives (12).

Summers—Three (summers of): Home Economics 289, 389, 489**** (consecutively).
Concentration C: (Teaching) 183+15 quarter hours of work experience.

The course work outlined below will qualify a student for vocational certification in Job Training Food Service in Ohio to teach foods and nutrition. The curriculum includes a supervised field experience in food production in an approved institution. It is strongly recommended that upon completion of the bachelor's degree requirements a student immediately pursue a Master of Education in Food and Nutrition to qualify for teaching in an accredited technical or community college.

First and Second Years—Same as Concentration A.

Third Year—Home Economics 307, 320, 321, 331, 332, 333, 352, 353 (28); Industrial Education and Technology 301, 470 (9); and Management 305, 354 (8).

Fourth Year—Biology 413 (5); Education 331, 402, 408, 409 (27); Home Economics 301, 431 (6) and electives (8).

Summer—Three (summers of) Home Economics 289, 389, 489**** (consecutively).

Industrial Education and Technology

Three teacher preparation curricula leading to the Bachelor of Science in Education and one curriculum leading to the Bachelor of Science in Technology are offered in two divisions of the Department.

** Chemistry 111, 112 would substitute for 121, 122, 123, but is not recommended.

*** Other Math Courses may be substituted.

**** Beyond minimum graduation requirements (183).

Plan 1. Industrial Arts Education

Division of Industrial and Technical Teacher Education

A student who completes the work outlined below is qualified to teach industrial education in elementary, middle, and junior and senior high schools and receives an Ohio Provisional Special Certificate in the field.

First Year—English 112 (4); H.P.E. 100 (3); Physics 100 (4); Speech 102 (4); Chemistry 100 (4); group selections (6); Industrial Education and Technology 104, 113, 114 (12); Industrial Education and Technology 121, 191 (9); Industrial Education and Technology 152 (2). Total: 48 hours.

Second Year—English literature (4); Psychology 201 (5); group selections (18); Industrial Education and Technology 208, 214, 235, 291 (16); Industrial Education and Technology 252 (3). Total: 46 hours.

Third Year—Economics 200 or 201 (4); Education 302—may be completed after completion of Psychology 201 (4); group selections (10); Industrial Education and Technology 316 (4); Industrial Education and Technology 352 (3); industrial education and technology concentration (14); industrial education and technology electives (7). Total: 46 hours.

Fourth Year—Education 402 (4); Education 408 (4); Education 409 (4); Education 331 (15); Industrial Education and Technology 449—recommended to be completed after student teaching (3); industrial education and technology concentration (10); industrial education and technology electives (3). Total: 43 hours.

Plan II. Vocational-Industrial

Division of Industrial and Technical Teacher Education

The work outlined below qualifies a student to teach pre-vocational subjects and aspects of vocational subjects for which he has industrial experience combined with an undergraduate concentration. Industrial experience is gained through the University-sponsored industrial internship program. Subject to the approval of the Ohio Department of Education, a student receives the temporary certificate as a trade technology instructor in the area of concentration. He also may qualify for the Provisional High School and/or the Provisional Special Certificate in industrial education and may qualify as a coordinator of a cooperative education program.

First Year—English 112 (4); H.P.E. 100 (3); Physics 100 (4); Speech 102 (4); group selections (8); Chemistry 100 (4); Industrial Education and Technology 104, 113, 114 (12); Industrial Education and Technology 121, 191 (9); Industrial Education and Technology 152 (2). Total: 50 hours.

Second Year—English literature (4); Psychology 201 (5); group selections (16); Industrial Education and Technology 208, 214, 235, 291 (16); Industrial Education and Technology 252 (3); Industrial Education and Technology 289 (5). Total: 49 hours.

Third Year—Education 302—may be completed after the completion of Psychology 201 (4); Economics 200 or 201 (4); group selections (10); Industrial Education and Technology 352 (3); Industrial Education and Technology 389 (5); industrial education and technology concentration (12); industrial education and technology electives (11). Total: 49 hours.

Fourth Year—Education 402 (4); Education 408 (4); Education 409 (4); Education 331 (15); Industrial Education and Technology 449—recommended to be completed after student teaching (3); Industrial Education and Technology 470 (3); Industrial Education and Technology 389 (5); industrial education and technology concentration (12). Total: 50 hours.

Plan III. Technical College Education

Division of Industrial and Technical Education

The work outlined below qualifies the student to teach in post-high school institutions. An undergraduate concentration and industrial experience gained through a University-sponsored industrial internship program contribute to individual qualifications.

Upon completion of the program, a student may qualify for the Provisional High School Certificate in industrial education and also may qualify as a coordinator of a cooperative education program.

It is strongly recommended that upon his completion of the bachelor's degree requirements that a student immediately pursue a Master of Education program which combines post-high school level teaching and graduate work.

First Year—chemistry elective (4); English 112 (4); H.P.E. 100 (3); mathematics electives selected from Industrial Education and Technology 121 or Mathematics 124, 131, 231 (10); Physics 110 (3); Speech 102 (4); Industrial Education and Technology 104, 113, 114 (12); Industrial Education and Technology 152 (2); Industrial Education and Technology 191 (4); electives (4). Total: 50 hours.

Second Year—English literature (4); physics sequence (4); Psychology 201 (5); Industrial Education and Technology 243 (4); Industrial Education and Technology 204, 208, 214 (13); Industrial Education and Technology 235, 291 (8); Industrial Education and Technology 252, 289 (8); electives (5). Total: 51 hours.

Third Year—Economics 200 or 201 (4); physics sequence (4); Education 302—may be taken anytime after the completion of Psychology 201 (4); group selections (12); Industrial Education and Technology 352 (3); Industrial Education and Technology 389 (5); Industrial Education and Technology concentration (16). Total: 48 hours.

Fourth Year—Education 402 (4); Education 408 (4); Education 409 (4); Education 331 (15); group selections (6); Industrial Education and Technology 389 (5); Industrial Education and Technology 449—recommended to be completed after student teaching (3); Industrial Education and Technology concentration (8). Total: 49 hours.

Plan IV. Industrial Arts and Special Education

Division of Industrial and Technical Teacher Education

This is a dual major. The student completing the work outlined below will be qualified for Ohio certification in two areas: Industrial Arts (High School Provisional Certificate) and Special Education (Educable Mentally Retarded-Provisional). Qualifications for a coordinator of a cooperative education program may also be met.

First Year—English 112 (4); H.P.E. 100 (3); Physics 100 or 110 (4); Speech 102 (4); Chemistry 100 or 111 (4); group selections (6); Industrial Education and Technology 104, 113, 114 (12); Industrial Education and Technology 121, 191 (9); Industrial Education and Technology 152 (2). Total: 48 hours.

Second Year—English literature (4); Psychology 201 (5); group selections (18); Industrial Education and Technology 208, 214, 235, 291 (16); Industrial Education and Technology 252 (3). Total: 46 hours.

Third Year—Economics 200 or 201 (4); Education 302—may be completed after completion of Psychology 201 (4); group selections (10); Speech 423 (4); Industrial Education and Technology 316 (4); Industrial Education and Technology 352 (3); Education 431, 433, 434 (12); Industrial Education and Technology electives (8). Total: 49 hours.

Fourth Year—Education 402 (4); Education 408 (4); Education 409 (4); Education 331 (15); Industrial Education and Technology 449—recommended to be completed after student teaching (3); Education 435, 436 (8); Industrial Education and Technology 470 or Education 437 (4); Industrial Education and Technology electives (4). Total: 46 hours.

Industrial Technology

Division of Technology

For the student interested in application of arts and sciences to industrial processes. Career opportunities exist in a growing area of service which interfaces engineering and business administration. Emphasis is placed on technical processes within industry and personnel leadership with such employment classifications as: production management, technical sales, product design, quality control, technical service, cost analysis, and systems analysis.

Technical areas of concentrated study include: construction, design and drafting,

electronics, energy and power, graphic communications, and machine and materials processing.

A unique strength of this curriculum is flexibility. Once the first two years of studies are completed, an individual program is designed using courses from the areas of concentration listed above, management, marketing, the physical sciences, communications, and the humanities. Industrial experience is gained through the university-sponsored industrial internship program.

First Year—Art 112 (3); English 112 (4); H.P.E. 100 (3); Industrial Education and Technology 104, 113, 114, 152, 191 (18); Speech 102 (4); chemistry elective (4); elective in accounting or business administration (4); select from Industrial Education and Technology 121 or Mathematics 124, 125, 131, 231 (10). Total: 50 hours.

Second Year—English literature (4); Industrial Education and Technology 204, 208, 214, 235, 243, 291 (25); Computer Science 101 (4); select from college or university physics sequence (11-14); elective (4); Industrial Education and Technology 289 (5). Total: 53-56 hours.

Third Year—Statistics 111, 212 (8); Economics 200 (4); Management 305 (4); Psychology 201 (5); Speech 312 (4); electives (6); Industrial Education and Technology 389 (5); select from area of concentration (12). Total: 48 hours.

Fourth Year—Psychology 352 (3); Sociology 101 (3); electives in computer science, business administration, management, marketing and accounting (8); electives in social or behavioral science (6); electives (9); Industrial Education and Technology 389—repeated—(5); area of concentration (15). Total: 49 hours.

Courses For Industrial Technology Concentrations

Construction—select from Industrial Education and Technology 301, 306, 307, 323, 331, 335, 361, 406, 407, 435, 450, 490; Geography 442.

Design and Drafting—select from Industrial Education and Technology 301, 304, 305, 450, 452, 455, 490; Art 211, 212, 213; Computer Science 102; Geography 321.

Electronics and Instrumentation—select from Industrial Education and Technology 347, 348, 391, 453, 458, 490; Computer Science 203, 307, 410, 411; Physics 307, 308.

Energy, Power, Instrumentation and Control—select from Industrial Education and Technology 304, 347, 348, 391, 454, 490; Physics 225, 306, 307, 308; Computer Science 102.

Graphic Communications—select from Industrial Education and Technology 305, 308, 309, 381, 456, 460; Art 377, 378, 477; Computer Science 102; Journalism 307, 310.

Machine and Materials Processing—select from Industrial Education and Technology 311, 321, 323, 331, 361, 451, 458, 459, 461, 463, 490; Management 353, 450; Quantitative Analysis and Control 325; Computer Science 102.

General Technology—select from 300- and 400-level Industrial Education and Technology courses.

Speech and Hearing Therapy Curriculum

First Year—Biology 104 (5); English 112 (4); Speech 102, 141 (8); Speech 201, 202 (7); Speech 223, 226 (8); Group III (4); H.P.E. 100 (3); Group IV (5). Total: 44 hours.

Second Year—Mathematics 121 or Physics 100 (4 or 5); Psychology 201 (5); Psychology 270 (3); Education 302 (4); Sociology 101, 202 (6); Group III (4); Speech 203, 324, 331 (12); electives* (6). Total: 44-45 hours.

Third Year—Education 431 (4); English literature elective (3-5); Psychology 305, 460 (7); Speech 325, 328 (9); Speech 330, 332 (8); Speech 422**, 424, 433, 435 (14); Group II (4). Total: 49-51 hours.

* 14 hours of electives must be from Groups I, II, III, IV plus those specified.

** Speech 422 counts as part of the science requirement.

Fourth Year—Education 356 (3); Education 408 (4); Education 331 (15); Education 409 (4); psychology elective (4); Speech 426 (8); electives (7). Total: 45 hours.

Curriculum for Teachers of Deaf and Hard-of-Hearing Children

First Year—Art 101 (3); Biology 104 (5); English 112 (4); Geography 121, 122 (6); physical science—geology, chemistry, physics (8); H.P.E. 100 (3); H.P.E. 109, 110 (5); History 151 or 152 or 153 (4); Speech 102 (4); Speech 223 (4). Total: 46 hours.

Second Year—History 205 (4); History 206 (4); literature elective in English (4); Mathematics 241, 242 (9); Psychology 201 (5); Education 432 (3); Speech 226 (4); Speech 324 (4); English 342 (5); Speech 434 (3); Psychology 270 (3). Total: 48 hours.

Third Year—Art 343 (3); Education 302 (4); Education 351 (4); Education 352 (3); Education 353 (3); Education 355 (3); Education 356 (3); Education 461 (3); H.P.E. 342 (3); Music 351 (2); Music 352 (2); Music 353 (2); Speech 328 (4); Psychology 305 (3); Education 431 (4); Education 451 (4). Total: 50 hours.

Fourth Year—Psychology 460 or Education 402 (4); Education 408 (4); Education 409 (4); Education 381 (15); Speech 422 (4); Speech 433 (4); Education 464, 465 (6); Education 462, 463 (6). Total: 47 hours.

The student who completes the 191-hour program receives an Ohio Provisional Certificate in elementary education and special education for teaching deaf and hard-of-hearing children.

Curriculum for Teachers of Educable Mentally Retarded (EMR)* Children

First Year—Art 101 (3); Biology 104 (5); English 112 (4); Geography 121, 122 (6); H.P.E. 100 (3); H.P.E. 109, 110 (5); History 151 or 152 or 153 (4); Speech 102 (4); electives or minor (8); physical science (4). Total: 46 hours.

Second Year—History 205, 206 (8); literature elective in English (4); Mathematics 241, 242 (9); physical science elective—geology, chemistry, or physics (4); Psychology 201 (5); Group III (3); Education 302, 431 (8); Psychology 270 (3). Total: 44 hours.

Third Year—Art 343 (3); Education 432, 433, 434, 435, 436 (19); English 342 (5); H.P.E. 342 or 433 (3); Music 351, 352, 353 (6); Psychology 305 (3); Education 438, 451 (7). Total: 46 hours.

Fourth Year—Education 408, 437 (8); Education 381 (15); Education 409 (4); Psychology 460 or Education 402 (4); Speech 423 (4); electives or minor (12). Total: 47 hours.

A student who desires a certificate in Elementary Education must have completed the following courses: Education 351, 352, 353, 355, 356.

Curriculum for Teachers of Emotionally Disturbed Children (Learning and Behavior Disorders)

First Year—Art 101 (3); Biology 104 (5); English 112 (4); Geography 121, 122 (6); H.P.E. 100 (3); H.P.E. 109, 110 (5); History 151 or 152 or 153 (4); Speech 102 (4); electives or minor (3); physical science (8). Total: 45 hours.

Second Year—Education 302 (4); History 205, 206 (8); literature elective in English (4); Mathematics 241, 242 (9); Psychology 201, 270 (8); Education 431 (4); electives or minor (7). Total: 44 hours.

Third Year—Art 343 (3); Education 351, 352, 353, 355, 356 (16); English 342 (5); H.P.E. 342 or 433 (3); Education 443 (3); Music 351, 352, 353 (6); Psychology 305, 405 (8); one course selected from Education 342, 412, 432, or 438 (3). Total: 47 hours.

Fourth Year—Education 408 (4); Education 381 (15); Education 409 (4); Education 420, 451, 453, 454 (16); Psychology 460 or Education 402 (4); Speech 423 (4). Total: 47 hours.

* Formerly called "Slow Learning."

The student who completes the 188-hour program receives an Ohio Provisional Certificate in elementary education and meets the approved requirements for teaching children with behavioral disorders.

Curriculum for Teachers of Trainable Mentally Retarded Children

First Year—Art 101 (3); Biology 104 (5); English 112 (4); Geography 121, 122 (6); H.P.E. 100 (3); H.P.E. 109, 110 (5); History 151 or 152 or 153 (4); Speech 102 (4); electives or minor (4); physical science (4); Group III (3). Total: 45 hours.

Second Year—History 205, 206 (8); literature elective in English (4); Mathematics 241, 242 (9); physical science elective—geology, chemistry, or physics (4); Psychology 201, 270 (8); Group III (3); electives or minor (9). Total: 45 hours.

Third Year—Art 343 (3); Education 302, 351, 352, 353, 355, 356 (20) or Education 434, 435, 436, 437 (17); Education 431, 432, 433 (10); English 342 (5); H.P.E. 342 or 433 (3); Education 342 (4); Music 351, 352, 353 (6). Total: 48-51 hours.

Fourth Year—Education 381 (15); Education 408, 440, 443, 445 (13); Education 409 (4); Psychology 460 or Education 402 (4); Speech 423 (4); electives or minor (5). Total: 45 hours.

The State Department of Certification does not issue a certificate for a teacher of trainable mentally retarded children. The student who completes the curriculum and 185 hours receives an Ohio Provisional Certificate in special education for teachers of trainable mentally retarded children or elementary education and meets the requirements established by the State Department of Mental Hygiene.

INTER-COLLEGE CURRICULA

A candidate who has met all the requirements for a degree from the College of Business Administration or College of Arts and Sciences also may qualify for the degree of Bachelor of Science in Education and for an Ohio certificate to teach by completing the combined curriculum including the general and specific graduation requirements for each College. See pages 57,55 .

A student who wishes to pursue the combined program must register in the College of Education as well as the other College and must maintain an accumulative point average of 3.0 or better based upon at least two quarters of work at Bowling Green State University.

ADDITIONAL CERTIFICATION PROCEDURES

TRANSFER FROM A SPECIAL TO A HIGH SCHOOL CERTIFICATE

The holder of a Special Certificate may obtain the Provisional High School Certificate in another subject upon completion of the requirements for the teaching subject as listed on pages 85-90.

FINE ARTS-EDUCATION CURRICULUM

The combined arts and sciences and education curriculum leading to the Bachelor of Fine Arts degree and to certification for the teaching of public school art is outlined on page 61. A student following this curriculum registers in both the College of Arts and Sciences and the College of Education and has his program approved by the adviser in each College.

TRANSFER FROM A HIGH SCHOOL OR SPECIAL TO AN ELEMENTARY CERTIFICATE

The holder of a Provisional, Professional, or Permanent High School or Special Certificate may obtain a certificate valid for elementary teaching upon evidence of the satisfactory completion of 18 hours of credit in the following designated areas: methods of teaching reading, arithmetic and science, and social studies; one elementary education elective as recommended by the Office of the Dean of the College of Education. This certificate is designated as a "retraining" certificate and may be renewed upon evidence of the completion of 18 hours of additional credit applicable to a degree in elementary education.*

* Program outlines may be obtained from the Office of the Dean.

TRANSFER FROM AN ELEMENTARY TO A HIGH SCHOOL CERTIFICATE

The holder of an elementary certificate of any grade—Provisional, Professional, or Permanent—obtained upon graduation from a four-year curriculum for the preparation of elementary teachers may obtain the Provisional High School Certificate by completing one major or two minors or the Ohio certification requirements in at least two teaching subjects including a 4-hour methods course in one of these subjects.

PROVISIONAL CADET ELEMENTARY CERTIFICATE

By action of the Board of Education for the State of Ohio, no student was permitted to enter the Provisional Cadet Elementary Certificate program after October 1, 1966; and no Cadet Provisional Certificate was issued after October 1, 1968.

The student who began the Provisional Cadet Elementary Certificate program prior to October 1, 1966, must have had all Cadet Certificate requirements completed prior to September 1, 1968, to receive this certificate. A current holder of the Cadet Certificate may take courses toward his degree requirements at the academic centers, if available and applicable, or on the campus at Bowling Green.

PREPARATION FOR COLLEGE TEACHING

A student interested in college teaching should alert his adviser. This enables him to obtain the necessary degree of concentration in the field chosen for future specialization in addition to preparation for teaching. Additional information may be obtained.

EARLY ADMISSION TO GRADUATE SCHOOL

See page 109.

THE SCHOOL OF MUSIC

James Paul Kennedy, B.A., B.M.Ed., M.M., Ph.D., Director-Dean

Department of History-Theory-Composition:

Oliver Chamberlain and Wallace De Pue, Acting Co-Chairmen

Department of Music Education: DuWayne Hansen, Acting Chairman

Department of Performance Studies: Bernard Linden, Acting Chairman

Department of Public Mission: James Paul Kennedy, Acting Chairman

School of Music Advisory Board Personnel

A. Beverly Barksdale, Associate Director, Cleveland Museum of Art, and Past Manager, Cleveland Orchestra

Howard Brown, Vice President, D. S. Brown Co.

Frank Forest, President, Empire State Music Festival

Karl Haas, President, Interlochen Arts Academy

Mildred Miller, Metropolitan Opera Association

Michael Pappas, General Supervision of Philadelphia Refinery, Standard Oil Company of Ohio

Hugh Ross, Conductor and Vice President, Sullivan Foundation

Otto Wittmann, Director, Toledo Museum of Art

School of Music Executive Committee

Mark Kelly, Chairman; Oliver Chamberlain; Robert Lewis; Louis Marini; Robert Moore; Emil Raab.

Council on Instruction

David Glasmire, Chairman; DuWayne Hansen; Robert Hohn; Wendell Jones; James Paul Kennedy (ex-officio); Bernard Linden; Gary Mollenkopf; David Oyster; William Pepper; Don Wilson.

Administrative Committee

Oliver Chamberlain, Wallace De Pue, DuWayne Hansen, Robert Hohn, Bernard Linden.

OBJECTIVES

The primary objectives of the School of Music are to prepare a talented student for a professional career in music and to create a cultural climate for the entire campus-community. Education in music is not only a means to a career but the basis of a liberal education.

ACCREDITATION

The School of Music has been accredited by the National Association of Schools of Music since 1947 and has been re-examined periodically.

Division of Public Mission

James Paul Kennedy, Chairman

The School of Music conducts an extensive program of public recitals and concert performances. The Division of Public Mission cooperates with the National Young Audiences program to provide musical performance in a public school setting. Artists in residence and resident ensembles such as the string quartet and brass and woodwind quintets contribute to the public mission of the school and to the musical experience of the community which it serves.

ADMISSION TO THE SCHOOL OF MUSIC

A student interested in the School of Music must submit to the Bowling Green State University School of Music, an Application for Admission directly to the Director. In addition, a student must also submit the regular Application for Admission to the Director of Admissions. Both application forms may be obtained by writing to the Director of the School of Music. Please review admission requirements on page 9 of this Bulletin.

PLACEMENT EXAMINATIONS

Each major or minor is required to take a placement examination. This includes an entrance audition in the student's major performance area on the same dates designated for special music awards and a written test during preregistration. A student is accepted, placed on warning, or rejected depending on the outcome of these tests. A non-music student wishing to enroll in applied music courses is asked to audition in his chosen performance area.

BACHELOR OF MUSIC

The School of Music offers curricula in music education, applied music (performance studies), theory-composition, and history-literature, all leading to the Bachelor of Music degree. This degree provides not only the most substantial undergraduate preparation for a professional career but also a background of graduate studies. Programs outlined for each concentration stress breadth as well as depth to insure not only technical skills but a broad understanding of the social and cultural environment in which the art of music is practiced. For course descriptions, see pages 158-162.

In addition to the Bachelor of Music degree, the Bachelor of Arts in Music is available through the College of Arts and Sciences, see pages 48-49.

Various minors in music exist to serve the needs of those who are majoring in other areas. For the minor in the College of Arts and Sciences, see page 49. For the minors in the College of Education, see page 89.

RECITAL ATTENDANCE AND PARTICIPATION

A student majoring or minoring in music is required to attend all Musicianship and Performance Classes—Thursday at 2 p.m., except during the quarter of off-campus teaching.* A music major must attend 9 performances of student and faculty recitals, concerts and those University Artist Series presentations which are especially significant musically each quarter for 3 years.** A music minor must attend 7 of these performances each quarter for 3 years.** The music major or minor may be required to participate, directly or indirectly, in major School of Music concert productions.

FIVE-YEAR PROGRAM

A five-year Performance curriculum leading to a Master of Music degree and Ohio State Certification for teaching in the public schools is available to gifted scholar musicians. Students interested in this option should contact the Coordinator of Graduate Studies in Music for information and enrollment.

MUSIC HISTORY AND LITERATURE

It is advisable that before the end of his freshman year that each candidate for the degree of Bachelor of Music with a major in Music History and Literature meet with the Coordinator of Music History to develop a program of courses which is mutually agreeable to fulfill the remainder of both group and music requirements for the student's degree program. Each student's progress is

* Unauthorized absences from Musicianship and Performance Class are reported and are treated as an absence from a regularly scheduled class.

** Failure to meet this standard may result in the student's grade in his major area being dropped one letter.

reviewed by the faculty in Music History and Literature before the student's admittance to the junior and senior years.

GROUP MINIMUM REQUIREMENTS

Group I: *Composition, Literature, and Speech*. Each student must complete at least one course in written communication such as English 112 or the equivalent, an English literature course, and Speech 102. Total: 12 hours.

Group IV: *Fine Arts, Philosophy, and Foreign Languages*. Each student must complete at least three quarters of German 101, 102, 103. If equivalent proficiency can be established in the above with the Department of German, then French, Latin, Italian, or Russian may be substituted to obtain the equivalent credits.

Total Group Requirements. In addition, each student must elect a sufficient number of courses selected from any of the four groups in consultation with the Coordinator of Music History to meet total group requirements. Minimum total: 63 hours.

SAMPLE PROGRAM

First Year—Music 107, 108, 109 (18); applied music (9); ensemble (3); English 112 (4); Speech 102 (4); Group II—science (4); Group III (4); H.P.E. 100 (3). Total: 49 hours.

Second Year—Music 201, 202, 203 (6); applied music (9); Music 204, 205, 206 (9); Music 218, 219, 220 (9); ensemble (3); English literature (4); Group IV (4); keyboard or elective (3). Total: 47 hours.

Third Year—Music 304 (3); music theory elective (3); ensemble (3); applied music elective (3); music history and literature elective (11); German 101, 102, 103 (12); group electives (12); Music 407 (3); Total: 50 hours.

Fourth Year—Music theory electives (6); Music 406 (12); applied or ensemble electives (6); music history and literature electives (10); group electives (16); Total: 50 hours.

The above is a sample program to be modified according to individual needs and capabilities.

Collegium Musicum. The Department maintains a Collegium Musicum as a training ground for performance practice and showcase for music not usually performed by other traditional chamber music ensembles. Ensemble credit is available in: Madrigal Singers, Renaissance Ensemble, Baroque Ensemble, and New Music Ensemble.

MUSIC THEORY AND COMPOSITION

It is advisable that before the end of his freshman year each candidate for the degree of Bachelor of Music with a major in Music Theory and Composition meet with the Coordinator of Music Theory to develop a program of courses which is mutually agreeable to fulfill the remainder of both group and music requirements for that student's degree program.

GROUP MINIMUM REQUIREMENTS

Group I: *Composition and Speech*. Each student must complete at least one course in written communication such as English 112 or the equivalent and one course in oral communication such as Speech 102 or the equivalent. Total: 8-10 hours.

Group II: *Science and Mathematics*. Each student must complete at least one course in science or mathematics. Mathematics 200, a 2-hour course, is insufficient to meet this requirement. Physics 350 is recommended. Total: 4-5 hours.

Group III: *Social Sciences*. Each student must complete at least one course selected from the following fields: economics, geography, political science, history, and sociology. Total: 4-5 hours.

Group IV: *Fine Arts, Philosophy, and Foreign Languages*. Each student must complete at least one course selected from the fields of philosophy and fine arts other than music to a total of 4-5 hours. Philosophy 204 is recommended.

Each student must also complete at least six quarters of one foreign language or demonstrate proficiency equivalent to this amount to the satisfaction of the Language Departments to a total of 24-30 hours. Total: 28-35 hours.

Total Group Requirements. In addition, each student must complete a sufficient number of courses from any of the four groups above to meet his total group requirements. Total: 63 hours.

SAMPLE PROGRAM

First Year—Music 107, 108, 109 (18); wind and percussion classes (3); Music 161, 162, 163 or proficiency (3); ensemble—choral (3); English 112 (4); Speech 102 (4); Group II science* (5); Group IV fine arts*** (9); H.P.E. 100 (3). Total: 52 hours.

Second Year—Music 201, 202, 203 (6); Music 204, 205, 206 (9); Music 207, 208, 209 (6); Music 218, 219, 220 (9); voice and string classes (3); Music 261, 262, 263 or proficiency (3); ensemble—chamber (3); Group III** (4); group electives# (8). Total: 51 hours.

Third Year—Music 302 (2); Music 304 (3); Music 315 (3); Music 316 (9); Music 320 (3); Music 410 (9); string and/or wind classes (2); Music 361, 362, 363 or proficiency (3); ensemble—band (3); foreign language## (15). Total: 52 hours.

Fourth Year—Music 316 (9); Music 403, 404, 405 (6); Music 410 (9); Music 461, 462, 463 or proficiency (3); ensemble—orchestral (3); foreign language## (15). Total: 45 hours.

The above is a sample program to be modified according to individual needs and capabilities.

PERFORMANCE STUDIES

A student is accepted into the Bachelor of Music program in performance by audition only. An acceptance audition may take place before admission to the School of Music. The decision for acceptance must be made by the full area faculty. After acceptance, the student in counsel with his adviser develops a long-range program based on the program requirements and the student's individual needs and desires.

GROUP MINIMUM REQUIREMENTS

Group I: *Composition and Literature.* Each student is required to complete English 112 or its equivalent; or, if the student demonstrates a proficiency equivalent to English 112, an advanced composition course may be substituted. In addition, one English literature course is required.

Group II: *Science and Mathematics.* Each student must complete at least one science or mathematics course.

Group III: *Social Sciences.* Each student must complete at least one course selected from the following areas: economics, geography, political science, history, sociology or psychology.

Group IV: *Fine Arts, Foreign Language, and Philosophy.* Each student must complete at least one course in fine arts (excluding music), foreign language, speech-theatre, library science, and philosophy. To satisfy the foreign language requirements, the freshman sequence is minimum—French 101, 102, 103; German 101, 102, 103; etc.

Total Group Requirements: minimum 63 hours. In addition, each student must elect a sufficient number of courses from the above groups or any course approved by the student's adviser to bring the total number of credit hours to

* Physics 350 is recommended.

** History 151 is recommended.

*** Art History 145, 146, 245 are recommended.

History 152, 153 are recommended.

Two years of German or of one romance language are required.

a minimum of 63. Any music course not specifically required for a degree is acceptable under Group IV. Interests in such fields as speech-theatre, journalism, or library science may be developed. A minimum of 48 credit hours, however, must be taken outside of the School of Music.

APPLIED MUSIC

SAMPLE PROGRAM: VOICE

First Year—Music 171, 172, 173 (9); Music 161, 162, 163 or proficiency (3); Music 107, 108, 109 (18); English 112 (4); English literature (4); Group II (4); H.P.E. (3); ensembles (3). Total: 48 hours.

Second Year—Music 271, 272, 273 (9); Music 261, 262, 263 (3); Music 201, 202, 203 (6); Music 204, 205, 206 (9); Music 218, 219, 220 (9); French 101, 102, 103 (12); ensembles (3). Total: 51 hours.

Third Year—Music 371, 372, 373 (9); Music 311, 312, 313 (6); German 101, 102, 103 (12); Music 304 (3); Music 409 (3); Music 314 (3); Music 207 (2); Music 403 (2); ensembles (3). Total: 43 hours.

Fourth Year—Music 471, 472, 473 (9); Group III (4); non-music electives (14); electives, music or non-music (17); ensembles (3). Total: 47 hours.

SAMPLE PROGRAM: PIANO

First Year—Music 161, 162, 163 (9); Music 107, 108, 109 (18); English 112 (4); English literature (4); Group II (4); H.P.E. (3); ensembles (3). Total: 45 hours.

Second Year—Music 261, 262, 263 (9); Music 201, 202, 203 (6); Music 204, 205, 206 (9); Music 218, 219, 220 (9); Group III (4); Group IV (4); academic elective (4); ensembles (3). Total: 48 hours.

Third Year—Music 361, 362, 363 (9); Music 304 (3); Music 366, 367, 368 (9); Music 315 (3); Music 207, 208 (4); Music 403 (2); Music 210, 211, 212 (6); non-music academics (12); ensembles (3); Total: 51 hours.

Fourth Year—Music 461, 462, 463 (9); Music 404 (2); non-music academic (12); electives, music or non-music (15); ensembles (3); Music 409 (3). Total: 44 hours.

SAMPLE PROGRAM: ORGAN

First Year—Music 191, 192, 193 (9); Music 107, 108, 109 (18); English 112 (4); English literature (4); Group II (4); H.P.E. 100 (3); ensemble (3). Total 45 hours.

Second Year—Music 291, 292, 293 (9); Music 201, 202, 203 (6); Music 204, 205, 206 (9); Music 218, 219, 220 (9); Group III (4); Group IV non-music electives (4); ensembles (3). Total: 48 hours.

Third Year—Music 391, 392, 393 (9); Music 304 (3); Music 409 (3); Music 315 (3); Music 207 (2); Music 208 (2); Music 403 (2); Music 215, 216, 217 (6); non-music academics (12); ensemble (3). Total: 45 hours.

Fourth Year—Music 491, 492, 493 (9); Music 404 (2); Music 419 (3); Music 396, 397, 398 (6); Music 415 (3); non-music academics (12); electives, music or non-music (15); ensembles (3). Total: 53 hours.

SAMPLE PROGRAM: INSTRUMENTAL

First Year—instrument (9); Music 107, 108, 109 (18); English 112 (4); English literature (4); Group II (4); piano (or proficiency) (3); H.P.E. 100 (3); ensembles (6). Total: 51 hours.

Second Year—instrument (9); Music 201, 202, 203 (6); Music 204, 205, 206 (9); Music 218, 219, 220 (9); Group III (4); Group IV (4); non-music academic (4); ensembles (6); piano (3). Total: 54 hours.

Third Year—instrument (9); Music 304 (3); Music 409 (3); Music 315 (3); Music 207, 208 (4); Music 403 (2); non-music academics (12); ensembles (6). Total: 42 hours.

Fourth Year—instrument (9); pedagogy (3); non-music academics (15); ensembles (6). Total: 33 hours.

MUSIC EDUCATION

Three degree options are offered in Music Education which lead to certification for teaching of public school music: a Choral Major, an Instrumental Major, and a Classroom Music Major. The total number of hours required for graduation in all three programs is 211. To complete this program in four years or 12 quarters, a student must enroll in at least 17 hours of course work each quarter. A student may desire to reduce the typical quarter load to 15 hours which can be done by extending the program beyond 12 quarters and attending one or two summer terms. Students pursuing one of the several certification options in Music Education must also be enrolled in the College of Education.

Academic Minor. Ordinarily students pursuing a degree in Music Education do not carry an academic minor. However, a minor can be pursued provided the student is willing to take additional credits beyond the minimum of 211 required for graduation.

Double Major. A student interested in a double major should consult with the Director of the School of Music and the chairman of the concerned departments for information concerning the requirements. Double majors between departments must be approved by the chairman of the appropriate departments. Such programs ordinarily require a time expenditure of more than 12 quarters.

Applied Study. Each student in Music Education must have an applied area of emphasis. An entering student must audition before a faculty committee to determine acceptance and standing. If a student wishes to change his area of emphasis, it must be with the approval of the faculties involved.

Each student is required to pass a proficiency examination in his major applied area at the third-quarter juries. Failure to pass this proficiency examination results in probationary status for one quarter at the end of which significant improvement must be demonstrated or applied instruction will be terminated and the student's standing in the School of Music will be reviewed.

Instrumental and Choral Music Education Majors are required to study in their major applied area all quarters except that one set aside for student teaching.

Recital. A half recital (or its equivalent) is required of Music Education majors taking the instrumental or choral option. A full recital may be given with the consent of the area faculty. Students pursuing the Classroom Music option are encouraged, but not required, to give a public recital. A recital may not be given while student teaching.

Ensembles. All Music Education majors are required to participate in seven quarters of large ensemble and two quarters of small ensemble. Students are encouraged, however, to participate in large ensembles each quarter except the quarter they student teach. Choral majors are not required to participate in a large instrumental ensemble, but may do so, when qualified, on an elective basis. Instrumental majors must acquire seven hours of large ensemble (Concert or Symphonic Band or Orchestra) exclusive of Marching Band.

Applied Instrumental Classes. Music Education majors pursuing the instrumental and choral options are required to elect 11 and 7 instrumental classes respectively. Instrumental majors may elect any combination of wind and string classes to complete eleven hours; Choral majors are required to take one quarter each of high strings (violin or viola), low strings (cello or double bass), brass, percussion, and woodwinds.

Basic Musicianship. Failure of any portion of Basic Musicianship in any quarter continues to be registered within the single composite grade. However, the mark of I is given any student whose work in one section of the course is below acceptable quality yet whose composite grade is a passing one. This student is given the opportunity to raise his deficiency to a passing level before the end of the period which is allowed for the removal of an I, see page 17 of this *Bulletin*. If he fails to meet this requirement in the allotted time, the mark of I automatically becomes an F for the entire course.

SPECIFIC REQUIREMENTS FOR MUSIC EDUCATION

The requirements for the degree of Bachelor of Music in Music Education include completion of:

1. 63 hours of credit from each of four groups of areas of knowledge listed below;
2. 36 hours of credit in professional education courses;
3. 23 hours of credit in music methods;
4. 15 hours of credit in music history and literature;
5. 33 hours of credit in music theory;
6. 6 hours of credit in conducting;
7. 23 hours of credit in applied music;
8. 9 hours of credit in large and small ensembles;
9. 3 hours of credit in Health and Physical Education.

GROUP REQUIREMENTS

To insure a general education background in addition to the teaching specialization, a student is required to complete 63 hours of credit from the four areas of knowledge indicated below as group requirements. Insofar as possible, group requirements should be completed during the freshman and sophomore years.

Group I: *Composition, Literature, and Speech*. Each student must complete English 112 or equivalent, a literature course in English, and Speech 102. A student is considered to have demonstrated acceptable performance in English skills if he has received a grade of C or better in English 112. A student who receives a D in English 112 must repeat the course until he earns a grade of C. Furthermore, the student is required to present evidence of freedom from speech defects as certified by the Department of Speech. Minimum total: 12 hours.

Group II: *Science and Mathematics*. Each student must complete 8 hours of credit in course work selected from the areas of biology, chemistry, physics*, geology, and mathematics. Mathematics 241 and 242 are applicable only for an elementary education major. Minimum total: 8 hours. (*Physics 350, Acoustics of Music and Speech, is recommended).

Group III: *Social Sciences*. Each student must complete 8 hours of credit in the social sciences. Courses may be selected from the areas of economics, geography, history, political science, psychology (except Psychology 201), and sociology. Minimum total: 8 hours.

Group IV: *Fine and Applied Arts*. Each student is required to complete 9 hours of credit in one or more of the following fields: art, business education, crafts, drama (including radio, television), foreign language, home economics, industrial education and technology, library science, literature (in addition to that in Group I), modern dance, and philosophy. No graduation credit is allowed for less than two quarters of a beginning foreign language. Group IV requirements may not include music courses. Minimum total: 9 hours.

Total Group Requirements. Each student in the School of Music must meet the total minimum requirements (37 hours) for Groups I, II, III, and IV. The remaining 26 hours may be elected from one or more of the groups, but may not include required courses in the music major, and must include at least 8 hours in non-music courses.

Group IV Requirements for the Classroom Music Major. Students pursuing the Classroom Music option are required to take 12 hours in related art disciplines. These include: Art 101; 6 hours from Art 145, 146, 245, Speech 347 or 447; and 3 hours of an applied Art course or a 400-level Art history course. 23 hours then may be elected from one or more of the groups, but may not include required courses in the music major, and must include at least 8 hours in non-music courses.

PROFESSIONAL EDUCATION REQUIREMENTS

To insure adequate professional preparation for a career in teaching, 36 hours of credit are required to include: Education 402 (4), 408 (4), and 409 (4); Student Teaching 331 (15); Psychology 201 (5); and Education 302 (4). Professional

* Biology 104, Geology 100, or Physics 350 is recommended.

requirements including eligibility for a quarter of student teaching are specified on pages 82-84 of the *Bulletin*.

MUSIC METHODS REQUIREMENTS

Three methods courses are required of all Music Education majors: Music 255 (4), 355 (3), and 356 (2). In addition, Instrumental majors must elect Music 357 (3) and 11 hours of applied instrument classes; Choral majors, Music 456 (3), 7 hours of applied instrument classes; Music 311 and 301; Classroom majors, 7 hours of applied instrument classes, Music 451 and 455. Minimum total: 23 hours.

MUSIC HISTORY AND THEORY REQUIREMENTS

The following courses are required of all Music Education majors: 107-108-109, 201-202-203, 204-205-206, 218-219-220, 304, and 315. Total minimum hours in music history, 15; in music theory, 33.

CONDUCTING REQUIREMENTS

All Music Education majors are required to take Music 207-208-209 in their junior year before student teaching. Minimum total: 6 hours.

APPLIED MUSIC REQUIREMENTS

<i>Instrumental Major</i>		<i>Choral Major</i>		<i>Classroom Major</i>	
Major Instrument	15	Major Instrument	15	Piano	9
Piano	6	Minor Instrument (piano or voice)	8	Voice	9
Voice or Voice Class	2			Additional Applied	5
	<hr/>		<hr/>		<hr/>
	23		23		23

Piano Emphasis. A student majoring in Music Education whose primary performance area is piano must choose one of the degree options and meet all the requirements of that program, including those of instrumental classes. Pianists taking the Instrumental option must satisfy the piano requirements (6 hours) by electing other applied areas of instrumental study.

RECOMMENDED SEQUENCE OF COURSES FOR MUSIC EDUCATION

First Year—applied music (9); instrument classes (3); Music 107, 108, 109 (18); ensembles (3); English 112 (4); Speech 102 (4); H.P.E. 100 (3); group requirements (8). Total: 52 hours.

Second Year—applied music (6); instrument classes (1); Music 218, 219, 220 (9); Music 201, 202, 203 (6); Music 204, 205, 206 (9); ensembles (3); Psychology 201 (5); English literature (4); group requirements (10). Total: 53 hours.

Third Year—applied music (5); instrument classes or Music 311 and 301 or Music 451 (4); Music 304, 315 (6); Music 255, 355, 356 (9); Music 207, 208, 209 (6); Education 302 (4); ensembles (2); group requirements (16). Total: 52 hours.

Fourth Year—applied music (3); instrument classes (3); Music 357 or 456 or 455 (3); ensembles (1); Education 402, 408, 409 (12); Education 331 (15); group requirements (17). Total: 54 hours.



THE GRADUATE SCHOOL

Charles A. Leone, Ph.D., Dean

Richard Eakin, Ph.D., Assistant Dean and Director of Graduate Admissions

Ronald N. Marso, Ed.D., Assistant Dean for Research and Special Projects

ADMISSION

Admission to graduate study must be obtained from the Graduate School before any enrollment for graduate credits can be authorized. A student should apply for admission directly to the Graduate School.

DEGREES

Graduate study is offered during the regular academic year and during the summer leading to the following degrees:

- Master of Accountancy
- Master of Arts
- Master of Arts in Teaching
- Master of Business Administration
- Master of Education
- Master of Fine Arts
- Master of Music
- Specialist in Education
- Doctor of Philosophy
 - Biology
 - Educational Administration
 - English
 - Psychology
 - Speech

MAJORS

Graduate majors are offered in the following areas:

Accounting; American Studies*; Art, Biology; Business Administration†*; Business Education; Chemistry; College Student Personnel*; Earth Science*; Economics; Education: Educational Administration, Elementary Education, Guidance and Counseling, Reading, Special Education; English; Geography; Geology; German; Health and Physical Education; History; Industrial Education and Technology; Mathematics; Music; Philosophy; Physical Sciences and Mathematics*; Physics; Political Science; Psychology; Romance Languages: French, Spanish; School Psychology*; Sociology; Speech.

A graduate minor may be taken in any department field approved for a major or in library science which is approved for a minor.

* Interdepartmental major.

† This program involves a core curriculum and the five functional fields of accounting: management, marketing, finance, statistics, and international business. May be elected as a minor.

AWARDS FOR GRADUATE STUDY

An award granted to a selected first-year graduate student may carry a stipend of up to \$2,800. In addition, the award includes waiver of the *Instructional Fee* (for the academic year and the following summer) and the *Nonresident Fee* (for the academic year and the following summer). Each graduate assistant pays the *General Fee* and other charges which may apply to him. A graduate assistant registers for the number of hours appropriate to his assistantship assignment during the academic year. Renewal of an award for a second year is possible.

A teaching fellowship is available for a student who has the master's degree and who plans to work toward the degree of Doctor of Philosophy. This program includes college-level teaching under supervision. The stipend is from \$2,000 to \$4,000 plus waiver of the *Instructional* and *Nonresident Fees*. The teaching fellow pays the *General Fee* and any other charges which may apply to him.

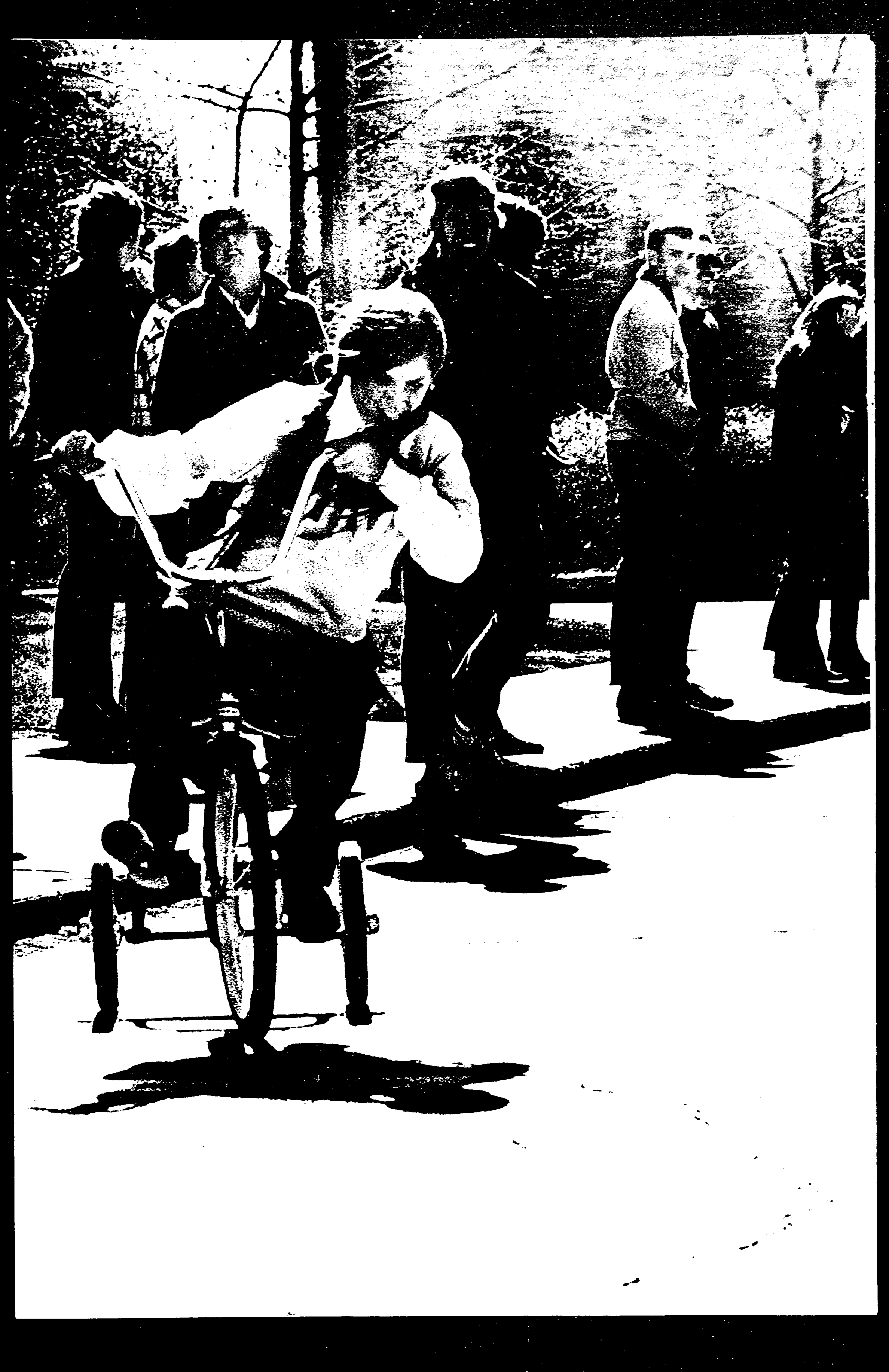
Applications for a graduate assistantship or a teaching fellowship should be filed with the chairman of the appropriate department by March 1 for the following academic year.

Further information concerning the Graduate School may be obtained in the *Graduate Bulletin*.

EARLY ADMISSION

A senior at Bowling Green who has 150 hours of credit and an average of 3.0 or better in all his work and who does not require full time in his senior year to complete the requirements for his undergraduate degree may be admitted to the Graduate School as an advanced undergraduate. He may register for limited work for graduate credit provided he obtains approval in advance from the Dean of the Graduate School.

A senior, in his last quarter of undergraduate work, who has completed all requirements for graduation except his current registration and who has been declared acceptable for admission to the Graduate School following the receipt of his undergraduate degree, is permitted to enroll in courses for graduate credit if his required undergraduate registration is not a full course load. A student's enrollment under this provision is not to exceed 15 hours of undergraduate and graduate work combined.



INTERDEPARTMENTAL PROGRAMS

AMERICAN STUDIES

Alma J. Payne, Adviser for Planned Program in American Studies

The goal of the American Studies Program is to provide a unified approach to the subject matter of the liberal arts so as to achieve a comprehensive view of American life and of the American heritage. This approach combines specialized fields into patterns which do not isolate American life but rather reveal its rich heritage from and its relationship to all of Western civilization. The chairman of the Interdepartmental Committee, which directs the program, serves as an adviser to the student in setting up a program adapted to his interests and to the requirements of the college and the program.

The program consists of 63 hours minimum in the following Departments: English, History, Political Science, Philosophy, and the School of Art. The 63 hours must be distributed as follows: a field of concentration of 23 hours, including those hours indicated as basic by the department of concentration (see pages 45 and 85); at least 4 hours in a senior seminar; and a total of 36 hours with a minimum of 6 hours in each of the four cognate departments not chosen as a field of concentration (see pages 45 and 85).

At least 32 of the 63 hours minimum must be in 300- or 400-level courses. Prerequisites to 300- or 400-level courses identified as cognates in the American Studies Program are waived for students in the program for whom this would not be a severe handicap. No minor is required.

INTERNATIONAL STUDIES

Don K. Rowney, Adviser for Planned Program in International Studies

An interdisciplinary planned program for the undergraduate who wishes to pursue a concentrated course of studies in preparation for research, teaching, or administrative specializations in the areas of East Asia, Latin America, the Middle East, the Soviet Union, and Eastern Europe.

A student specializing in the areas of East Asia, the Middle East, the Soviet Union, or Eastern Europe completes 20 hours of basic courses—History 153, Political Science 101, Economics 201, Geography 230, and Sociology 231—together with 25 hours of courses in his area of specialization to be chosen in consultation with his major adviser. To insure maximum exposure to the intellectual and literary traditions of the area of his choice, the student must complete 9 hours of courses above the 202-level in an appropriate language—German, Russian, or French. The student also is encouraged to take advantage of appropriate programs of study abroad sponsored by Bowling Green or other universities which can contribute to his familiarization with his major area of interest. An appropriate minor is chosen in consultation with the International Studies adviser.

A student who wishes to specialize in the Latin-American area completes courses appropriate to that area to a total of 50 hours. A list of approved courses may be obtained from the Office of International Education or from the Latin-American area program adviser, Dr. J. R. Thomas. The student chooses Spanish as his foreign language and an appropriate minor in consultation with his adviser.

POPULAR CULTURE

Ray B. Browne, Adviser for Planned Program in Popular Culture

The Center for the Study of Popular Culture is dedicated to broadening the base of college and university education to make it more inclusive and therefore more democratic and more viable. The Program, therefore, is not so much *interdisciplinary* as *supradisciplinary*. The goal of the program is to provide a wide, comprehensive approach to knowledge that presents timely studies in a setting of relevancy in order to demonstrate synthesis and relative significance. The emphasis is on the use and applicability of the subject matter in the world today. Because, however, contemporary life is not without antecedents, historical material is brought in as required or when useful. The effectiveness of this overall approach derives from considering Popular Culture as a function rather than a discipline. The Director of the Center, or his representative, in consultation with the other members of the Advisory Committee, directs the program and serves as adviser to each student in setting up a schedule adapted to his special interests and needs and to the requirements of the college and the Program.

The Program consists of a minimum of 65 hours within the Popular Culture Program and the following departments: Education, English, Geography, History, Home Economics, Journalism, Marketing, Music, Philosophy, Political Science, Psychology, Sociology and Speech. Exceptions may be made to suit the needs and desires of individual students. No more than 15 hours may be taken in a single department other than the Popular Culture Program. See page 49 for specific courses available in the program.

PROGRAMS OF STUDY ABROAD

AUSTRIA

Warren J. Wolfe, Coordinator of Academic Programs Abroad

Herbert Gauerke, Program Director

The Department of German and Russian conducts an academic year abroad program in Salzburg, Austria. The program consists of two semesters (equals three quarters) of academic study in a German-speaking country with an excellent cultural environment.

A carefully designed curriculum includes courses in the German language and the literature of the German-speaking countries, as well as courses in related areas (music, history, geography, government, and education) as they pertain to Central Europe. All academic work is done in German. An American program director resides in Salzburg and supervises the program. Teaching staff is drawn from the faculty of the University of Salzburg. Students live with Austrian students in a dormitory. Group travel to historical and cultural centers of Germany and Austria is included in the program which generally runs from around October 1 through July 1.

Applications for the program are accepted starting in January of every academic year. Applicants must have junior standing and the equivalent of two years of college German by the time the year abroad commences. A minimum grade point average of 2.25 overall and 2.5 in all German courses taken is required.

FRANCE

Warren J. Wolfe, Program Director

The Department of Romance Languages has established an academic-year program of French studies in conjunction with the Institut d'Etudes Francaises in Tours, France. All courses are conducted in French and include work in art, geography, history, French language and literature, and philosophy. A student lives in a carefully chosen private home near the Institut. Visits to important historic and cultural centers are an integral part of the program.

The study program is open primarily to a junior regardless of his major area of study. A student must have a minimum grade point average of 2.25 in all academic work and an average of 2.5 in French courses. The minimum preparation in French is the completion of the intermediate college course.

SPAIN

Michael J. Flys, Program Director

The Department of Romance Languages conducts an independent year-around study program in Madrid, Spain. It is divided into four quarters and offers an interested student an opportunity to study in the culturally rich environment of the Spanish capital.

A carefully designed curriculum includes courses in Spanish language and literature and the related areas of the art, geography, history, and philosophy of Spain. All courses are taught in Spanish and are fully approved by the respective departments at Bowling Green State University. Teaching personnel is drawn from the staff of Spanish institutions of higher learning. An American program director resides in Madrid and supervises the academic program. A student lives at a privately owned academic and residence center operated by the program. Group travel to historic and cultural centers of Spain is included in the program.

This program is open to any qualified student regardless of his major area of study. A student must have completed the intermediate college course in Spanish or its equivalent and must have sophomore standing or above. He must have a minimum grade point average of 2.25 in all academic work taken and an average of 2.5 in Spanish courses.

In addition to its offering for an undergraduate, the Department conducts a graduate summer study program for a student enrolled in the M.A. degree program in Spanish.



DESCRIPTION OF COURSES

The Arabic number in parentheses immediately following the title of the course indicates the number of hours of credit.

The Roman numerals indicate the quarter or quarters in which the course is offered with I indicating the fall quarter; II, the winter quarter; III, the spring quarter; IV, the summer quarter.

The asterisk beside the name of a department or division indicates that all courses in that department may be used to fulfill requirements for a degree in the College of Arts and Sciences except where a specific exception is noted—see page 43. Courses in other departments may be used to fulfill requirements of the College of Arts and Sciences only under the conditions listed on page 43.

Courses numbered from 100 to 199 are ordinarily for a freshman or sophomore.

Courses numbered from 200 to 299 are for a sophomore, junior, or senior and are not ordinarily open to a freshman.

Courses numbered 300 to 499 are ordinarily open to a junior or senior but under exceptional circumstances may be taken by a student upon the recommendation of his adviser and with the written approval of the instructor of the course or the chairman of the department concerned.

Courses which may be taken for graduate credit are listed in the *Graduate Bulletin*.

*AEROSPACE STUDIES

Professor: Colonel Garuti (Chairman); Assistant Professors: Major Nelson, Captain Rubenson, Captain Macri; Sergeant Major: Staff Sergeant Cramer; Personnel Technician: Staff Sergeant Harrington; Administrative Assistant: Staff Sergeant Paterson.

GENERAL BASIC MILITARY COURSE

Prerequisite: Departmental Approval

101. AEROSPACE STUDIES (1) I. A study of the doctrine, mission, and organization of the United States Air Force; mission, function, and employment of U.S. strategic defensive forces; corps training activities.

102. AEROSPACE STUDIES (1) II. Mission, function, and employment of U.S. strategic offensive forces. U.S. general purpose

forces; mission, resources, and operation of the tactical air forces; corps training activities.

103. AEROSPACE STUDIES (1) III. U.S. general purpose forces continued; capabilities of the U.S. Army in limited war and counterinsurgency; the U.S. Navy and Marine Corps; structure and mission of the U.S. aerospace support activities; corps training activities.

201. AEROSPACE STUDIES (1) I. Defense policies; theories of general war; nature and context of limited war; policies and strategies of limited war; policies and strategies of the Soviet Union and China; corps training activities.

202. AEROSPACE STUDIES (1) II. The role of alliances in U.S. defensive policies; defense organization and decision-making; organization and function of the Department of Defense; corps training activities.

203. AEROSPACE STUDIES (1) III. Role of the military in the United States national policies; the elements and processes of defense decision-making; corps training activities.

301. AEROSPACE STUDIES (3) I. History of aerospace power; history of U.S. aerospace power; development of an independent Air Force and its challenges and changes; corps training activities.

302. AEROSPACE STUDIES (3) II. Aerospace power today; military aerospace power; defense strategy; aerospace concepts and doctrines and the employment of aerospace power; corps training activities.

303. AEROSPACE STUDIES (3) III. Astronautics and space operations; history of our space program; spatial environment; space orbits and trajectories; space vehicle systems; space operations and the future developments in space; corps training activities.

411. AEROSPACE STUDIES (3) I. The nature, the need for, the theory, the variables, and the simulated application of Air Force leadership; basic concepts of human behavior and human relations within the formal organization; examination of the officership profession; corps training activities.

412. AEROSPACE STUDIES (3) II. Historical development of management thought; examination of the planning, organizing, coordinating, directing, and controlling function of management—emphasizing Air Force application;

study of the command and staff concept, decision-making theory, problem solving, and the communicative process; corps training activities.

413. AEROSPACE STUDIES (3) III. The junior officer as an administrator; study of Air Force personnel policies; the information sciences; the military justice system; corps training activities.

461. AEROSPACE STUDIES: Flight Instruction Program* (2) I. Theory of flight; aerodynamics; federal aviation regulations; aviation map and chart interpretation; circular slide rule; radio communication procedures; aircraft operation; flying safety. Required of an AFROTC category 1P student.

462. AEROSPACE STUDIES: Flight Instruction Program* (2) II. A study and application of dead-reckoning and pilotage navigation; radio navigation, weight and balance, meteorology, aircraft performance, and instruction in basic flight maneuvers. Required of an AFROTC category 1P student.

463. AEROSPACE STUDIES: Flight Instruction Program* (2) III. A study and application of aircraft operation, flight safety, rules of the air, instruction in advanced flight maneuvers, and navigation techniques. Required of an AFROTC category 1P student.

*AMERICAN STUDIES

400. SENIOR SEMINAR IN AMERICAN STUDIES (4) II, III. An interdisciplinary seminar primarily for majors in American Studies. Selected topics in American culture, each approached from various points of view within the humanities and social sciences. Prerequisite: senior standing and a major in social sciences or in a humanity. Mrs. Blanchard, Miss Payne, or especially assigned staff.

*ART

Professors Wankelman (Director), Bone, Lakofsky, Ocvirk, Running, Stinson, Wigg; Associate Professors Coleman, Hall, Hasselschwert; Assistant Professors Bandy, Cayton, Davenport, DeHays, Ehrlichman, Jacomini, Magada, Mazur, Misfeldt; Instructors Arn, Hilty, Lenderman, Wolfe, Wright.

101. INTRODUCTION TO ART (3) I, II, III. Introduction to the basic principles of art form including experiences with the elements of graphic expression; a foundation course open to any student. Two lectures, two-hour studio.

102. ART FUNDAMENTALS (5) I, II. Introduction to the basic principles of art form including experiences with the elements of graphic expression; a foundation course open to an art major or minor. Two lectures, three 2-hour studios.

103. DRAWING (3) I, II, III. Observation of natural objects as an aid to expressive draftsmanship. Six studio hours. Prerequisite or parallel: Art 101 or 102.

*Credit cannot be granted for both AS 461-462-463 and Industrial Education and Technology 141 (Private Pilot).

104. DRAWING (3) I, II, III. Art 103 continued. Principles of pictorial structure. Six studio hours. Prerequisite: Art 103.

112. BEGINNING DESIGN (3) I, II, III. Design theories as a basis for artistic expression. An introduction to three-dimensional design. Six studio hours. Prerequisite or parallel: Art 101 or 102 or consent of instructor.

205. BEGINNING DRAWING FROM LIFE (3) I, II, III. Principles and practice in creative and structural drawing; development of the concepts and techniques required to accomplish competent graphic expression. Six studio hours. Prerequisite: Art 104.

206. ADVANCED DRAWING FROM LIFE (3) I, II, III. Advanced problems in drawing and composition. Six studio hours. Prerequisite: Art 205.

211. INTERMEDIATE DESIGN (3) I, II, III. Practice in problems of formal design, lettering, and layout. Six studio hours. Prerequisite: Art 101 or 102 or consent of instructor. Mr. Davenport, Mr. Hall, Mr. Jacomini.

212. INTERMEDIATE DESIGN (3) I, II, III. Exploration problems with an orientation toward product design. Six studio hours. Prerequisite: Art 104 or consent of instructor. Mr. DeHays, Mr. Hall.

213. INTERMEDIATE DESIGN (3) I, II, III. Studio problems in environmental concepts specifically related to interior and exterior spaces. Six studio hours. Prerequisite: Art 104 or consent of instructor. Mr. Arn, Mr. Hall.

261. BEGINNING SCULPTURE (3) I, II, III. Beginning problems are devoted to creative arrangements of three-dimensional forms. Six studio hours. Prerequisite: Art 101 or 102.

263. BEGINNING CERAMICS (3) I, II, III. Basic techniques in forming, decorating, and firing of pottery. One lecture, four studios. Prerequisite: Art 101 or 102 and 112. Mr. Ehrlichman, Mr. Lakofsky.

265. WEAVING (3) I, II, IV. Introduction to the principles of Macrame, studies in color and fibers, weaving on a frame loom. Prerequisite: Art 102, 104, 112.

305. ADVANCED DRAWING FROM LIFE (3) I, II, III. Art 206 continued.

311. ADVANCED DESIGN (3). Offered on demand. Technical problems in design. Six studio hours. May be repeated to 6 hours. Prerequisite: Art 211, 212. Mr. Hall, Mr. Jacomini.

321. BEGINNING JEWELRY DESIGN (3) I, II, III. The use of metals in jewelry making with emphasis on design and the development of skill in the manipulation of tools and materials. One lecture, four studios. Prerequisite: Art 101 or 102, 112. Mr. Hasselschwert, Mr. Lenderman.

322. JEWELRY DESIGN (3). Offered on demand. Art 321 continued. Six studio hours. Prerequisite: Art 321. Mr. Hasselschwert, Mr. Lenderman.

343. ART FOR ELEMENTARY TEACHERS (3) I, II, III. Experience with art materials and problems to develop a creative attitude; problems based primarily on the needs of children. Not open to art majors. Not for Arts and Sciences credit. Prerequisite: Art 101 or 102.

352. ART EDUCATION IN ELEMENTARY SCHOOLS (3) I, II. History and philosophy of art education. Principles, objectives, curriculum, instructional and resource materials, and methods in public school art. One lecture, two 2-hour laboratories. Not for Arts and Sciences credit. Prerequisite: Education 302, junior standing. Mr. Ehrlichman.

353. ART EDUCATION IN SECONDARY SCHOOLS (3) III. Art 352 continued. One lecture, two 2-hour laboratories. Not for Arts and Sciences credit. Prerequisite: Art 352. Mr. Ehrlichman.

361. SCULPTURE (3) I, II, III. Investigation of such media as built-up plaster, wood carving, stone carving, welding. Six studio hours. May be repeated to 9 hours. Prerequisite: Art 261.

363. CERAMICS (3) I, II, III. Consideration of form, color, and texture as basic factors of ceramic design with emphasis on glazes and techniques of the potter's wheel. Courses must be taken in number sequence. Six studio hours. May be repeated to 9 hours. Prerequisite: Art 263. Mr. Ehrlichman, Mr. Lakofsky.

364. ADVANCED CERAMICS (3) I, II, III. Art 363 continued. Six studio hours. Prerequisite: Art 102, 363. Mr. Ehrlichman, Mr. Lakofsky.

365. WEAVING (3) I, II, III. Introduction to the basic principles of weaving on a 4-harness loom. Sample weave studies, rug sampler. Prerequisite: consent of instructor. Mr. Lenderman.

371. BEGINNING WATERCOLOR PAINTING (3) I, II, III. Exploration of technical possibilities of watercolor as a medium. Six studio hours. Prerequisite: Art 104, 112.

372. ADVANCED WATERCOLOR PAINTING (3) I, II, III. Art 371 continued, stressing the aesthetic and technical approach. Six studio hours. May be repeated to 9 hours. Prerequisite: Art 371.

373. BEGINNING OIL PAINTING (3) I, II, III. Individual problems chosen or assigned to acquaint the student with the possibilities and limitations of the oil medium as a means of achieving expressive art form. Six studio hours. Prerequisite: Art 104, 112.

374. OIL PAINTING (3) I, II, III. Art 373 continued with attention to individual approach. Six studio hours. May be repeated to 9 hours. Prerequisite: Art 373.

377. BEGINNING PRINTS (3) I, II, III. Introduction to basic graphic techniques with consideration of their aesthetic potential in the finished print. Six studio hours. Prerequisite: Art 104, 112. Mr. Cayton, Mr. Magada, Mr. Ocvirk, Mr. Wigg.

378. PRINTS (3) I, II, III. Art 377 continued. Introduction to additional graphic techniques. Six studio hours. May be repeated to 9 hours. Prerequisite: Art 377. Mr. Cayton, Mr. Magada, Mr. Ocvirk, Mr. Wigg.

411. ADVANCED DESIGN (3) I, III. Art 311 continued. Six studio hours. Prerequisite: Art 311. Mr. Hall, Mr. Jacomini.

415. GLASSBLOWING (3). Introduction to the craft of free-hand-blown glass. Deals with the building of all needed equipment and technology

for the craftsman. Six studio hours. Offered on demand. Prerequisite: permission of instructor. Mr. Hall.

421. ADVANCED JEWELRY DESIGN (3) I, II, III. Art 322 continued. Six studio hours. May be repeated to 6 hours. Prerequisite: Art 322. Mr. Hasselschwert.

461. ADVANCED SCULPTURE (3) I, II, III. Six studio hours. May be repeated to 12 hours. Prerequisite: Art 361. Mr. Coleman, Mr. Ocvirk.

463. ADVANCED CERAMICS (3) I, II, III. Six studio hours. May be repeated to 9 hours. Prerequisite: Art 364.

465. ADVANCED WEAVING (3) I, II, III. Continuation of Art 365. Emphasis on experimental weaving and adapting previous studies into projects. May be repeated to 6 hours. Prerequisite: Art 365, permission of instructor. Mr. Lenderman.

471. ADVANCED WATERCOLOR (3) I, II, III. Art 372 continued. Six studio hours. May be repeated to 12 hours. Prerequisite: Art 372.

473. ADVANCED OIL PAINTING (3) I, II, III. Art 374 continued. Six studio hours. May be repeated to 12 hours. Prerequisite: Art 374.

477. ADVANCED PRINTS (3) I, II, III. Art 377 continued. Six studio hours. May be repeated to 12 hours. Prerequisite: Art 377. Mr. Magada, Mr. Ocvirk, Mr. Wigg.

489. DESIGN INTERNSHIP (3-15) I, II, III, IV. Professional studio experience in a chosen area design firm. Credit approved upon submission of portfolio and written description of the experience in consultation with the firm. May count as elective hours only. Prerequisite: 15 hours of design, consent of the design staff.

COURSES IN ART HISTORY

145. HISTORY OF WESTERN ART I (3) I, II, III. History of ancient and early medieval art. Open only to a freshman or sophomore. Mr. Bandy, Mr. Misfeldt, Mr. Stinson, Mrs. Wolfe.

146. HISTORY OF WESTERN ART II (3) I, II, III. Medieval, Renaissance, and Baroque art. Open only to a freshman or sophomore. Mr. Bandy, Mr. Misfeldt, Mr. Stinson, Mrs. Wolfe.

245. HISTORY OF WESTERN ART III (3) I, II, III. Nineteenth and twentieth century art. Mr. Bandy, Mr. Misfeldt, Mr. Stinson.

444. CLASSICAL ART (3) I. Hellenistic, Greek, Roman art.

447. MEDIEVAL ART (3) II. Early Christian and Byzantine art.

449. LATE MEDIEVAL ART (3) III. Romanesque and Gothic art.

451. ART OF THE ITALIAN RENAISSANCE (3) I, II. Renaissance art in Italy.

453. ART OF THE NORTHERN RENAISSANCE (3) I. Renaissance art in northern Europe.

454. BAROQUE AND ROCOCO ART (3) III. Baroque and Rococo art in Italy and northern Europe.

455. ART OF THE NINETEENTH CENTURY (3) II. Architecture, sculpture, painting in the nineteenth century.

456. CONTEMPORARY ART (3) I, III. Architecture, sculpture, painting in the twentieth century.
457. AMERICAN ART (3) I, II. History and appreciation of American art from colonial times to present with emphasis on painting, sculpture, architecture. Mr. Bandy, Mr. Misfeldt, Mr. Stinson.
458. ORIENTAL ART I (3) II. The art of India, Southeast Asia, and Indonesia. Mr. Stinson.
459. ORIENTAL ART II (3) III. The art of China and Japan from the earliest times to the present. Mr. Stinson.

ARTS AND SCIENCES

John G. Eriksen, Dean

100. SEMINAR IN ARTS AND SCIENCES (2-8). Interdisciplinary studies in the arts and sciences. Offered on sufficient demand or as an area of study meeting new trends in the arts and sciences. May be repeated by consent of the Dean of the College. Prerequisite: consent of instructor.
300. SEMINAR IN ARTS AND SCIENCES (2-8). Interdisciplinary studies in arts and sciences offered on sufficient demand or as an area of study meeting new trends in the arts and sciences. May be repeated by consent of the Dean of the College. Prerequisite: consent of instructor.

*BIOLOGY

Professors Fisher (Chairman), Acker (Assistant Chairman), Brent, Burley, Graves, Hallberg, Jackson, Leone, Oster; Associate Professors Crang, Easterly, Hamilton, Harmon, Hamre, Martin, Schurr, Whitwer; Assistant Professors Baxter, Graham, Hann, Noble, Rabalais, Romans, Vessey; Instructor Groat.

101. GENERAL BIOLOGY: MAN AND HIS ENVIRONMENT (5) I, II, III. Fundamental principles of biology and their relations to man and his environment. Emphasis on present environmental problems of air, water and land pollution, human reproduction, population dynamics, and modern health problems. Three 1-hour lectures, two 1-hour laboratories. Not accepted toward a biology major or minor.
104. GENERAL BIOLOGY (5) I, II, III. A course in fundamental principles and concepts of biology. Three 1-hour lectures, two 1-hour laboratories. Not accepted toward a biology major or minor.
106. GENERAL BOTANY AND MICROBIOLOGY (3) I, II, III. Fundamental principles of botany and microbiology at the organismic level; processes, morphology, life cycles and phylogeny of plants and microorganisms. Two lectures and one 2-hour laboratory. May be taken concurrently with Biology 107.
107. GENERAL ZOOLOGY (3) I, II, III. Fundamental principles of zoology at the organismic level; processes, morphology, life cycles and phylogeny of animals. Two lectures and one 2-hour laboratory. May be taken concurrently with Biology 106.
208. BASIC PHYSIOLOGY (5) I, II, III. Introduction to the study of functional properties of living things. Four lectures, one 3-hour laboratory. Prerequisite: Biology 106, 107, and one quarter laboratory chemistry which may be taken concurrently.
213. ENVIRONMENTAL BIOLOGY (5) I, III. Introduction to the study of living organisms in relation to their environment and the fundamental principles of ecology. Three lectures, one 2-hour and one 3-hour laboratory. Prerequisite: Biology 106, 107, and one quarter of laboratory chemistry which may be taken concurrently.
251. GENERAL GENETICS (5) I, II, III. Principles of inheritance and their bearing on theoretical and applied biology as viewed from their cytological development and their evolutionary and nuclear aspects. Three lectures, two 2-hour laboratories. Prerequisite: Biology 106, 107, and one quarter of laboratory chemistry which may be taken concurrently.
321. ECONOMIC BIOLOGY I (4) I. Ecological aspects of control of invertebrate animals, the chemistry and action of insecticides and herbicides, equipment and methods of the pest control industry, and roles of various governmental agencies. Three 2-hour periods per week. Prerequisite: 15 hours of biology. Mr. Jackson.
322. ECONOMIC BIOLOGY II (4) II. Ecological aspects of control of vertebrate animals; the chemistry and action of rodenticides; rodent, predator, and bird controls; zoonoses, public health sanitation, and sanitary biology; and roles of various governmental agencies. Three 2-hour periods per week. Prerequisite: 15 hours of biology. Mr. Jackson.
331. HUMAN ANATOMY AND PHYSIOLOGY (5) I. Basic anatomy and physiology of skeletal, muscular, circulatory, and respiratory systems. Three 1-hour lectures, two 2-hour laboratories. Prerequisite: Biology 104.
332. HUMAN ANATOMY AND PHYSIOLOGY (5) II. Basic anatomy and physiology of digestive, excretory, endocrine, reproductive, and nervous systems. Three lectures, two 2-hour laboratories. Prerequisite: Biology 104.
351. ORGANIC EVOLUTION (3) II. Evidences of evolution and a discussion of such factors as mutation, hybridization, natural selection, influence of environment, and the inheritance of acquired characteristics. Prerequisite: 100-level biology sequence. Biology 251 is desirable.
401. INTRODUCTION TO BIOLOGICAL RESEARCH (3-6) I, II, III. For an advanced student who has shown proficiency and a marked degree of independence in his work. Individual registration. Prerequisite: six quarters of biology, consent of instructor. May be repeated once, but only a total of 6 hours may be applied toward major in biology.
405. GENERAL PARASITOLOGY (5) I. Morphologic, taxonomic, economic, and other biologic aspects of parasites. Two lectures and two 3-hour laboratories. Prerequisite: 100-level biology sequence and consent of instructor. Mr. Rabalais.

406. ARTHROPOD VECTORS AND PARASITES (5) III. The biology and identification of disease-carrying, toxic, and parasitic arthropods. Three lectures, two 2-hour laboratories or equivalent in field trips. Prerequisite: biology core requirements. Mr. Graves.
408. ANIMAL PHYSIOLOGY (5) I. A comparative study of selected organ system functions of animals. Three lectures, two 3-hour laboratories. Prerequisite: Biology 208 and organic chemistry or consent of instructor. Biochemistry is recommended. Mr. Martin.
409. INVERTEBRATE ZOOLOGY I (5) I. Classification, biology, and physiology of the lower invertebrates. Prerequisite: 100-level biology sequence or oceanography and consent of instructor. Mr. Schurr.
410. INVERTEBRATE ZOOLOGY II (5) II. Classification, biology, and physiology of the invertebrates through the lower chordates. Prerequisite: 100-level biology sequence or oceanography and consent of instructor. Mr. Schurr.
412. FIELD EXPERIENCE (9) IV. A detailed study of biotic communities involving identification of plants and animals, mapping, instrumentation, and preparation of reports. Individual problems can be arranged for an advanced student to a maximum of 9 hours. Prerequisite: Biology 213, consent of instructor. Mr. Acker.
413. BACTERIOLOGY (5) I, II, III. Methods of isolation, culture, staining, identification, and classification. Attention is given to physiological and nutritional aspects. Three lectures, two 3-hour laboratories. Prerequisite: one year of chemistry, 100-level biology sequence. Miss Harmon.
414. INTRODUCTION TO PLANT TAXONOMY (5) III. A laboratory, field, and discussion course in plant identification with emphasis on taxonomic principles, use of keys and manuals, and field recognition. Prerequisite: 100-level biology sequence. Four 2-hour lecture-laboratory periods and several Saturday field trips. Mr. Easterly, Mr. Fisher.
415. PLANT ANATOMY (5) I. Development and mature structure of the principle tissues of vascular plants and the basic patterns and modifications of root, stem, leaf, and flower. Three lectures and two 2-hour laboratories. Prerequisite: Biology 106. Mr. Romans.
416. MORPHOLOGY OF VASCULAR PLANTS (5) II. The comparative structure and evolutionary trends in vascular plants. Three lectures and two 2-hour laboratories. Prerequisite: Biology 106 and 415 or approval of instructor. Mr. Romans.
417. PLANT PHYSIOLOGY I (5) I. Physiology of higher plants with emphasis on water relations, respiration, and basic enzymology. Three lectures and two 2-hour laboratories. Prerequisite: 15 hours of biology and one year of laboratory chemistry. Mr. Burley.
418. PLANT PHYSIOLOGY II (5) II. Physiology of higher plants with emphasis on photosynthesis, photoperiodism, growth, and mineral nutrition. Three lectures and two 2-hour laboratories. Prerequisite: 15 hours of biology and one year of laboratory chemistry. Mr. Burley.
419. ANIMAL HISTOLOGY (5) III. Microscopic anatomy of vertebrates, origin of tissues and organs, and relation of structure to function. Three recitations, two 3-hour laboratories. Prerequisite: six quarters of biology. Mr. Hamre.
421. MICROBIOLOGY (5) III. Microbial life with experience in methods of laboratory study, enrichment techniques, and identification. Three lectures, two 2-hour laboratories. Prerequisite: Biology 413 and organic chemistry or consent of instructor. Mr. Brent.
422. TERRESTRIAL ECOLOGY (5) III. Plants and animals in relation to terrestrial environment. Two 4-hour lecture-laboratory periods and one discussion period. Two weekend and one or more Saturday field trips required. Prerequisite: 15 hours of biology and Biology 213. Mr. Hamilton, Mr. Vessey.
423. TAXONOMY OF VASCULAR PLANTS (5) I. Classification of vascular plants with emphasis on nomenclature, systems of classification, family relationships, and evolution and distribution patterns. Four 2-hour lecture-laboratory periods and several Saturday field trips. Prerequisite: Biology 414. Mr. Easterly, Mr. Fisher.
424. ALGOLOGY (5) III. Taxonomy, ecology, and morphology of the algae with primary emphasis on the fresh water algae. Two 1-hour lectures and two 3-hour laboratories. Prerequisite: 15 hours in biology. Mr. Lowe.
425. LIMNOLOGY (5) I. Freshwater biology; detection, measurement, and analysis of environmental factors. Three lectures, two 3-hour laboratories. Prerequisite: 15 hours of biology. Mr. Acker.
426. PATHOGENIC MICROBIOLOGY (5) II. Microorganisms causing common diseases of vertebrates. Three lectures, two 2-hour laboratories. Prerequisite: Biology 413. Mr. Hann.
430. ZOOGEOGRAPHY (4) II. Fauna of the biosphere with emphasis on the relationship of the animal to its environment and the features which limit or augment distribution. Prerequisite: 15 hours of biology. Miss Whitwer.
431. MORPHOGENESIS OF VERTEBRATES I (5) I. Ancestry of the vertebrates and developmental preliminaries with a descriptive, comparative, and theoretical consideration of embryogeny. Three lectures, two 3-hour laboratories. Prerequisite: 100-level biology sequence.
432. MORPHOGENESIS OF VERTEBRATES II (5) II. Organogenesis and histogenesis of vertebrates. Comparative study of the evolutionary significance of structural and developmental changes and the relationships among the integument, skeleton, muscular, and circulatory systems. Three lectures, two 3-hour laboratories. Prerequisite: 100-level biology sequence. Biology 431 is highly recommended.
433. MORPHOGENESIS OF VERTEBRATES III (5) III. Organogenesis and histogenesis of vertebrates. Comparative study of evolutionary significance of

structural and developmental changes and relationships of the digestive, respiratory, nervous, excretory, reproductive, and endocrine systems. Three 1-hour lectures, two 3-hour laboratories. Prerequisite: 100-level biology sequence. Biology 431, 432 are highly recommended. Mr. Hallberg.

435. ENTOMOLOGY (5) I. Morphology, taxonomy, and physiology of insects. Three lectures, two 3-hour laboratories or equivalent in field trips. Prerequisite: 100-level biology sequence. Mr. Graves.

436. CYTOLOGY (5) I. Cells, tissues, and subcellular elements of organisms. Structure, biochemistry, and function are correlated. Three lectures, two 3-hour laboratories. Prerequisite: 15 hours of biology. Mr. Baxter, Mr. Crang.

439. IMMUNOBIOLOGY (5) II. Biological aspects of the establishment of the immune state in animals. Laboratory work on detection and quantitation of antigens and antibodies. Three lectures, two 3-hour laboratories. Prerequisite: six quarters of biology. Organic chemistry and biochemistry are desirable. Mr. Baxter.

443. MICROBIAL PHYSIOLOGY (5) I. Discussion of the chemical composition and metabolic activities of microorganisms and the function of these activities in the life of the organism. Three 1-hour lectures and two 3-hour laboratories. Prerequisite: Biology 413 and Chemistry 307 or consent of instructor. Mr. Horvath.

472. ICHTHYOLOGY (4) III. Survey of the main groups of fish and the classification, life history, and ecology of local species. Three lectures, one 2-hour and one 3-hour laboratory or equivalent field work, a weekend field trip in late spring. Prerequisite: sophomore core requirements in biology. Mr. Acker.

473. MAMMALOLOGY (5) I. Emphasis on identification, habits, distribution, and behavior. Two lectures and two 3-hour laboratories or equivalent field work. Prerequisite: sophomore core requirements in biology. Mr. Vessey.

474. MARINE BIOLOGY I (4) II. Biological and oceanographic analysis of the ocean environment with emphasis on marine ecology, marine populations, laboratory techniques and a trip to a marine field station. One 2-hour discussion period and six hours of laboratory arranged. Prerequisite: one year of chemistry, invertebrate zoology, consent of instructor, and pre-registration discussion. Mrs. Groat.

476. HERPETOLOGY (4) III (alternate years). Amphibians and reptiles, emphasizing identification, habits, distribution, and behavior. Two lectures, one 2-hour and one 3-hour laboratory or equivalent field work, an all-day and/or weekend field trip in spring. Prerequisite: sophomore core requirements in biology.

477. ORNITHOLOGY (5) III. Structure, physiology, life history, habits, and identifications of birds. Three lectures, one 2-hour and one 3-hour laboratory or equivalent field work, an

all-day or weekend field trip in spring. Prerequisite: sophomore core requirements in biology. Mr. Martin.

490. SEMINAR (2) I, II, III. Review of literature to acquaint the student with research techniques and important work being done in the various fields of biology. May be repeated, but only a total of 4 hours may be applied toward a biology major. Prerequisite: 15 hours of biology.

BUSINESS ADMINISTRATION

GENERAL COURSES IN BUSINESS ADMINISTRATION**

102. INTRODUCTION TO BUSINESS (4) I, II, III. A background for American business — the market, competition and change, the nature and central role of management, our business environment. Open only to a freshman or sophomore. Mrs. Hodge.

303. BUSINESS COMMUNICATION (4) I, II, III. Effective communication of business information with emphasis on the psychological principles involved in securing action.

403. GOVERNMENT AND BUSINESS (4) I, II, III. Relations of all echelons of government to the businessman, showing major instances where government controls, regulates, or otherwise exercises influence on the actions of the businessman. Mr. Decker, Mr. Wilson.

404. BUSINESS CONDITIONS (4) I, II. Business fluctuations covering statistical measurement, components of gross national product, methods of forecasting, theories of fluctuations, and problems of stabilization. Prerequisite: Economics 202, Statistics 212. Mr. Herbst.

405. BUSINESS POLICY AND STRATEGY (4) I, II, III. Development, implementation, and reappraisal of business policy and strategy; resource allocation by means of administrative policies. Cases and business simulation games. Prerequisites: senior standing and prior completion of business core courses, or consent of instructor.

409. BUSINESS INTERNSHIP (1-4) I, III. Not open to the student with credit for other 409 courses in the College of Business Administration. Program must be approved in advance by Director, College Internship Program. Work experience must be completed within the last year prior to graduation. Credit is determined by the quality and extent of the work experience.

491. STUDIES IN BUSINESS ADMINISTRATION (1-4). Offered on demand. Study in depth of selected areas. Offered to an individual student on a lecture basis or in the form of a seminar depending on student needs and nature of material. May be repeated to 8 hours.

495. READING FOR HONORS IN BUSINESS ADMINISTRATION (1-4) I, II, III. For the

** See also Business Education, Business Law, Economics, Finance and Insurance, Management, Marketing, Quantitative Analysis and Control.

student who wishes to pursue, under supervision, an independent program of reading and study. Prerequisite: 3.0 accumulative point average, consent of Department.

COURSES IN INTERNATIONAL BUSINESS

390. INTRODUCTION TO MULTINATIONAL BUSINESS (4) I. The environment encountered by U.S. enterprises engaged in business abroad; business practices and policies for foreign operations; consideration of international organizations. Prerequisite: Economics 351 or consent of instructor. Mr. Hoskins.
440. MANAGEMENT OF INTERNATIONAL OPERATIONS (3) II. An analysis of accounting, finance, marketing, management and operational policies, practices and strategies appropriate for foreign operations. Selected case studies for specific problems. Prerequisite: Business Administration 390.
450. CURRENT ISSUES IN INTERNATIONAL BUSINESS (3) III. An in-depth analysis of specific problems confronting international business firms. Case studies and individual research on current problems for class presentation and discussion. Prerequisite: Business Administration 440.
477. SUMMER SEMINAR ON BUSINESS ABROAD (8) IV. A four-week study-travel program for the student seeking first-hand knowledge of the nature of and the problems encountered by American business firms operating in various business climates abroad. Senior status required. Mr. Davidson.
492. STUDIES IN INTERNATIONAL BUSINESS ADMINISTRATION (1-4). Offered on demand. Independent study on subject matter related to international business not otherwise offered in the curriculum. Reading, report, and research assignments to permit analysis of subject selected. May be repeated to 8 hours.

BUSINESS EDUCATION

Professors Guthrie (Chairman), Rusher, Stutsman; Associate Professors Bright, Goddard; Assistant Professors Hamed, Montgomery, Schenk; Instructors Brazik, Green, Karnes, Pasut.

101. BUSINESS MATHEMATICS (4) I, II, III. Mathematics of finance, merchandising, business ownership, taxation, and consumer problems. Mr. Guthrie, Mr. Schenk.

111.*† BEGINNING TYPEWRITING (3) I, II, III. Principles of touch typewriting for personal and business use. Four class periods.

*†The student with two semesters of high school typewriting and/or shorthand should register for Business Education 112 and/or 214. The student with four semesters of high school typewriting and/or shorthand should enroll in Business Education 210 and/or 215. Those who choose to enroll in lower level classes will not receive credit toward graduation for such classes.

112. INTERMEDIATE TYPEWRITING (3) I, II, III. Development of skill through improvement of technique and special problems. Four class periods. Prerequisite: one year of high school typewriting or Business Education 111.

210. ADVANCED TYPEWRITING (3) II, III. Typewriting problems and projects with emphasis on office production standards. Four class periods. Prerequisite: two years of high school typewriting or Business Education 112.

211. OFFICE REPRODUCTION PROCESSES (3) I, II, III. Uses, limitations, costs of modern office reproduction equipment and processes including development of skill in their use. Prerequisite: Business Education 112 or equivalent.

213.*† BEGINNING SHORTHAND THEORY (3) I. Principles of Gregg Diamond Jubilee shorthand.

214. INTERMEDIATE SHORTHAND THEORY (3) II. A continuation of the principles of Gregg shorthand with an introduction to transcription. Prerequisite: one year of high school shorthand or Business Education 213.

215. ADVANCED SHORTHAND THEORY (3) III. Development of speed in recording dictation and transcribing. Prerequisite: two years of high school shorthand or Business Education 214.

220. DATA PROCESSING I (3) I, II, III. Introduction to machine processing of data using various kinds of small calculators—rotary, printing, and electronic. Three class periods plus assigned laboratories. Mr. Montgomery.

230. RECORDS MANAGEMENT (3) I. Principles of paperwork control of an organization from the creation of records to their final storage or destruction. Mr. Stutsman.

240. BUSINESS PROBLEMS OF THE CONSUMER (4) I, II, III. Relationship of business practices to consumer activities. Ways of improving standard of living of individuals and groups through developing competencies in buying, using goods and services, money management. Mr. Guthrie.

311. DICTATION AND TRANSCRIPTION (3) I. Dictation at high speed rates with emphasis on rapid and accurate transcription. Prerequisite: Business Education 112, 215 or equivalent.

312. ADVANCED DICTATION AND TRANSCRIPTION (3) II. Development of a technical vocabulary, short cuts to speed dictation, and office-style dictation. Prerequisite: Business Education 311.

313. SPECIALIZED DICTATION AND TRANSCRIPTION (3) III. Development of shorthand and transcription competency in working with specialized areas — medical, legal, scientific, international business. Prerequisite: Business Education 312. Miss Rusher.

*†The student with two semesters of high school typewriting and/or shorthand should register for Business Education 112 and/or 214. The student with four semesters of high school typewriting and/or shorthand should enroll in Business Education 210 and/or 215. Those who choose to enroll in lower level classes will not receive credit toward graduation for such classes.

314. INTERNSHIP IN BUSINESS EDUCATION (1-3) I, II, III. Supervised experience in local offices or businesses. Forty clock hours of work required for each hour of college credit. May be repeated to 3 hours. No more than 1 hour of credit may be received in any one office or business firm.

321. DATA PROCESSING II (3) I, III. Introduction to punch card and other input-output media in automated data processing. Practice in using unit record equipment. Introduction to computers and computer languages. Three class periods plus assigned laboratories. Mr. Hamed.

322. DATA PROCESSING III (3) II. Principles of electronic data processing and programming. Use of the computer to process business and educational data. Three class periods plus assigned projects. Mr. Hamed.

335. OFFICE SYSTEMS AND PROCEDURES (3) II. Analysis of information flow through an organization and its implementation through a series of interactive systems and procedures. Mr. Stutsman.

352. BASIC BUSINESS IN SECONDARY SCHOOLS (3) I, III. Principles, objectives, instructional and resource materials, and methods in the basic business subjects. Mr. Stutsman, Mr. Schenk.

354. BOOKKEEPING AND DATA PROCESSING IN SECONDARY SCHOOLS (3) I, II. Principles, objectives, curriculum, testing, instructional and resource materials, and methods of teaching bookkeeping and data processing. Mr. Hamed.

356. SHORTHAND AND SECRETARIAL PRACTICE IN SECONDARY SCHOOLS (2) II, III. Principles and methods of teaching shorthand, transcription, and secretarial practice. Miss Rusher.

358. TYPEWRITING AND CLERICAL PRACTICE IN SECONDARY SCHOOLS (2) II, III. Principles and methods of teaching typewriting and clerical practice. Mr. Guthrie.

364. DISTRIBUTIVE EDUCATION IN SECONDARY SCHOOLS (4) I, III. Methods of teaching vocational and related subject matter in distributive education.

401. SECRETARIAL ADMINISTRATION (5) I, II. An intensive study of the procedures, skills, and knowledges which are the basis for administrative-level positions. Prerequisite: Business Education 210, 311. Miss Rusher.

441. CONSUMER ECONOMICS IN THE SCHOOLS (4) II. Investigation of the need for consumer economics. The organization and integration of consumer economics in school programs. Consideration of the necessary background in consumer and business information. Mr. Guthrie.

455. OFFICE MANAGEMENT (3) III. Application of management principles to the service areas of an office; supervision of office work and office workers. Mr. Stutsman.

461. DEVELOPMENT OF INSTRUCTIONAL MATERIALS IN DISTRIBUTIVE EDUCATION (4) II. The study and application of methods for developing teaching materials in distributive education. Mr. Green.

462. COORDINATION IN COOPERATIVE VOCATIONAL EDUCATION (4) I, III. Coordination in high school, post-high school, and adult training programs for vocational business and distributive education. Mr. Bright, Mr. Green.

463. COMMUNITY PLANNING IN ADULT VOCATIONAL EDUCATION (4) III. Identification of adult needs, procedures for organizing and promoting adult programs, selecting and training adult leaders, and financing adult programs. Mr. Bright.

465. DEVELOPMENT AND ADMINISTRATION OF VOCATIONAL EDUCATION (4) I, II. Vocational education as sponsored by federal, state, and local legislation. Mr. Bright.

466. INTENSIVE VOCATIONAL BUSINESS AND OFFICE EDUCATION (4) I, II. Principles of program construction, organization, improvement, implementation, evaluation, and development of program guides. Mr. Bright.

467. WORKSHOP IN BUSINESS AND DISTRIBUTIVE EDUCATION (2-4) IV. Areas covered are of current interest to teachers in business and distributive education. Possible areas include youth with special needs, cooperative education, vocational education for adults, intensive programs, post-secondary programs, and technical programs.

491. STUDIES IN BUSINESS AND DISTRIBUTIVE EDUCATION (2-5) I, II, III. Offered on an individual, seminar, or lecture basis. Treatment of selected areas in depth depending on student needs and the nature of the material. Prerequisite: consent of instructor.

BUSINESS LAW

Associate Professor Riegle (Chairman); Professor Decker; Associate Professor M. Wilson; Assistant Professor Simmons.

301. GENERAL BUSINESS LAW (4) I, II, III. Historical, political, economic background to the study of business law. Origin, development, fundamentals of contracts. Economic role of contracts in facilitating goods and services. Prerequisite: Economics 202. Staff.

302. GENERAL BUSINESS LAW (4) II. Business Law 301 continued—law of sales, common carrier, business association, real property. Prerequisite: Business Law 301. Mr. Wilson.

310. LAW AND THE CITIZEN (4). Offered on demand. A course dealing with the history of the legal process and the development of the American legal system as a cause of social change; current trends in the fields of criminal, constitutional, and consumer laws as these areas of the law affect our citizens today. Prerequisite: junior standing or consent of instructor. Mr. Simmons.

413. TRUSTS AND ESTATES (4) I. Execution, administration, revocation of wills and trusts; guardianships; life insurance estates; insurance law as it relates to estates, their protection, and liability. Analysis of role of wills and trusts in distribution of wealth. Prerequisite: Business Law 301. Mr. Riegle.

414. PERSONAL AND PROPERTY RIGHTS (4) I. The history and the development of modern concepts in areas of personality, privacy, product and service liabilities including legal problems in advertising, responsibility to the work force and ecology.

415. REALTY LAW (4) III. Creation, acquisition, transfer of realty; deeds and mortgages as security devices and their economic implications; landlord-tenant relations and the economic role of leasehold interests. Prerequisite: Business Law 301. Mr. Riegle.

417. LAW OF BUSINESS ASSOCIATIONS (4) III. Establishing the relation of agency, partnership, and corporation and the legal incident thereto; fundamentals of the Uniform Partnership Act, the Model Corporation Act; economic implications as business entities. Prerequisite: Business Law 301. Mr. Riegle.

419. LABOR LAW (4) I. Federal and state legislation and court-administrative decisions pertinent to labor relations; concepts of collective bargaining; case studies of approaches used by labor and management to solve problems in the context of private determination. Prerequisite: Business Law 301. Mr. Wilson.

420. SECURED TRANSACTIONS (4) I, II, III. The legal environment created by the Uniform Commercial Code in transactions involving personal property sales, marketing, advertising, and Negotiable Instruments and their economic role in facilitating goods and services. Prerequisite: Business Law 301. Dr. Riegle, Dr. Decker.

491. STUDIES IN BUSINESS LAW (1-4). I, II, III Study in depth of selected areas. Offered to individual student on a lecture basis or in the form of a seminar depending on student needs and the nature of the material. May be repeated to 8 hours.

495. READINGS FOR HONORS IN BUSINESS LAW (1-4) I, II, III. For the student in business administration who wishes to pursue, under supervision, an independent program of reading and study. Prerequisite: 3.0 accumulative point average, consent of the Department.

*CHEMISTRY

Professors W. Hall (Chairman). Anders, Boggs, Den Besten, Hammer, J. Weber; Associate Professors Brecher, Hurst, Kinstle, Meyer, Rendina; Assistant Professors Blinn, Clemans, Endres, Newman; Instructors Crumm, Turnberg; Part-Time Instructor Britt; Storeroom Manager and Electronics Technician Synnamon; Assistant Storeroom Manager R. C. Smith.

The Department of Chemistry is accredited by the American Chemical Society.

NOTE—In several areas the Chemistry Department offers courses at more than one level. A student who takes two courses in any one of the following groups may not receive credit for both: Chemistry 100, 111, 121, 131; Chemistry 112, 122, 132; Chemistry 123, 133; Chemistry 307, 445; Chemistry 306, 343;

Chemistry 321, 350, 450; Chemistry 352, 431. Students are invited to secure more detailed descriptions of these courses from the Department.

100. INTRODUCTION TO CHEMISTRY (4) I, II, III. A non-laboratory course; not open to a major or minor in chemistry.

111. ELEMENTARY CHEMISTRY (4) I, II. Three lectures and one 3-hour laboratory. Not accepted toward a chemistry major or minor unless followed by Chemistry 122. Prerequisite: two years of high school science and/or mathematics.

112. ELEMENTARY CHEMISTRY (4) II, III. Chemistry 111 continued. Three lectures, one 3-hour laboratory. Prerequisite: Chemistry 111 or 121.

121. GENERAL CHEMISTRY (5) I, II, III. Two lectures, one recitation, four hours of laboratory. Prerequisite: demonstration of proficiency equivalent to one year of high school algebra.

122. GENERAL CHEMISTRY (5) I, II, III. Chemistry 121 continued. Two lectures, one recitation, four hours of laboratory. Prerequisite: Chemistry 121; Chemistry 111 with consent of instructor.

123. GENERAL CHEMISTRY (5) I, II, III. Chemistry 122 continued. Approximately one-half quarter is devoted to qualitative analysis. Two lectures, one recitation, four hours of laboratory. Prerequisite: Chemistry 122.

131. GENERAL CHEMISTRY (5) I. For the student with strong background in chemistry and mathematics. Three lectures, four hours of laboratory. Prerequisite: high school chemistry, consent of instructor. Prerequisite or parallel: Mathematics 130. Mr. Den Besten.

132. GENERAL CHEMISTRY (5) II. Chemistry 131 continued with emphasis on quantitative procedures in the laboratory. Three lectures, four hours of laboratory. Mr. Den Besten.

133. GENERAL CHEMISTRY (5) III. Chemistry 132 continued. Three lectures, six hours of laboratory. Mr. Den Besten.

201. QUANTITATIVE ANALYSIS (5) I, II, III. Gravimetric and volumetric analysis. Three lectures, six hours of laboratory. Prerequisite: Chemistry 123. Mr. Anders, Mr. Crumm, Mr. Hammer.

306. ORGANIC CHEMISTRY (5) I, III. Survey of organic chemistry; not open to a chemistry major for credit but open to any other qualified student without regard to class rank. Four lectures and three hours of laboratory. Prerequisite: Chemistry 123, 133, or 112.

307. BIOCHEMISTRY (5) I, III. An introduction to the structure, function, metabolism, and interrelationships of carbohydrates, lipids, proteins and nucleic acids in animals, plants, and bacteria. Four lectures and one 3-hour laboratory a week. Prerequisite: Chemistry 306 or equivalent. Biology 104 is recommended. Dr. Brecher.

310. CHEMICAL INFORMATION (3) III. Communication and retrieval of scientific information and the planning of an original laboratory investigation. Prerequisite: 20 hours of chemistry. Reading knowledge of German is desirable. Mr. Hall.

313. SPECIAL TOPICS IN CHEMISTRY (1-2) I, II, III. A rigorous study of a specific topic in chemistry of current interest. To be offered on demand and the offering to be initiated by either students or faculty. May be repeated for a total of four credit hours. Staff.
321. SURVEY OF INSTRUMENTAL ANALYSIS (4) III. Elementary instrumental methods of analysis. Two lectures and six hours of laboratory. A student may not receive credit for this course and Chemistry 350 or 450, 451. Prerequisite: Chemistry 201, a year of general physics. Mr. Anders, Mr. Crumm.
343. ORGANIC CHEMISTRY (4) I, II. Fundamental principles and practice of organic chemistry. Three lectures and one 3-hour laboratory. Prerequisite: Chemistry 201. Mr. Boggs, Mr. Clemans, Mr. Weber.
344. ORGANIC CHEMISTRY (4) II, III. Chemistry 343 continued. Three lectures and one 3-hour laboratory. Prerequisite: Chemistry 343. Mr. Boggs, Mr. Clemans, Mr. Weber.
345. ORGANIC CHEMISTRY (4) I, III. Chemistry 344 continued. Three lectures and one 3-hour laboratory. Prerequisite: Chemistry 344. Mr. Boggs, Mr. Clemans, Mr. Weber.
346. ADVANCED ORGANIC CHEMISTRY LABORATORY (3) I, III. Laboratory principles and practice. Nine hours of laboratory. Prerequisite: Chemistry 345. Mr. Boggs.
350. INTERMEDIATE ANALYSIS (3) II. Chemistry 201 continued including elementary electrochemical methods. Two lectures and one 4-hour laboratory. Prerequisite: Chemistry 201. Concurrent: Chemistry 435.
352. PHYSICAL CHEMISTRY (5) I. Physical chemistry for the student whose program does not require the full-year course. Four lectures and one 3-hour laboratory. Prerequisite: Chemistry 201, Mathematics 130. Mathematics 131 is recommended. Prerequisite or parallel: Physics 213 or equivalent. Mr. Meyer.
413. SPECIAL PROBLEMS (1-3) I, II, III. Introduction to chemical research; library and laboratory work. Three to nine hours of laboratory and one half-hour conference each week. Oral and written reports are required. Prerequisite: consent of Department; 30 hours of chemistry, including Chemistry 310; Mathematics 131; Physics 223 or 213. Registration may be repeated but no more than 9 hours total credit may be applied toward a degree.
430. QUALITATIVE ORGANIC ANALYSIS (4) II. Systematic procedures for separation and identification of organic compounds. One lecture and nine hours of laboratory. Prerequisite: Chemistry 345. Mr. Boggs.
431. PHYSICAL CHEMISTRY (3) I, II. Gases and thermodynamics. Three recitations a week. Prerequisite: Chemistry 201, Mathematics 232, Physics 213 or 233.
432. PHYSICAL CHEMISTRY LABORATORY (2) I, II. To accompany Chemistry 431. One or two 3-hour laboratories. Includes lectures on dimensional analysis, theory of measurement, glass working, instrumentation. Prerequisite or parallel: Chemistry 431. Mr. Hall.
433. PHYSICAL CHEMISTRY (3) II, III. Chemistry 431 continued. Introduction to electrochemistry, kinetics, quantum phenomena. Three recitations a week. Prerequisite: Chemistry 431.
434. PHYSICAL CHEMISTRY LABORATORY (1 or 2) II, III. To accompany Chemistry 433. One or two 3-hour laboratories. Includes lectures on selected experimental methods used in research and industry. Prerequisite: Chemistry 432. Mr. Hall.
435. PHYSICAL CHEMISTRY (3) I, III. 433 continued. Quantum chemistry, atomic and molecular structure. Three recitations a week. Prerequisite: Chemistry 433.
436. ADVANCED PHYSICAL CHEMISTRY LABORATORY (1 or 2) I, III. One or two 3-hour laboratories with emphasis on independent investigation of newer techniques. Prerequisite: Chemistry 434.
440. THEORETICAL ORGANIC CHEMISTRY (4) III. Synthesis of complex compounds, reaction mechanisms, stereochemistry. Four lectures a week. Prerequisite: Chemistry 345. Prerequisite or parallel: Chemistry 435.
445. GENERAL BIOCHEMISTRY (3) II. The chemistry, structure, and physical properties of biopolymers: The proteins, enzymes, nucleic acids, polysaccharides, lipids as macromolecular aggregates of cell membranes and organelles; (See Chemistry 446 and 447). Three lectures a week. Prerequisite: Chemistry 345 and 352 or 431-432 concurrently or permission of the instructor. Biology 104 is recommended. Dr. Rendina.
446. BIOCHEMISTRY LABORATORY (2) II. Quantitative biochemical analysis, spectrophotometry and pH measurement; techniques of paper and gel electrophoresis, and of paper, column, and thin-layer chromatography. The physical and chemical properties of amino acids, proteins, enzymes, lipids, carbohydrates, and nucleic acids. (See Chemistry 448). Two 3-hour laboratories a week. Prerequisite or concurrent: Chemistry 445. Dr. Rendina.
447. GENERAL BIOCHEMISTRY (3) III. A continuation of Chemistry 445. Enzyme kinetics and mechanisms; thermodynamics and cell energetics; metabolic degradation of carbohydrates, lipids, proteins, and nucleic acids; oxidation-reduction reactions; the biosynthesis of biopolymers and macromolecules; regulation in intermediary metabolism. Three lectures a week. Prerequisite: Chemistry 445 or permission of instructor. Dr. Rendina.
448. BIOCHEMISTRY LABORATORY (2) III. Continuation of Chemistry 446. To accompany Chemistry 447. Experiments in enzyme kinetics and in the metabolism of carbohydrates, lipids, and proteins; oxidation-reduction reactions and oxidative-phosphorylation; experiments in biosynthesis using isotopes, chromatography, and ultracentrifugation. Two 3-hour laboratories a week. Prerequisite: Chemistry 446. Dr. Rendina.

450. THEORY AND PRACTICE OF ANALYSIS (5) I. Fundamental principles of chemistry as applied to analysis. Emphasis on electrometric instrumental methods. For a student who completes Chemistry 133. Three lectures and six hours of laboratory. Prerequisite or parallel: Chemistry 435, 436. Advanced laboratory experience in physics is recommended. Mr. Anders.

451. INSTRUMENTAL METHODS OF ANALYSIS (4) II, III. Emphasis on optical, chromatographic, and thermal methods. Two lectures and six hours of laboratory. Prerequisite: Chemistry 350 or 450. Mr. Anders.

460. ADVANCED INORGANIC CHEMISTRY (3) II. The theoretical basis of inorganic chemistry: atomic structure, crystal chemistry, molecular structure, and chemical bonding; ligand field theory; aqueous and non-aqueous solutions. Three lectures. Prerequisite: Chemistry 435.

461. ADVANCED INORGANIC CHEMISTRY (3) III. The chemistry of the metals and non-metals, coordination compounds, inorganic reaction mechanisms. Three lectures. Prerequisite: Chemistry 460.

*COMPUTER SCIENCE

Associate Professor Fulton (Chairman); Professor Krabill; Assistant Professor Miller; Instructor Stepenske; Lecturers Cheng, Conrad, Eckel.

101. INTRODUCTION TO COMPUTING (4) I, II, III, IV. Basic programming; algorithms; program structure; data representation; analysis of numerous numerical and non-numerical problems and their solution using FORTRAN IV or CPS. Three lectures and two hours of laboratory. Prerequisite: high school algebra.

202. COMPUTERS AND PROGRAMMING (4) I, II. Computer structure; machine language; computer systems organization; symbolic coding and assembly systems; systems and utility programs. Three lectures and two hours of laboratory. Prerequisite: Computer Science 101.

203. INTRODUCTION TO DISCRETE STRUCTURES (4) II, III. Topics from basic set algebra, algebraic structures, Boolean algebra, and graph theory with applications of the concepts in computer science. Prerequisite: Mathematics 131, 231; Computer Science 101.

304. NUMERICAL CALCULUS (4) III. Basic numerical algorithms for computer use; polynomial interpolation; quadrature; solution of nonlinear equations and linear systems. Three lectures and two hours of laboratory. Not open to a student with credit for Mathematics 335. Prerequisite: Computer Science 101, Mathematics 332.

305. DATA STRUCTURES (4) I. Topics from basic concepts of data, linear lists and strings, arrays and orthogonal lists, tree structures, storage systems and structures, storage allocation and collection, searching, sorting, generalized data management systems. Prerequisite: Computer Science 202.

306. PROGRAMMING LANGUAGES (4) II. Survey of significant features of existing programming languages; structure of simple statements; structure of algorithmic languages; list processing and string manipulation languages. Prerequisite: Computer Science 202.

307. COMPUTER ORGANIZATION (4) I. Logic design and components of digital computing systems; computer system organization; description and simulation techniques. Three lectures and two hours of laboratory. Prerequisite: Computer Science 202.

408. SYSTEMS PROGRAMMING (4) III. Software organization of computer systems which support a wide variety of users; design of general computer systems; problems which arise in multiaccessing, multiprogramming, and multiprocessing. Prerequisite: Computer Science 306.

409. COMPILER CONSTRUCTION (4) I. Analysis of source language and the generation of efficient object code; design and implementation of compilers; local and global optimization. Prerequisite: Computer Science 305, 306.

410. SWITCHING THEORY (4) II. Theoretical foundations and mathematical techniques concerned with the design of logical circuits; switching algebra and its relation to Boolean algebra and propositional logic. Three lectures and two hours of laboratory. Prerequisite: Computer Science 307.

411. SEQUENTIAL MACHINES (4) III. Structural aspects of sequential machines; behavioral aspects of sequential machines; the variants of finite automata. Prerequisite: Computer Science 410.

451. NUMERICAL ANALYSIS (4) II, IV. Zeros of polynomials and transcendental functions; numerical differentiation and integration; solution of linear systems by direct and by iterative methods. Prerequisite: Computer Science 101, Mathematics 333. Not open to a student with credit for Mathematics 451.

452. NUMERICAL ANALYSIS (4) III. Matrix inversion; computation of eigenvalues and eigenvectors of matrices; interpolation; least squares approximation; numerical solution of ordinary and partial differential equations. Prerequisite: Computer Science 101, Mathematics 337. Not open to a student with credit for Mathematics 452.

485. COMPUTERS AND THE UNIVERSITY (1, 3, or 4) II, III. Use of the computer in the instructional, research, and administrative environments. Optional instruction in a computer programming language. Prerequisite: consent of instructor.

490. PROBLEMS IN COMPUTER APPLICATIONS (4) I, II, III. Readings and independent study of particular interest to an individual student. Prerequisite: consent of instructor.

492. SPECIAL SEMINAR IN COMPUTER APPLICATIONS (4) I, II, III. Special readings and independent study on topics of particular interest to advanced undergraduate and graduate students. Prerequisite: consent of instructor.

*ECONOMICS

Associate Professor Sternitzke (Chairman); Professors Helms, Mabry, Van Scoyoc; Associate Professors Edwards, Fundaburk, Marcis; Assistant Professors Browne, Chittle, Haas, Hall, Krishnan, Navin, Ostas, Reed, Robertson, Zahn.

200. INTRODUCTION TO ECONOMICS (4) I, II, III. Government expenditures and taxation, money and banking, poverty, capitalism and its alternatives, economic impact of large corporations. Not open to the student who is required to complete Economics 201.
201. PRINCIPLES OF ECONOMICS (4) I, II, III. Nature of economics; fundamentals of supply and demand; national income and employment; the banking system; monetary and fiscal policy; economic growth and stabilization. Prerequisite: sophomore standing.
202. PRINCIPLES OF ECONOMICS (4) I, II, III. Economics 201 continued. Theory of price and product market analysis; factor markets and distribution of income; international economics; current economic problems and public policy. Prerequisite: Economics 200 or 201.
301. ELEMENTARY METHODS OF QUANTITATIVE ECONOMICS (4) II. An extension of Principles of Economics in which the mathematical techniques used in studying economic theory are developed. Recommended for the student who intends to pursue graduate study. Prerequisite: Economics 202, Mathematics 124 or 131.
302. INTERMEDIATE MICROECONOMIC THEORY (4) I, III. Theory of demand, of the firm, of production and distribution. Economics of pure competition, monopoly, and imperfect competition. Factor price determination. Prerequisite: Economics 202.
303. INTERMEDIATE MACROECONOMIC THEORY (4) II, III. Concepts and measurement of national income. Analysis of forces determining the level of national income and employment, the price level, and rate of economic growth. Prerequisite: Economics 202.
304. MANAGERIAL ECONOMICS (4) I, II, III. Application of economic theory to decision-making problems of the firm; demand analysis and sales forecasting; cost analysis; pricing practices and policies; capital budgeting. Prerequisite: Economics 202, Statistics 212.
311. MONEY, BANKING, AND PUBLIC POLICY (4) I, II, III. Nature and functions of money and the commercial banking system. Means of monetary regulation and control. Role of money and monetary policy on total economic activity. Prerequisite: Economics 202.
321. LABOR ECONOMICS (4) I, II, III. Economics of employment and utilization of human effort in production of goods and services, labor organizations, collective bargaining, regulation of labor by government, wage determination, unemployment and social security. Prerequisite: Economics 202.
322. LABOR AND PUBLIC POLICY (4) II. Economic effects of government policy towards organized labor. Collective bargaining implications of pertinent federal and state legislation and public policy with respect to wages and hours. Prerequisite: Economics 202.
323. MANPOWER ECONOMICS (4) I. Economic analysis of poverty, labor mobility, automation, discrimination, education and retraining programs, black capitalism, welfare and guaranteed income. Prerequisite: Economics 202.
331. PUBLIC FINANCE (4) I, III. Basic principles of public expenditures, taxation, and public debt. Prerequisite: Economics 202.
332. STATE AND LOCAL GOVERNMENT FINANCE (4) II. Analysis of economic functions of state and local governments. Examines revenue sources, expenditure mixes, debt, and intergovernmental fiscal relations. Prerequisite: Economics 202.
341. TRANSPORTATION ECONOMICS (4) I. Economic aspects of transport industries and the role of transportation in the economy. Analysis of industry costs and pricing policies. Prerequisite: Economics 202.
351. INTERNATIONAL TRADE AND FINANCE (4) 1. Structure and regulation of foreign trade; mechanics of international finance; new elements in the foreign trade of the U.S. Prerequisite: Economics 202.
361. INTRODUCTION TO URBAN AND REGIONAL ECONOMICS (4) I. Survey of economic problems and analysis pertaining to urban centers and regions; location theories; theories of urban and regional development. Prerequisite: Economics 202.
371. ECONOMIC DEVELOPMENT (4) III. Analysis of obstacles to and current efforts for the promotion of economic growth in emerging nations. Prerequisite: Economics 202 or consent of the instructor.
372. COMPARATIVE ECONOMIC SYSTEMS (4) I. Analysis of economic activity in capitalistic, socialistic, and planned economies. Prerequisite: Economics 202 or consent of instructor.
401. MATHEMATICAL ECONOMICS (4) I. Presentation of economic theory in a mathematical context. Primary emphasis is placed on microeconomic and macroeconomic models and their structure and analysis. Constrained optimization. Prerequisite: Economics 301 or two quarters of calculus, Economics 302 or 303.
402. ECONOMETRICS (4) II. Mathematical techniques used in formulating models of economic theory and an introduction to statistical techniques which may be used to measure economic data and to test the validity of theoretical models. Prerequisite: Statistics 212, Economics 301, 401, or consent of instructor.
414. MONETARY AND FISCAL POLICY (4) III. Objectives, means and history of monetary and fiscal control and its effect on total economic activity. Prerequisite: Economics 311.
423. LABOR-MANAGEMENT RELATIONS (4) III. Employer-employee relations with emphasis on the functioning of the collective bargaining process. Attention is given to conciliation,

mediation, and arbitration procedures. Prerequisite: Economics 321 or consent of the instructor.

424. INCOME, WAGES, AND WELFARE: ANALYSIS AND POLICY (4) II. Theories of income and wage determination. Effect of employers and labor organizations and economic effects of the adoption of various income policies. Prerequisite: Economics 202.

442. AIR TRANSPORTATION (4). Offered on demand. Economic basis of the airlines; financing; traffic control; domestic and international regulatory policies. Prerequisite: Economics 202.

443. ECONOMIC PROBLEMS IN TRANSPORTATION (4) II. Critical examination of current problems and problems related to the future development of the transportation system and of public regulatory policies. Prerequisite: Economics 341.

444. DISTRIBUTION MANAGEMENT (4). Offered on demand. Nature and functions of transportation management; regulatory procedures. Prerequisite: Economics 202. Not for Arts and Sciences credit.

445. MOTOR CARRIERS (4). Offered on demand. Evaluation of highway transport; financing of motor carriers and highways; economics of the industry; regulatory policies. Prerequisite: Economics 202.

446. TRANSPORTATION REGULATION AND PUBLIC POLICY (4) III. Offered on demand. Evolution of regulation by the I.C.C., F.P.C., and F.C.C. Implementation of policy through the decisions of the agencies and the federal courts. Prerequisite: Economics 202.

447. ECONOMICS OF REGULATED INDUSTRIES (4) III. Historical development of public regulation of certain industries, methods of regulation and evaluation of public policy towards regulated industries. Prerequisite: Economics 202.

451. INTERNATIONAL ECONOMICS (4) II. Theory of international economics; international trade as a factor in national income; significance of international investment; public policies to promote trade; international economic cooperation. Prerequisite: Economics 351.

452. INTERNATIONAL MONETARY ECONOMICS (4) III. Analysis of alternative international monetary systems with special emphasis on the present system. Prerequisite: Economics 311, 351.

453. THE ECONOMY OF LATIN AMERICA (4) I. Offered in 1971-72 and alternate years. Economic aspects of Latin American development and growth: structure of the economy, applicable models of economic development, economic thought of leading Latin American economists, and current problems and policies. Prerequisite: Economics 351 or consent of the instructor or of the Director of the Latin American Studies Program.

459. URBAN ECONOMICS (4) III. Economic problems of city development; urban-suburban relationships; urban planning and renewal. Prerequisite: Economics 361.

460. REGIONAL ECONOMICS (4) II. Study of regions and regional growth. Significance

of factor movements and technological change for growth and development of sub-national economic areas. Consideration of analytical models and techniques used in such analysis.

Prerequisite: Economics 361.

461. REAL ESTATE FINANCE (4) III. Offered on demand. Market factors affecting residential property values, private sources of funds and role of governmental agencies in residential markets. Prerequisite: Economics 202. Not for Arts and Sciences credit.

471. SOCIAL CONTROL OF ECONOMIC ACTIVITY (4) I. Analysis of how such factors as size, concentration, product differentiation, and price-fixing tactics influence the economy. Evaluation of the public policy designed to control the growth of monopoly power. Prerequisite: Economics 202.

473. HISTORY OF ECONOMIC THOUGHT (4) III. Development of economics and the tools of economic analysis from Adam Smith to J. M. Keynes. Prerequisite: Economics 202.

474. THE SOVIET ECONOMY (4) II. Resources, structure, operation of the Soviet economy today. Emphasis on planned goals of the system, process utilized in attaining them, and system's economic efficiency. Prerequisite: Economics 202.

475. THE ECONOMICS OF PUBLIC EDUCATION (4) III. Designed for teachers and school administrators. Emphasizes the financing of education and the relationship of educational financing to federal monetary and fiscal policies and to state and local government finance.

476. SEMINAR IN CONTEMPORARY ECONOMIC PROBLEMS (4). Offered on demand. Interested students should consult with the chairman of the Department.

491. STUDIES IN ECONOMICS (2-5). Offered on demand. Treatment of selected areas in depth. Offered to an individual student on a lecture basis or in a seminar depending on student needs and the nature of the material. May be repeated to 8 hours.

495. READINGS FOR HONORS IN ECONOMICS (4-9) I, II, III. For a student majoring in economics who has an accumulative point average of 3.0. The course normally culminates in a treatise or comprehensive examination which must receive the approval of the Department. An interested student should first consult the Department chairman. Prerequisite: consent of the Department.

EDUCATION

Professors York (Chairman), Beck, Berry, Brune, Chamberlin, Elsass, Endres, Geer, Harrington, Harris, Jenson, Lee, D. Minifie, Nemeth, L. Ort, V. Ort, Rabin, M. Weber, C. Young; Associate Professors M. Campbell, Crawford, G. Daniels, Foy, Hagman, Hayden, R. Jones, Marso, D. Miller, Moomaw, Phillips, Pigge, R. Rowe, Toscano, Weinberger, F. Williams; Assistant Professors T. Bennett, Blackwell, N. Chambers, Cote, Fyffe, Girona, Heisler, Henderson, Joynt, Lowry, MacGuffie, Martin, McBride, McFee, Mills, E. Minifie, Peters, Pohlman, Reed, Reynolds, Seifert,

R. Smith, Stang; Instructors W. Alexander, Avers, C. Brooks, C. Brown, R. Bryson, Cotrell, Davidson, DeTray, Doellinger, Gertsen, Graziano, Hohman, Huntley, McMillin, Mohnacky, Myles, Schaller, Schnupp, Spaulding, Wills, Yockey.

91. READING IMPROVEMENT (3) I, II, III, IV. Principles underlying efficient reading applied in daily practice; designed to improve skills involved in comprehension, vocabulary, study techniques, and rate of purposeful reading on the college level. Credit earned in this course is recorded on the student's permanent record but is not applied to meeting the total of 183 hours of credit required for graduation. Laboratory fee of \$25.

302. EDUCATIONAL PSYCHOLOGY (4) I, II, III, IV. Concepts and factors affecting the application of psychological principles to the educative process. Required of each education major and of a student applying for certification. requirements (page 83) must be met.

331. STUDENT TEACHING (15) I, II, III. Required of each student in the secondary school or the special certification program. Classroom teaching under supervision is provided on a full-day basis. Conferences and seminars supplement the program. Fee: \$36. Eligibility requirements (page 83) must be met.

332. STUDENT TEACHING (2-7) I, II, III. Optional additional student teaching taken upon the advice and consent of the staff.

342. PSYCHOLOGY OF CHILDHOOD (4) I, II, III, IV. Study of behavior and development of children through elementary school age. Prerequisite: Psychology 201. Education 302 is recommended. Mr. Bennett.

351. SOCIAL STUDIES IN THE ELEMENTARY SCHOOL (4) I, II, III, IV. Theory underlying teaching procedures. Objectives, curriculum, instructional materials, methods, laboratory experience in social studies. Laboratory requires a 3-hour time block one morning per week. Prerequisite: Education 302 or 342. Miss Hagman, Mrs. Mills, Mr. Young.

352. MATHEMATICS IN THE ELEMENTARY SCHOOL (3) I, II, III, IV. The teaching of modern mathematics in grades K-6. Objectives, curriculum, materials of instruction, methods of teaching, and evaluation. Four lecture-laboratories. Prerequisite: Mathematics 241; Education 302 or 342. Mr. Brune, Mr. Martin, Mr. Pigge.

353. SCIENCE IN THE ELEMENTARY SCHOOL (3) I, II, III, IV. The teaching of science in grades K-6. Objectives, curriculum, materials of instruction, methods of teaching, and evaluation. Four lecture-laboratories. Prerequisite: Education 302 or 342. Mr. Fyffe, Mr. Harris, Mr. Lee, Mr. McFee.

355. THE TEACHING OF READING IN THE ELEMENTARY SCHOOL (3) I, II, III, IV. The basic course in the teaching of reading which includes the psychological bases; historical overview; teaching of reading skills—readiness, word recognition, comprehension, and study skills, functional reading, parent and

community involvement, current reading approaches, classroom remedial reading. Prerequisite: Education 302 or 342. English 380 is highly recommended. Mr. Crawford, Mrs. Gertsen, Mrs. Lowry, Mrs. Myles, Mrs. Schaller.

356. LANGUAGE ARTS IN THE ELEMENTARY SCHOOL (3) I, II, III, IV. The basic course in teaching the language arts which includes: an overview, the study of language with special emphasis on developmental procedures in guiding growth in oral communication, listening, handwriting, spelling, and written expression. Prerequisite: Education 302 or 342. English 380 is highly recommended. Mr. Crawford, Mrs. Gertsen, Mrs. Lowry, Mrs. Myles, Mrs. Schaller.

357. KINDERGARTEN-PRIMARY CURRICULUM AND METHODS (4) I, II, III, IV. Objectives, curriculum, instructional and resource materials, methods, laboratory experience in kindergarten-primary education. Should precede the quarter of student teaching. Prerequisite: Education 302 or 342. Mrs. Gertsen, Mrs. Myles, Mrs. Schaller.

358. MODERN FOREIGN LANGUAGES IN THE ELEMENTARY SCHOOLS (4) II. Objectives, methods, curricula, instructional and resource materials in foreign language teaching in the elementary school. Open only to the elementary education major with a language minor or with consent of instructor. Prerequisite: Education 302 or 342.

371. ENGLISH IN SECONDARY SCHOOLS (4) I, II, III. Principles, objectives, curriculum, instructional and resource materials, and methods of teaching English in secondary schools. Two lectures and three laboratories. Prerequisite: Education 302 and junior standing. Mr. Hillocks†, Mrs. Morton†.

372. SPEECH IN SECONDARY SCHOOLS (4) I. Principles, objectives, instructional and resource materials, and methods for curricular, extracurricular, and cocurricular speech in secondary schools. Two lectures and three laboratories. Prerequisite: Education 302 and junior standing.

373. FOREIGN LANGUAGE IN SECONDARY SCHOOLS (4) I, II, III. Principles, objectives, curriculum, instructional and resource materials, and methods of teaching foreign language in secondary schools. Two lectures and three laboratories. Prerequisite: Education 302 and junior standing.

374. MATHEMATICS IN SECONDARY SCHOOLS (4) I, II, III. Principles, objectives, curriculum, instructional and resource materials, and methods of teaching mathematics in secondary schools. Two lectures and three laboratories. Prerequisite: Education 302 and junior standing. Mr. Brune, Mr. Martin, Mr. Pigge.

375. SCIENCE IN SECONDARY SCHOOLS (4) I, II, III. Principles, objectives, curriculum, instructional and resource materials, and methods of teaching science in secondary schools.

†Department of English.

- Two lectures and three laboratories. Prerequisite: Education 302 and junior standing. Mr. Beck, Mr. Fyffe, Mr. Lee, Mr. McFee.
376. SOCIAL STUDIES IN SECONDARY SCHOOLS (4) I, II, III. Principles, objectives, curriculum, instructional and resource materials, and methods of teaching social studies in secondary schools. Two lectures and three laboratories. Prerequisite: Education 302 and junior standing. Mr. Endres, Mr. Graziano, Mr. Wills.
381. STUDENT TEACHING (15) I, II, III. Required for elementary and/or kindergarten-primary certification. Classroom teaching under supervision on a full-day basis. Conferences and seminars supplement the program. Fee: \$36. Eligibility requirements (page 83) must be met.
382. STUDENT TEACHING (2-7) I, II, III. Optional additional student teaching taken upon the advice and consent of the staff.
401. CONTEMPORARY SECONDARY EDUCATION (4) IV. Secondary school problems in curriculum, organization, planning, and methods in relation to historical, philosophical, psychological, and sociological backgrounds.
402. TESTS AND MEASUREMENTS (4) I, II, III, IV. Principles of measurement applied to instructional problems, construction of tests for use in the classroom and a survey of standardized tests, introduction of simple statistical procedures. Recommended to precede student teaching. Prerequisite: Education 302; one methods course. Mr. Harrington, Mr. Marso, Mr. Ort, Mr. Reed, Mr. Seifert, Miss Stang.
408. FOUNDATIONS OF AMERICAN EDUCATION (4) I, II, III, IV. Philosophical, psychological, sociological, anthropological, or historical influences on American schools. Frameworks for the development of one's personal philosophy of education. Mr. Campbell, Mrs. Foy, Mr. Girona, Miss Peters, Mr. Phillips.
409. THE AMERICAN EDUCATIONAL SYSTEM (4) I, II, III, IV. Organizational and administrative policies, practices, problems, issues with emphasis on sources and forms of financial support, school personnel, professional relations. Staff.
411. THE TEACHER'S ROLE IN GUIDANCE (4) I, III, IV. A study of the teacher's role in guidance. An introduction to the role and function of the guidance program and a consideration of the ways in which teachers might utilize the guidance program to provide more effective educational programs for their students. Prerequisite: senior standing. Mr. Hayden, Mr. Moomaw.
412. EDUCATION OF THE DISADVANTAGED (3) II, IV. A course for the purposes of acquainting a student with the effects of socio-economic deprivation on educational performance and for studying teaching techniques appropriate to the needs and characteristics of the disadvantaged student. Prerequisite: education methods and Education 302. Mr. Bennett.
420. READING STUDY SKILLS IN CONTENT AREAS (4) I, II, IV. A survey course of developmental reading in the middle and secondary schools. Emphasis is placed on word attack skills, vocabulary, comprehension, speed, and reading interests. Materials, methods, and provisions for individual differences in developmental and content area reading are considered. Prerequisite: methods and Education 302. Mr. Crawford, Mr. Nemeth, Mrs. Weber.
423. INVESTIGATIONS IN THE TEACHING OF ARITHMETIC (4) II, IV. Research in mathematics education as it affects elementary schools. Theories of learning experiments in teaching procedures, curriculum studies, classroom materials, and equipment. Mr. Brune, Mr. Martin, Mr. Pigge.
424. INVESTIGATIONS IN THE TEACHING OF SOCIAL STUDIES (4) II, III, IV. Analysis of patterns and principles of organization of social studies in the elementary school. Study of teaching materials and procedures. Mr. Endres, Mrs. Mills, Mr. Young.
426. INVESTIGATIONS IN THE TEACHING OF ELEMENTARY SCIENCE (4) IV. Analysis of the science concepts and principles which are developed; nature of materials and methodology and design of evaluation procedures. Mr. Fyffe, Mr. Harris, Mr. Lee, Mr. McFee.
427. PREPARATION OF INSTRUCTIONAL MATERIALS (4) I, II, III, IV. Planning and executing visual materials in terms of desired objectives. Techniques for projected and non-projected materials. Two lecture-demonstrations, one 2-hour laboratory each week. Not open to the student with credit for Library Science 427. Mr. Doellinger, Mr. Ward, Mr. Williams.
428. UTILIZATION OF EDUCATIONAL MEDIA (4) I, II, III, IV. Use of audio-visual materials in improving instruction; background in selection, utilization, and evaluation of major types of audio-visual materials. Not open to the student with credit for Library Science 428. Mr. Daniels, Mr. Doellinger, Mr. Williams.
431. THE EDUCATION OF EXCEPTIONAL CHILDREN (4) I, II, III, IV. Problems of exceptional school children: mentally retarded, learning and behavior disorders, speech-and-hearing-handicapped, visually handicapped, gifted and creative. Each area of exceptionality is considered in terms of etiology, diagnosis, personal-social problems, and prognosis. Mr. Blackwell, Mr. Miller, Mrs. Minifie, Mr. Minifie.
432. PRINCIPLES AND PURPOSES OF SPECIAL EDUCATION (3) I, II, III, IV. Functions of the public schools and governmental agencies in providing educational services for exceptional children. Mr. Miller, Mrs. Minifie, Mr. Minifie, Mrs. McMillin.
433. EDUCATION OF MENTALLY RETARDED CHILDREN (3) I, II, III, IV. Introduction to the understanding and teaching of educable and trainable mentally retarded children: etiology, diagnosis, theory, educational procedures. Mr. Blackwell, Mr. Miller, Mrs. Minifie, Mr. Minifie.
434. LANGUAGE ARTS FOR EDUCABLE MENTALLY RETARDED (5) I, II, III, IV. Practical measures for approaching the language arts with educable mentally retarded children including reading, writing, spelling, oral

and written communication. Methods and materials appropriate to the developmental levels of educable mentally retarded children are reviewed. Prerequisite: Education 431, 432, 433. Mr. Smith.

435. ARITHMETIC AND SCIENCE FOR EDUCABLE MENTALLY RETARDED CHILDREN (3) I, II, IV. A functional approach to arithmetic and science for educable mentally retarded children; teacher's responsibility for developing appropriate sequence of skills and knowledge for educable mentally retarded children. Prerequisite: Education 431, 432, 433. Mr. Joynt, Mr. Smith.

436. SOCIAL STUDIES FOR EDUCABLE MENTALLY RETARDED CHILDREN (5) I, II, III, IV. Introduction to the social studies sequence for educable mentally retarded children. Selection, organization, and development of appropriate units or social studies cores for use with educable mentally retarded children. Prerequisite: Education 431, 432, 433. Mr. Smith.

437. OCCUPATIONAL ORIENTATION AND JOB PREPARATION FOR EDUCABLE MENTALLY RETARDED CHILDREN (4) III, IV. Responsibilities of a special class teacher for developing employable skills with educable mentally retarded children. Prerequisite: Education 431, 432, 433. Mr. Joynt, Mrs. Minifie.

438. PROBLEMS IN EVALUATING, SELECTING, AND ADAPTING SPECIALIZED INSTRUCTIONAL MATERIALS FOR EXCEPTIONAL PUPILS (3) I, II, III, IV. Analysis, comparison, and use of materials with pupils of specified exceptionality in terms of educational and administrative merit. Prerequisite: consent of instructor. Mr. Blackwell, Mrs. McMillin, Mr. Smith.

440. CURRICULUM DEVELOPMENT AND METHODOLOGY FOR TEACHING TRAINABLE MENTALLY RETARDED CHILDREN (3) I, II, IV. Materials and techniques for teaching severely mentally retarded children. Emphasizes the development and appropriate skills with practical applications. Prerequisite: Education 433 or consent of instructor. Mr. Blackwell, Mr. Miller.

443. PRACTICUM WITH EXCEPTIONAL CHILDREN (3) II, III. Individual observations, participation, and supervised practicum experiences in the education of children. May be repeated to 9 hours. Prerequisite: consent of instructor. Mr. Blackwell.

445. SHELTERED WORKSHOP—FUNCTION AND RELATIONSHIP TO SPECIAL EDUCATION (3) III, IV. Role of sheltered workshops in the rehabilitation of mentally retarded persons. Techniques needed in making job analyses and in analyzing skills required for specific jobs and job areas. Mr. Blackwell, Mr. MacGuffie, Mr. Miller.

451. EDUCATIONAL UNDERSTANDING OF THE EMOTIONALLY DISTURBED CHILD (4) I, III, IV. To acquaint the prospective teacher with the multiple origins of disturbed behavior and the identification of manifest patterns signifying disturbed behavior. Prerequisite: Education 302 or consent of instructor. Mr. Miller, Mr. R. Rowe.

453. LEARNING DISORDERS AND THE EMOTIONALLY DISTURBED CHILD (3) I, II, IV. An investigation of specific learning disorders or disabilities as direct or contributing factors in the origins, evaluation, and educational management of children with emotional disturbances. Prerequisite: Education 431 or consent of instructor. Mr. Miller, Mr. R. Rowe.

454. EDUCATIONAL PROCEDURES FOR THE EMOTIONALLY DISTURBED CHILD (3) II, III, IV. Designed to acquaint the prospective teacher with the special methods, materials, and behavior management techniques used in teaching the emotionally disturbed child. Prerequisite: Education 451 or consent of instructor. Mr. Miller, Mr. R. Rowe.

461. INTRODUCTION TO EDUCATION OF THE DEAF (3) I, IV. History and philosophy of education of the deaf. Structure of the ear and causes of deafness. Problems in organization, support, and maintenance of programs for deaf and hard-of-hearing children. Presentation of types of instruction given in various schools: the oral method, the combined method, the Rochester method, and the acoustic method. Prerequisite: Education 431, 432. Staff.

462. INTRODUCTION TO METHODS OF TEACHING ELEMENTARY SCHOOL SUBJECTS TO DEAF AND HARD-OF-HEARING CHILDREN (3) II, IV. Methods of teaching pre-school and primary elementary school subjects to the deaf and hard-of-hearing. Prerequisite: Education 461. Staff.

463. ADVANCED METHODS OF TEACHING ELEMENTARY SCHOOL SUBJECTS TO DEAF AND HARD-OF-HEARING CHILDREN (3) III, IV. Methods of teaching intermediate and junior high subjects to the deaf and hard-of-hearing. The use of communication skills in all content subject areas. Means of preparing pupils to enter regular high schools or special colleges. Prerequisite: Education 431, 461, 462. Staff.

464. BASIC LANGUAGE INSTRUCTION FOR ACOUSTICALLY HANDICAPPED CHILDREN (3) I, IV. Systems of teaching language to the deaf and hard-of-hearing. Principles of grammar essential to the use of any system of language instruction. Development of oral and written language readiness. Prerequisite: Education 431. Staff.

465. ADVANCED LANGUAGE INSTRUCTION FOR ACOUSTICALLY HANDICAPPED CHILDREN (3) II, IV. Development of functional language usage in both oral and written form in the symbolic systems of communication and ideation for the acoustically handicapped child. Prerequisite: Education 431, 464. Staff.

470. EDUCATION OF MULTI-HANDICAPPED CHILDREN (3) IV. Educational dynamics, strategies, logistics, and responsibilities involved in the socialization of multi-handicapped children. Mr. Blackwell, Mr. Miller, Mrs. Minifie.

471. ANATOMY, PHYSIOLOGY, AND HYGIENE OF THE EYE (3) IV. A study of the anatomy, physiology, and hygiene of the eye. A study of the functional implications of various pathologies in the educational setting. Staff.

472. BRAILLE I—BEGINNING BRAILLE (3) IV. History of development of braille system and other methods of reading used by the blind. Mastery of literary braille code. Slate and stylus techniques presented; introduction to Nemeth Code of Mathematics. Staff.

473. ADVANCED BRAILLE (3) IV. Development of skill in reading and writing braille; methods and techniques of teaching grade two Braille. Staff.

474. THEORY AND PRACTICE IN EDUCATION OF THE BLIND AND PARTIALLY SIGHTED CHILDREN (3) IV. Identification, classification, and methods of program organization; principles of preparation, selection, effective use of instructional materials for children with limited or no vision. Staff.

490. PROBLEMS IN EDUCATION (1-5). Offered on demand. For an advanced student wanting to conduct intensive study of selected problems in education. May be repeated to 6 hours; undergraduate credit only. Prerequisite: consent of the Department. Staff.

*ENGLISH

Professors Ross (Chairman), Baldanza, Bashore, Browne, Carpenter, Daniels, F. Eckman, P. Parnell, Payne; Associate Professors Abel, Barber, Epstein, Halpern, Hubach, L. Leland, V. Leland, O'Connor, Parrish, W. Pretzer, Robb, Steele, Wolfe (Assistant Chairman); Assistant Professors Blanchard, Danielson (Firelands), Hillocks, Meyers, Reiser, Salomon, Tabbert, Wymer; Instructors Crow, Danek, DiPalma, Drake, M. Eckman, Hartman, MacPhedron (Firelands), Morton, Rudinger (Firelands), Smith (Firelands), Solt, Stepp.

100. ENGLISH AS A FOREIGN LANGUAGE (5) I, II, III. For the student whose native language is not English. Development of skills in listening, speaking, reading, and writing standard American English related to academic study. Placement on the basis of proficiency tests. May be repeated once for credit with special permission. Mr. Pretzer and staff.

111. VARIETIES OF COLLEGE WRITING (4) I, II, III. Varieties of college writing. Rhetorical theory combined with practice in expository writing including documented papers and adaptation of the writing to probable readers. Placement on the basis of ACT score and proficiency tests.

112. STUDIES IN MODERN ENGLISH (4) I, II, III. Current attitudes in language study toward symbols, meaning, style. Rhetorical practice in applying aspects of semantics, usage, lexicography, and paralanguage to general humanistic studies including literature. Prerequisite: English 111 or placement on the basis of ACT score and proficiency tests.

112H. PRINCIPLES OF WRITING: HONORS TUTORIAL (4) I. Independent reading and research in materials such as those listed in English 112, correlated with major interests and with concurrent English courses. Reserved

for a student who meets special admission standards in English proficiency who may elect one of the following concurrently: English 202, 203, or 204.

113. VARIETIES OF COLLEGE WRITING: CREATIVE EMPHASIS (4) I, II, III. Varieties of college writing with emphasis on creative work. Rhetorical theory combined with practice in descriptive, narrative and lyrical writing, as well as expository writing. Can be substituted for English 112 or 112H. Permission of instructor.

161. WORLD LITERATURE (4) I, II, III. Masterpieces of world literature to 1400 including such authors as Homer, Confucius, Aeschylus, Sophocles, Plato, Aristophanes, Virgil, and Dante. Mr. Steele and staff.

162. WORLD LITERATURE (4) I, II, III. Masterpieces of world literature since 1400 including such authors as Montaigne, Cervantes, Goethe, Hugo, Balzac, Dostoyevski, and Kafka. Mr. Steele and staff.

202. INTRODUCTION TO POETRY (4) I, II, III. Study of poetry as a type of literature through a selection of great poems, past and present. Prerequisite: English 112 or a parallel of English 112H.

203. INTRODUCTION TO DRAMA (4) I, II, III. Study of drama as a type of literature through a selected group of representative plays, past and present. Prerequisite: English 112 or a parallel of English 112H.

204. INTRODUCTION TO FICTION (4) I, II, III. A study of fiction designed to develop appreciation of the short story and the novel as literary forms. Prerequisite: English 112 or a parallel of English 112H.

205. TECHNIQUES OF POETRY (4) I, II, III. A detailed study of the craft of poetry with concentration on imagery and rhythm. Examination of techniques in the works of both traditional and contemporary poets. (Fulfills the same requirements as English 202.) Prerequisite: English 112 or equivalent.

206. TECHNIQUES OF FICTION (4) I, II, III. A detailed study of the craft of fiction with concentration on characterization, plot, mood, tone, and diction. Examination of techniques in the works of both traditional and contemporary writers. (Fulfills the same requirements as English 204.) Prerequisite: English 112 or equivalent.

207. INTERMEDIATE WRITING (4) I, II, III. Primarily advanced exposition. Prerequisite: English 112 or equivalent.

208. CREATIVE WRITING (4) I, II, III. Supervised writing in both poetry and fiction, with group discussions and concentration on the shorter forms. May be repeated once. Prerequisite: English 112 or equivalent.

260. INTRODUCTION TO POPULAR CULTURE (5) I. Examination of the various types of culture and media which affect our lives—their artistic and esthetic accomplishments and failures, their obvious and subtle forces and influences. Prerequisite: English 112 or equivalent.

300. MASTERPIECES (4) II. Masterpieces selected from such authors as Confucius, Lucretius, Plutarch, Aurelius, Erasmus, Voltaire, Hugo, Gogol, and Nietzsche, read in translation, with concern for uses of literature and its influence on English and American cultural traditions. Prerequisite: any 200-level literature course.
301. SHAKESPEARE (4) I, II, III. Representative comedies, history plays, tragedies and tragicomedies, and the sonnets. Prerequisite: English 202 or 203.
303. AMERICAN LITERATURE (5) I, II. Roots of American literary traditions and growth of national independence of expression, based upon texts of representative writers including Edwards, Franklin, Irving, Cooper, and Hawthorne or Melville. Prerequisite: any 200-level literature course.
304. AMERICAN LITERATURE (5) II, III. Literary patterns of renewed idealism and emergent materialism in mid-nineteenth century America; Transcendentalism and its critics; and representative writers including Emerson, Thoreau, Whitman, and Dickinson. Prerequisite: any 200-level literature course.
305. AMERICAN LITERATURE (5) I, III. Rise of realism and naturalism and new directions in modern American writing with concentration on such authors as Howells, James, Twain, Hemingway, Faulkner, and on twentieth century American poets. Prerequisite: any 200-level literature course.
306. THE BIBLE (5) I, II, III. The *English Bible* as a literary classic and its development and influence on literary culture.
308. CREATIVE WRITING (5) II, III. Imaginative writing with attention to fiction and poetry. Class discussion and individual conferences. Prerequisite: a grade of B or better in English 208 or with approval of instructor. May be repeated once.
309. ENGLISH LITERATURE SURVEY TO 1660 (5) I, II. Major authors in the context of the major literary traditions from Anglo-Saxon times through the age of Milton. Emphasis on the developing ideas made memorable by their expression in literature. Prerequisite: any 200-level literature course.
310. ENGLISH LITERATURE: 1660-1824 (5) II, III. Major authors in the context of the major literary traditions from the Restoration through the Romantic age. Though a continuation of English 309, this course need not be taken in sequence. Prerequisite: any 200-level literature course. Mr. Halpern.
311. ENGLISH LITERATURE SURVEY: 1824 TO PRESENT (5) I, III. Major authors in the context of the major literary traditions from the Victorian age to the present. Though a continuation of English 309 and 310, this course need not be taken in sequence. Prerequisite: any 200-level literature course.
312. EARLY ENGLISH LITERATURE (4) I. English literature before 1500 including *Beowulf* and Old English lyric poetry in translation and Chaucer's *Canterbury Tales* and *Troilus and Cryseyde* in Middle English. Prerequisite: any 200-level literature course.
314. SIXTEENTH CENTURY LITERATURE (4) III. The evolution of poetry, prose, and drama during the Elizabethan Age. Readings include major works of Sidney, Spenser, Marlowe, and Shakespeare. Prerequisite: any 200-level literature course.
315. SEVENTEENTH CENTURY LITERATURE (4) II. Poetry and prose from 1600-1660; metaphysical and classical poetry; and religious, scientific, political, and philosophical prose.
317. ROMANTIC MOVEMENT (4) I, II, III. English poetry and prose from 1789-1832 with emphasis on Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats. Prerequisite: any 200-level literature course.
318. VICTORIAN LITERATURE (4) II, III. English poetry and prose, exclusive of fiction, 1832-1900 with emphasis on Carlyle, Tennyson, Browning, Arnold, and their contemporaries. Prerequisite: any 200-level literature course.
320. CONTEMPORARY POETRY (4) I, III. British and American poetry since 1890 with emphasis on symbolism, imagery, and experiments with unusual rhythmic effects. Prerequisite: any 200-level literature course.
322. MODERN NOVEL: EUROPEAN (4) II. Selected European novels in translation with emphasis on major twentieth century writers who have contributed significantly to the development of the form. Prerequisite: any 200-level literature course.
323. MODERN NOVEL: ENGLISH AND AMERICAN (4) II, III. Literary form in representative American and English novels since 1900. Prerequisite: any 200-level literature course.
324. MODERN NOVEL: JAPANESE (4) II. Survey of masterworks in modern Japanese fiction since Meiji Era and the first impact of Western literary forms. Prerequisite: any 200-level literature course. Mr. Baldanza.
325. MODERN DRAMA (4) I, III. Drama as a literary form through critical consideration of representative modern continental, English, and American plays. Prerequisite: any 200-level literature course.
331. NEOCLASSICAL I (4) I. Prose and poetry from 1660-1740 with emphasis on Pepys, Bunyan, Dryden, Hobbes, Locke, Pope, Rochester, and Gay. Prerequisite: any 200-level literature course.
332. NEOCLASSICAL II (4) II. Prose and poetry from 1740-1800 with emphasis on Swift, Johnson, Boswell, Goldsmith, Burke, Gibbon, and pre-romantic writers. Prerequisite: any 200-level literature course. Mr. Hillocks, Mr. Parnell, Miss Stepp.
342. CHILDREN'S LITERATURE (5) I, II, III. Wide reading and evaluation of books for children from nursery school through junior high school with emphasis on novels, folklore, informational literature, poetry, and bibliographical sources. Not open to a student with credit for Library Science 342.

370. POPULAR LITERATURE (5) II. Comprehensive and critical reading of various types of popular literature—detective, science fiction, western, mystery, "best sellers," poetry and magazine fiction.
372. LITERATURE OF MINORITIES (5) III. Survey of minority literary expression—its aims, methods and accomplishments.
380. STUDY OF ENGLISH GRAMMAR (5) I, II, III. Theories and analyses dealing with phonology, morphology, syntax, and their relationships to other studies.
400. CHAUCER (4) I, II. Study of *The Canterbury Tales* and *Troilus and Criseyde* with emphasis on cultural background and modern critical interpretation. Prerequisite: any 200-level literature course.
401. ADVANCED SHAKESPEARE (4) I, II, III. Intensive study of Shakespeare's dramatic technique in a specific dramatic form: tragedy, comedy, or history play. Prerequisite: English 301.
406. ENGLISH RENAISSANCE DRAMA (4) I, III. Intensive study of the plays of such major dramatists as Marlowe, Jonson, and Webster (excepting Shakespeare) who wrote before the theatres were closed in 1642. Prerequisite: English 203 or 301.
407. WRITER'S WORKSHOP (5) III. Consideration of the principles of creative writing, analysis of contemporary models, and practice in original composition. Emphasis is on fiction and poetry. Prerequisite: a grade of B or better in English 308 or with approval of instructor. May be repeated once.
408. MILTON (4) III. Major and minor poetry; representative prose. Prerequisite: any 200-level literature course.
409. AMERICAN NOVEL: COOPER TO DREISER (4) I, II, III. Intensive study of several authors who not only have historical importance but who also make significant attempts to portray the American character. Prerequisite: any 200-level literature course.
410. ENGLISH DRAMA OF THE RESTORATION AND EIGHTEENTH CENTURY (4) III. Drama, 1660-1800, with consideration of all significant forms: tragedy, comedy, heroic play, sentimentalism. Prerequisite: any 200-level literature course.
415. ENGLISH NOVEL: DEFOE TO AUSTEN (4) I, II, III. Selected novels by Defoe, Richardson, Fielding, Smollett, Sterne, Austen, and their contemporaries. Prerequisite: any 200-level literature course.
416. ENGLISH NOVEL: SCOTT TO BUTLER (4) I, II, III. Selected novels by Scott, Dickens, Thackeray, Trollope, Eliot, Hardy, Butler, and their contemporaries. Prerequisite: any 200-level literature course.
419. CRITICAL METHODS (4) III. Study and practice in various modes of literary criticism. Survey of such methods as biographical, textural, psychological, mythical, analytical. Prerequisite: any 200-level literature course.
420. ENGLISH LITERATURE: ADVANCED STUDIES (4) I, II, III. Intensive study of an author, a literary school, a genre, or a selected theme. May be repeated to 8 hours if topics are clearly different. Prerequisite: English 309, 310, or 311.
421. INTRODUCTION TO FOLKLORE (4) I. Traditional British ballads and their American variants, historical legend, folk tales, folk medicine, children's lore, the supernatural, superstition, written literature, and scholarly collections of folklore. Prerequisite: any 200-level literature course. Not open to a student with credit for Library Science 421.
422. AMERICAN LITERATURE: ADVANCED STUDIES (4) I, II, III. Intensive study of an author, a literary school, a genre, or a selected theme. May be repeated to 8 hours if topics are clearly different. Prerequisite: English 303, 304, or 305.
424. FOLKLORE AND AMERICAN LITERARY TRADITIONS (4) II. Analysis and discussion of folklore, its appearance in American literature, and direct and indirect utilization by and impact on American authors.
425. IDEAS IN AMERICAN CULTURE (4) I. Selected ideological patterns as evidenced in American prose and poetry. Primary sources from other disciplines may be used along with pertinent literary studies. Prerequisite: any 200-level literature course.
426. POPULAR ARTS AND ENTERTAINMENTS (4) III. In-depth examination of theatre, musicals, films, television, radio, books, magazines, and other forms of popular arts and entertainment.
430. AMERICAN TRANSCENDENTALISM (4) II, III. Major writers of the Transcendentalist movement are studied against the social and philosophical background of their time. Emphasis on the works of Emerson and Thoreau. Prerequisite: any 200-level literature course.
435. HAWTHORNE AND MELVILLE (4) I. Major works of Hawthorne and Melville considered against the background of the age. Prerequisite: any 200-level literature course.
442. STUDIES IN CHILDREN'S LITERATURE (4) II. Special problems in children's literature: history, criticism, trends, individual authors, and types. Not open to a student with credit for Library Science 442.
482. THE HISTORY OF THE ENGLISH LANGUAGE (4) I, II, III. Historical study of the changes in the sounds, grammar, usage, and meaning of English from the period of Old English to the present. Prerequisite or parallel: English 380
490. PROBLEMS IN LANGUAGE AND LITERATURE (4) I, II, III. For an advanced student who wishes to read independently. Prerequisite: consent of the Director of English Advising to a proposal approved by a staff member three weeks prior to the end of a quarter.
495. HONORS READING (4) I. For a superior major or minor who wants to pursue common studies determined by the interests of a group looking toward the granting

of honors in English. Prerequisite: consent of instructor.

*EXPERIMENTAL STUDIES

101, 301. SEMINAR (4) I, II, III. Offered on various topics. May be repeated to 16 hours.

201. INDEPENDENT STUDIES (3-16) I, II, III, IV. Research or a project designed by the student under the general supervision of a faculty member. Open to any sophomore, junior, or senior. The Director of the Office of Experimental Studies is to be consulted prior to registration.

395. INSTRUCTIONAL INTERNSHIP (2-4) I, II, III. Instructional assistance to faculty in the Seminar Program. Prerequisite: by invitation only.

FINANCE AND INSURANCE

Professors Fichthorn (Chairman), W. Abell; Assistant Professors Delaney, Herbst, Sleckitis; Instructor Plasterer; Part-Time Lecturers Ashbaugh, Stevenson.

COURSES IN FINANCE

341. BUSINESS FINANCE (4) I, II, III. Acquisition and allocation of funds in the business enterprise. Fundamentals of capital budgeting, financial structure, dividend policy, types of security contracts, and short-term financing. Prerequisite: Economics 202, Accounting 222. Staff.

430. PRINCIPLES OF INVESTMENT (4) I, II, III. Survey of the investment process as related to commitment of funds in securities. Risks and rewards of different investment media. Fundamentals of investment analysis, investment timing, portfolio construction and supervision. Prerequisite: Finance 341. Mr. Sleckitis.

431. STOCK MARKET (3) I, III. Organization, control, and operation of security markets. Prerequisite: Finance 341. Staff.

433. SECURITY ANALYSIS (4) III. Problems of selecting securities for various investment objectives. Appraisal of investment risks as applied to specific securities; valuation and suitability for purchase, retention, or sale; appropriateness for stated portfolio objectives. Prerequisite: Finance 430, Accounting 322. Mr. Fichthorn, Mr. Sleckitis.

443. PERSONAL FINANCE (3) I, II, III. Administration of personal incomes and financial resources including borrowing, savings media, insurance, home-ownership, and investments. Staff.

450. PROBLEMS IN FINANCIAL ADMINISTRATION (4) I, III. A case method approach to problems contained in the procurement and administration of funds. The course is intended as a sequel to Finance 341. Prerequisite: Finance 341, Accounting 322, or consent of instructor. Mr. Fichthorn, Mr. Plasterer.

451. QUANTITATIVE ANALYSIS IN FINANCE (4) II, III. Applications of quantitative techniques to financial decision-making with emphasis

on such areas as capital budgeting, financial structure, and dividend policy. Computer applications are investigated. Prerequisite: Finance 450, Accounting 322, Quantitative Analysis and Control 380. Mr. Herbst.

460. FINANCIAL INSTITUTIONS (4) I, III. Financial institutions which finance the business firm with emphasis on the money market, working capital market, mortgage market, securities market. Prerequisite: Finance 341, Economics 311. Mr. Herbst.

461. BANK MANAGEMENT (4) II. A top management study of banking. Management of funds, sources, and their allocation among reserves, loans, and investments to provide liquidity and earnings. Services to depositors; public relations. Prerequisite: Finance 341, Economics 311, Accounting 322. Mr. Herbst.

470. INTERNATIONAL BUSINESS FINANCE (4) II. International finance examined from three points of view: the American business firm operating internationally, the American financier, and the foreign financier including problems, policies, institutional arrangements, and current developments. Prerequisite: Finance 341, Economics 311. Staff.

COURSES IN INSURANCE

361. PRINCIPLES OF RISK AND INSURANCE (4) I, II, III. Fundamental nature of risk and its influence upon all human activities. Principles of insurance, insurance coverage, and other loss-bearing techniques. Mr. Abell, Mr. Delaney.

463. GROUP AND SOCIAL INSURANCE (4) III. Economic and sociological background of social and group insurance including studies of group accident and health coverages, OASDI, workmen's compensation, pensions, and unemployment compensation. Prerequisite: Insurance 361. Mr. Abell.

465. MULTIPLE LINE INSURANCE (4) I. Analysis of fire, casualty, inland marine and ocean marine coverages including the legal aspects, rate-making techniques, regulation, and loss-adjustment principles. Prerequisite: Insurance 361. Mr. Abell.

467. LIFE INSURANCE (4) II. Economic and social aspects of life insurance; structure of life insurance and annuity contracts; calculation of premiums, reserves, surrender values, and dividends; contract provisions and legal principles. Prerequisite or concurrent: Insurance 361. Mr. Delaney.

469. ADVANCED LIFE UNDERWRITING (4) III. Integration of life and health insurance into the overall estate plan; correlation with wills, trusts, guardianships, and agencies; tax treatment, funding business continuation agreements, deferred compensation arrangements, and estate liquidation; programming. Prerequisite: Insurance 361, 467. Mr. Delaney.

470. RISK MANAGEMENT (4) II. Introduction to management of corporate risk. Evaluation, control, prevention, retention, treatment of risks in

foreign countries; accounting and tax aspects are considered. Case problems supplement textual assignments. Prerequisite: Insurance 361, 465. Mr. Abell.

491. STUDIES IN FINANCE AND INSURANCE (1-4). Offered on demand. Study in depth of selected areas. Offered to an individual student on a lecture basis or in the form of a seminar depending on student needs and the nature of the material. May be repeated to 8 hours. Staff.

*GEOGRAPHY

Professors Buford (Chairman), Botts, Frank, Karnes, Fletcher, Hiltner; Associate Professors Anderson, Kunstmann; Assistant Professors Carlson, Crawford, Shrestha, Smith; Instructors Frey, Groop, Hoffman, Spinelli.

121. WORLD GEOGRAPHY I: EURASIA AND AFRICA (3) I, II, III. Geographical analysis of selected topics in Asia, Africa, and Europe. The ecological aspects of the cultural, political, and economic problems of these regions are emphasized. Open only to a freshman. Mr. Hiltner, Mr. Groop.

122. WORLD GEOGRAPHY II: THE AMERICAS AND THE PACIFIC (3) I, II, III. Analysis of aspects of geography concerned with man and his interrelationships with his physical environment. Open only to a freshman or sophomore. Staff.

125. ELEMENTS OF PHYSICAL GEOGRAPHY I (3) I. Fundamentals of physical geography with emphasis on earth-sun relationships, elements of weather and climate, and climatic types and their distribution. Two 1-hour lectures and one 2-hour laboratory. Mr. Frey.

126. ELEMENTS OF PHYSICAL GEOGRAPHY II (3) II. Fundamentals of physical geography with emphasis on distribution and classification of vegetation and soil and the representation of the earth on maps. Two 1-hour lectures and one 2-hour laboratory. Mr. Anderson.

127. ELEMENTS OF PHYSICAL GEOGRAPHY III (3) III. Fundamentals of physical geography with emphasis on processes of landform development, world-wide distribution of landforms, and physiographic features and regions of the U.S. Two 1-hour lectures and one 2-hour laboratory. Geography 126 is recommended. Mr. Kunstmann.

213. METEOROLOGY (5) I, II, III. Fundamental physical processes of the atmosphere and their relationship to the daily weather pattern. Prerequisite: Geography 125 or consent of instructor. Mr. Fletcher, Mr. Frey.

225. ECONOMIC GEOGRAPHY (5) I, II, III. Systematic study of world distribution of the primary, secondary, and tertiary activities of mankind with emphasis on geographic and economic factors affecting the distribution and location of economic activity. Mr. Botts, Mr. Frank, Mr. Smith.

230. CULTURAL GEOGRAPHY (5) I, II, III. Introduction to cultural geography stressing

definition of cultural elements of the landscape and their distribution and interpretation. Mr. Anderson, Mr. Carlson.

321. CARTOGRAPHY I (3) I. Introduction to practical map planning and construction with emphasis on basic cartographic theory and use of drafting materials and equipment. Mr. Crawford.

322. CARTOGRAPHY II (3) II. Presentation of quantitative and qualitative data with emphasis on statistical or thematic maps. Mr. Crawford.

323. CARTOGRAPHY III (3) III. Analysis of cartographic literature and trends in cartographic research. Individual research on graphic presentation of spatial data. Mr. Crawford.

341. GEOGRAPHY OF THE SOVIET UNION (3) III. Regional study of the Soviet Union with an appraisal and interpretation of geographic factors influencing its development. Mr. Anderson.

342. GEOGRAPHY OF EASTERN EUROPE (3) II. Regional study of eastern Europe with an appraisal and interpretation of geographic factors influencing its development. Mr. Anderson.

343. GEOGRAPHY OF WESTERN EUROPE (3) I, II, III. The geographic aspects which help in the understanding of the present-day status of the countries of Western Europe. Mr. Buford.

344. GEOGRAPHY OF EASTERN ASIA (3) I. A regional study of eastern Asia and the geographic factors influencing development of the countries in this area. Mr. Frank.

345. GEOGRAPHY OF SOUTHERN AND SOUTHEAST ASIA (3) II. A regional study of southern and southeastern Asia and the geographic factors influencing development of the countries in this area. Mr. Frank.

346. GEOGRAPHY OF THE MIDDLE EAST (3) I. Regional geography of the Middle East stressing geographic problems of the area. Mr. Hiltner.

347. GEOGRAPHY OF AFRICA (3) III. A regional study of Africa and the geographic factors influencing development of the African countries. Mr. Frank.

348. GEOGRAPHY OF MIDDLE AMERICA (3) I. A systematic analysis of problems related to the contemporary development of the societies of Mexico, Central America, and the West Indies. Mr. Spinelli.

349. GEOGRAPHY OF SOUTH AMERICA (3) II. A systematic analysis of problems related to the contemporary development of the societies of continental South America. Mr. Spinelli.

350. GEOGRAPHY OF ANGLO-AMERICA (3) I, II, III. A regional study of the U.S. and Canada, with an explanation of the geographic factors influencing their growth and development. Mr. Karnes, Mr. Kunstmann.

351. GEOGRAPHY OF OHIO (3) III. Physical, economic, and human geography of the state stressing topography, climate, and leading occupations. Mr. Fletcher, Mr. Frank.

402. INTERMEDIATE ECONOMIC GEOGRAPHY (5) I. Examination of the major theories of

central place, industrial, and plant location with examples of advantages and disadvantages of each theory. Prerequisite: Geography 225 or consent of instructor. Mr. Shrestha, Mr. Smith.

404. CLIMATOLOGY (5) II. Geophysical controls of climate and their effects on the distribution of the earth's climatic elements. Mr. Fletcher.

410. FIELD TECHNIQUES (5-9) IV. Instruction and practice in techniques of field data collection and interpretation. Physical and cultural elements of the landscape are investigated. Mr. Anderson.

411. ADVANCED CARTOGRAPHY (3) II. Offered 1970-71 and alternate years. An analysis of cartographic literature and new trends in cartographic research. Six hours per week. Prerequisite: Geography 322 or consent of instructor. Mr. Crawford.

412. USE AND INTERPRETATION OF AERIAL PHOTOGRAPHS I (3) II. An examination of the sources, types, characteristics, uses, and limitations of aerial photographs. Training in the use of standard equipment for stereoscopic viewing and height measurement. Mr. Kunstmann.

413. USE AND INTERPRETATION OF AERIAL PHOTOGRAPHS II (3) III. Principles and procedures used to obtain information about natural and cultural features from aerial photographs. Theory and procedure in the use of aerial photographs for mapping. Prerequisite: Geography 412 or consent of instructor. Mr. Kunstmann.

425. AGRICULTURAL GEOGRAPHY AND RURAL SETTLEMENT PATTERNS (5) I. Offered 1971-72 and alternate years. Spatial characteristics of agricultural production and an analysis of settlements which serve rural and suburban areas. Prerequisite: Geography 225. Mr. Carlson.

426. URBAN GEOGRAPHY (5) II. Analysis of the spatial patterns and internal organization of urban places. Ecological problems of cities, changes in the urban community, and new research developments. Mr. Hiltner.

427. INTERMEDIATE PHYSICAL GEOGRAPHY (4) III. Studies in selected aspects of physical geography (excluding meteorology and climatology) providing an opportunity for an in-depth analysis of man's environment. Prerequisite: Geography 125, 126, 127; or consent of instructor. Mr. Crawford, Mr. Kunstmann.

430. STUDIES IN CULTURAL GEOGRAPHY (4) I. Studies in selected aspects of cultural geography designed to stimulate intensive examination of limited parts of this diverse branch of geography. For an advanced undergraduate or graduate. Prerequisite: Geography 230 or permission of instructor. Mr. Anderson.

442. CONSERVATION OF NATURAL RESOURCES (5) I, III. Current problems associated with public policy to insure an adequate supply of water, soil, forests, wildlife, minerals, and recreational and human resources for the future. Mr. Karnes.

451. HISTORICAL GEOGRAPHY OF THE U.S. (5) I. Environmental setting for the growth

and development of the U.S. Mr. Carlson, Mr. Fletcher.

452. POLITICAL GEOGRAPHY (5) I, II. Geographic factors influencing the development of states and the interrelationship of these countries to each other. Mr. Buford.

471. OCEANOGRAPHY (4) III. The geographic aspects of oceanography. Mr. Fletcher.

490. SPECIAL PROBLEMS IN GEOGRAPHY (2-3). Offered on demand. Readings and research on varied topics to suit the needs of an individual student.

*GEOLOGY

Assistant Professor Steinker (Chairman); Professors Hoare, Loughheed, Rich; Associate Professors Forsyth, Howe, Kahle, Mancuso, Owen; Assistant Professors Pawłowicz, Walters; Instructor Tilton.

100. INTRODUCTION TO GEOLOGY (4) I, II, III. The earth; physical and historical geology; and the economic, social, and philosophic aspects of the subject matter. Not open to geology majors or minors.

103. GEOLOGIC MATERIALS (4) I, II, III. Introduction to common rocks and minerals and their mode of occurrence and origin. Three lectures and one 2-hour laboratory. One field trip is required. Credit is not given for both Geology 100 and 103.

104. GEOLOGICAL PROCESSES (4) I, II, III. Survey of the physical processes operating on and in the earth and of the landforms and geologic structures which have developed. Three lectures and one 2-hour laboratory. One field trip is required. Credit is not given for both Geology 100 and 104.

105. PRINCIPLES OF HISTORICAL GEOLOGY (4) I, II, III. Principles of stratigraphy, time, and evolution upon which the reconstruction of geologic history is based. Three lectures and one 2-hour laboratory. One field trip is required.

110. INTRODUCTION TO ASTRONOMY (4) I. Description and discussion of the solar system, local stars and clusters, nebulae, galaxies, and the universe; modern cosmogonies and the limitations for the existence and evolution of life; and methods of celestial observations. Mr. Howe, Mr. Loughheed.

302. INVERTEBRATE PALEONTOLOGY (3) I. Fossil invertebrates and their morphology, classification, and identification. Two lectures and one 3-hour laboratory. One field trip is required. Credit is given for either Geology 302 and 303 or 305, but not for both. Prerequisite: Geology 105 or consent of instructor. Mr. Hoare, Mr. Steinker.

303. INVERTEBRATE PALEONTOLOGY (3) II. Geology 302 continued. Mr. Hoare, Mr. Steinker.

304. GEOLOGY OF THE NATIONAL PARKS (4) II. Survey of the regional geology of the U.S. as illustrated in the national parks and monuments. Not open to geology majors in the B.S.

degree program. Prerequisite: Geology 100 or 103 and 104. Mr. Rich.

305. LIFE OF THE GEOLOGIC PAST (4) II. A non-technical study of the progressive development of life as illustrated by fossils. Two lectures and one 2-hour discussion demonstration. Not open to geology majors in the B.S. degree program. Credit is given for either Geology 302 and 303 or 305, but not for both. Prerequisite: Geology 100 or 105, Biology 104, or consent of instructor.

306. ROCKS AND MINERALS (4) III. A non-technical study of earth materials as illustrated by gems, minerals, and rocks. Prerequisite: Geology 100 or 103. Not open to geology majors in the B.S. degree program. Credit is given for either Geology 306 or 311 and 312. Mr. Kahle, Mr. Loughheed.

307. SEDIMENTARY PETROLOGY AND STRATIGRAPHY (3) II. Classification, megascopic identification, and laboratory analysis of sedimentary rocks, depositional environments, and principles of stratigraphy. One lecture and two 2-hour laboratories in first quarter; two lectures and one 2-hour laboratory in second quarter. Must be taken in two successive quarters. One field trip is required. Prerequisite: Geology 311, 312. Mr. Owen.

308. SEDIMENTARY PETROLOGY AND STRATIGRAPHY (3) III. Geology 307 continued. Mr. Owen.

309. STRUCTURAL GEOLOGY (4) III. Identification and interpretation of geologic structures. Mechanical principles of deformable bodies, fracture and faulting, flow and folding. Elementary concepts of tectonics. Three lectures and one 3-hour laboratory. Prerequisite: Geology 100 or 104 and Physics 110 or 131. Mr. Pawlowicz.

310. GEOMORPHOLOGY (4) III. Nature, evolution, and classification of landforms and detailed analysis of the sequence of landforms in the normal cycle of erosion in relation to varied geologic structure, rocks, and climates. Two 1-day field trips required. Prerequisite: Geology 104. Miss Forsyth, Mr. Rich.

311. MINERALOGY (3) I. Minerals, with emphasis on association, genesis, and classification. Two lectures and two 2-hour laboratories. Prerequisite: Geology 103. Prerequisite or parallel: Chemistry 121 or 131. Credit is given for either Geology 306 or 311 and 312, but not for both. Mr. Mancuso.

312. MINERALOGY (3) II. Mineralogy 311 continued. Emphasis on crystallography and crystal chemistry with an introduction to x-ray diffraction techniques. Prerequisite: Geology 311. Mr. Walters.

321. METAMORPHIC PETROLOGY (4) II. Origin, mode of occurrence, and classification. Two lectures and two 2-hour laboratories. Prerequisite: Geology 311, 312. Mr. Mancuso.

401. ECONOMIC GEOLOGY (4) III. Offered 1971-72 and alternate years. Classification and genesis of metallic mineral deposits illustrated by the study of classic areas. Three lectures and one 3-hour laboratory. Prerequisite: Geology 309, 320. Mr. Mancuso.

411. OPTICAL MINERALOGY (4) I. Optical properties and instrumental methods of studying crystalline materials. Two lectures and two 2-hour laboratories. Prerequisite: Geology 311, 312. Mr. Kahle.

412. ADVANCED HISTORICAL GEOLOGY (4) I. Regional geologic history illustrated by classical areas, particularly in North America and Europe, environmental reconstruction, depositional cycles, and basin analysis. Three lectures. Prerequisite: Geology 308, senior standing. Mr. Owen.

416. PETROLEUM GEOLOGY (4) III. Offered 1970-71 and alternate years. Principles of subsurface geology as illustrated by the exploration for oil and gas. Three lectures and one 3-hour laboratory. Prerequisite: Geology 308, 309. Mr. Owen.

418. GEOLOGY OF OHIO (4) I. Survey of the bedrock and surficial geology of Ohio, with consideration of the state's economic mineral resources. Three lectures. Three full-day field trips are required. Prerequisite: Geology 100 or 105. Miss Forsyth.

419. VERTEBRATE PALEONTOLOGY (4) I. Offered 1971-72 and alternate years. Fossil vertebrates and their morphology, classification, and evolution. Three lectures and one 2-hour laboratory. One field trip is required. Credit is not given for both Geology 419 and 305. Prerequisite: Geology 100 or 105 or Biology 105. Mr. Howe.

421. HUMAN ENVIRONMENTAL GEOLOGY (3) II. A general consideration of those aspects of geology critical to the wise use of the human environment. Prerequisites: Geology 103 and 104, or Geography 127. Miss Forsyth.

472. MARINE GEOLOGY AND PALEOBIOLOGY (4) I. The modern marine environment in relation to the fossil and rock record; life relationships of paleontologically significant marine organisms and their relationships to marine sediments; distribution and geochemistry of marine sediments; and geological processes in the marine environment. One 3-hour meeting; two-week field trip required. Prerequisite: Geology 303 and 308, or consent of instructor. Mr. Steinker, staff.

475. WORKSHOP IN SEISMOLOGY (1-2) I, II, III, IV. Supervised program in the theory of seismology, operation of seismological observatory, and interpretation of seismic records. May be repeated to 8 hours. Prerequisite: consent of instructor. Graded S (satisfactory) or U (unsatisfactory). Mr. Pawlowicz.

480. SEMINAR IN GEOLOGY (3) I. Seminar study of a selected topic. May be repeated to 6 hours. Prerequisite: consent of instructor.

490. GEOLOGICAL PROBLEMS (1-4) I, II, III. Individual work for an advanced student who has shown proficiency and a marked degree of independence in his work. May be repeated to 6 hours. Prerequisite: consent of instructor.

493. FIELD EXPERIENCE (1-9) IV. Experience in recognition and study of geologic structures, landforms, and rock units in the field. Written report required. Conducted at the Geology Field

Camp in the Uinta Mountains, Utah. Not open to geology majors. Prerequisite: three geology courses, consent of instructor. Mr. Owen and staff.

494. FIELD GEOLOGY (1-9) IV. Principles and practice of field geology, including use of the Brunton compass, aerial photographs, and plane table surveying in geologic mapping. Final map and report required. Conducted at the Geology Field Camp in the Uinta Mountains, Utah. Prerequisite: Geology 309, consent of instructor. Mr. Owen and staff.

*GERMAN AND RUSSIAN

Instructor Graubart (Acting Chairman); Professor Gauerke; Associate Professors Alssen, Shllaku; Assistant Professors Gray, Matthews; Instructors Gabor-Parnell, Hartman, Karas, Schmidt, Stickler.

Full undergraduate majors are offered in German and Russian. Minors are offered in German and Russian. For placement in the first or second year courses (101-202), generally one year of high school study is equivalent to one quarter of college work in that language. Credit toward graduation is not allowed for 101, 102, 103, 201, 202 when the equivalent credit has been accepted from high school as part of the admission credits except that a student is allowed to duplicate one unit of his high school study with University credit. No credit toward graduation is allowed for less than one year in beginning German or Russian.

TEACHING METHODS

EDUCATION 373. FOREIGN LANGUAGE IN SECONDARY SCHOOLS (4) II. (Designed for prospective German and Russian teachers. For course description see listings under EDUCATION.)

COURSES IN GERMAN

For Programs of Study Abroad, see page 112.

101. ELEMENTARY GERMAN (4) I, II, III. Beginning oral-aural study of the language with equal attention to grammar and reading.
102. ELEMENTARY GERMAN (4) I, II, III. German 101 continued. Prerequisite: German 101 or one year of German in high school or equivalent.
103. ELEMENTARY GERMAN (4) I, II, III. German 102 continued. Prerequisite: German 102 or equivalent.
201. INTERMEDIATE GERMAN (4) I, II, III. Second-year college German. Grammar review, readings from contemporary German literature, conversation and discussion. Prerequisite: German 103 or two years of high school German or equivalent.
202. INTERMEDIATE GERMAN (4) I, II, III. Grammar review continued. Readings in scientific and literary German. (Sections are divided by type of readings.) Prerequisite: German 201 or

three years of high school German or equivalent.

311. INTRODUCTION TO GERMAN LITERATURE (3) I, III. Survey of major authors and movements in German literature. Emphasis on twentieth century literature. Prerequisite: German 202 or equivalent.
312. INTRODUCTION TO GERMAN LITERATURE (3) I, II. German 311 continued. Coverage will concentrate on nineteenth century literature. Prerequisite: German 202 or equivalent.
315. GERMAN CULTURE AND CIVILIZATION (4) III. The social, intellectual, and artistic life of the German-speaking peoples from medieval times to the present. A cultural-historical background course for literary studies and the teaching of German. Prerequisite: German 202 or equivalent.
317. COMPOSITION AND CONVERSATION (3) I, III. Extensive practice in spoken German; introduction to independent writing. Discussion and composition topics are based on current events and everyday life situations. Prerequisite: German 202 or equivalent.
318. COMPOSITION AND CONVERSATION (3) I, II. German 317 continued on a more advanced basis. (German 317 and 318 may be repeated to 6 hours credit each for students participating in German Study Abroad Programs.) Prerequisite: German 317 or equivalent.
407. THE CLASSICAL AGE OF GERMAN LITERATURE (4) III. Selected works of the classical period of German literature, especially the writings of Goethe and Schiller. Prerequisite: German 311, 312, 317 and 318.
409. GERMAN ROMANTICISM (4) I. Readings from the major authors of the Romantic era; introduction into the important secondary writings and the principal successors. Prerequisite: German 311, 312, 317 and 318.
410. GERMAN REALISM (4) II. Introduction into the major trends of German nineteenth century literature. Readings emphasize the drama and the important prose forms, such as the *Novelle*. Prerequisite: German 311, 312, 317 and 318.
412. CONTEMPORARY GERMAN LITERATURE (4) III. A study of selected works of twentieth century writers. Prerequisite: German 311, 312, 317 and 318.
417. ADVANCED COMPOSITION AND CONVERSATION (3) I, III. Designed to develop increased facility in written composition and the spoken language. Emphasis on grammatical structures and levels of style in writing and colloquial idiom in spoken dialogue. Prerequisite: German 318 or equivalent.
480. SELECTED READINGS IN GERMAN LITERATURE (4) I, II, III. Course topic is chosen to meet curriculum needs and student requests. May be repeated to 8 hours. Prerequisite: German 311, 312.
482. INTRODUCTION TO GERMANIC LINGUISTICS (4) I. Derivation of the modern Germanic languages from Proto-Indo-European.

Classification and history of the Indo-European languages with emphasis on the Germanic language group. Prerequisite: German 202 or equivalent.

491. READINGS IN GERMANIC LITERATURE (1-3) I, II, III. Independent reading for the advanced student who wishes to study a particular period or author. Prerequisite: Departmental permission and consent of instructor.

COURSES IN RUSSIAN

101. ELEMENTARY RUSSIAN (4) I, II, III. An introductory course, stressing the four basic skills of speaking, understanding, reading, and writing.

102. ELEMENTARY RUSSIAN (4) I, II, III. Russian 101 continued. Prerequisite: Russian 101 or one year of high school Russian or equivalent.

103. ELEMENTARY RUSSIAN (4) I, II, III. Russian 102 continued. Prerequisite: Russian 102 or equivalent.

201. INTERMEDIATE RUSSIAN (4) I, II, III. Continuation of Russian 101-103. Grammar, reading, composition, conversation, and translation. Prerequisite: Russian 103 or at least two years of high school Russian or equivalent.

202. INTERMEDIATE RUSSIAN (4) I, II, III. Russian 201 continued. Prerequisite: Russian 201 or three years of high school Russian or equivalent.

303. INTRODUCTION TO SCIENTIFIC RUSSIAN (3) III. A reading and grammar course especially designed for science-oriented students who wish to build up an effective reading knowledge of scientific Russian. Prerequisite: Russian 202 or equivalent.

311. RUSSIAN LITERATURE: FROM THE BEGINNINGS THRU PUSHKIN (3) I. A survey of literary trends from the eleventh to the early nineteenth century, touching on the medieval and baroque periods, the eighteenth century classicism and sentimentalism, and Pushkin. Prerequisite: Russian 202 or equivalent. (Non-majors in junior standing may be admitted with consent of instructor and will be reading the assigned works in English translation.)

312. RUSSIAN LITERATURE IN THE NINETEENTH CENTURY (3) II. A survey of the social, political, and cultural trends of the Golden Age. Principal writers: Gogol, Lermontov, Dostoyevsky, Tolstoy, Chekhov, Goncharov, Turgenev, and others. Prerequisite: Russian 202, 311. (Non-majors in junior standing may be admitted with consent of instructor and will be reading the assigned works in English translation.)

313. RUSSIAN LITERATURE IN THE TWENTIETH CENTURY (3) III. Principal literary monuments in the pre- and post-revolutionary periods. Principal writers: Blok, Mayakovsky, Pasternak, Evtushenko, Sholokhov, Solzhenitsyn, and others. Prerequisite: Russian 202, 311, and 312. (Non-majors in junior standing may be admitted with consent of instructor and will be reading the assigned works in English translation.)

315. READINGS IN RUSSIAN CULTURE (3) II. The language, syntax, and topics of academic and literary Russian as in the fields of the natural sciences, the social sciences, and the humanities. Prerequisite: Russian 202 or equivalent.

316. READINGS IN RUSSIAN CULTURE (3) III. Russian 315 continued. Prerequisite: Russian 202 or equivalent.

317. COMPOSITION AND CONVERSATION (3) I. Intensive oral and written work, with emphasis on mastery of phonology, basic structural patterns, coordinated with literary readings. Prerequisite: Russian 202 or equivalent.

318. COMPOSITION AND CONVERSATION (3) II. Russian 317 continued. Prerequisite: Russian 317.

319. JOURNALISTIC RUSSIAN (3) III. Practice in the language and syntax of contemporary Russian journalism: expository prose, newspapers, journals, monographs, magazines, etc. Prerequisite: Russian 202 or equivalent. (Russian 317 and 318 are recommended.)

401. RUSSIAN POETRY (4) I. A study of the Russian lyric from mid-eighteenth century through contemporary Soviet verse. Prerequisite: Russian 202 or equivalent and Russian 311-313.

402. THE RUSSIAN NOVEL (4) II. A detailed study of the great tradition of the Russian novel. Primary readings will consist of novels by authors such as Karamzin, Pushkin, Gogol, Turgenev, Tolstoy, Dostoyevsky, Gorky, and Solzhenitsyn. Course may be repeated subsequently for credit when it is offered with different content. Prerequisite: Russian 311-313.

403. RUSSIAN DRAMA (4) III. The major works of Russian dramatic literature as exemplified by Polotski, Fonvizin, Griboyedov, Pushkin, Ostrovski, Turgenev, Tolstoy, and with special emphasis on Chekhov and the Moderns. Prerequisite: Russian 202 or equivalent and Russian 311-313.

431. SOURCES OF RUSSIAN CULTURE (4) I. A study of the culture and civilization of the Russian people, from the origins to the recent past. Prerequisite: Russian 202 or permission of instructor.

432. RUSSIAN FOLKLORE (4) II. A survey of the major genres of Russian folk literature and folk culture and their influence on Russian literature and language. Prerequisite: Russian 202 or permission of instructor.

433. STRUCTURE AND GROWTH OF THE RUSSIAN LANGUAGE (4) III. History of the standard Russian language linked to cultural developments with special attention to Slavic and non-Slavic influences. Phonetic and grammatical patterns of contemporary Russian. (Required of Russian teaching majors.) Prerequisite: Russian 202 or equivalent.

480. SELECTED READINGS IN RUSSIAN LITERATURE (3) III. Course topic is chosen to meet curriculum needs and student requests. May be repeated to 6 hours. Prerequisite: Russian 202 or equivalent, Russian 311, 312.

HEALTH AND PHYSICAL EDUCATION — MEN

Professors Cooper (Chairman), Keefe; Associate Professors Bellard, Bowers, Creason; Assistant Professors Brodt, Cochrane, Conibear, Crable, Dudley, Flannigan, Gibson, Herbert, C. Jackson, T. Kisselle, Livengood, Nehlen, Parsons, Piper, Ruehl, Sandy, Scholler, Stubbs, A. White, R. Young; Instructors Beard, Chismar, Gill, Haley, Hyland, Lorenzen, Plaunt, Thomas, Tranquil, Tyson, Vivian.

COURSES FOR MEN

100. GENERAL PHYSICAL EDUCATION (1) I, II, III. Each freshman must complete three units from a wide selection of activities such as golf, tennis, swimming, ice skating, etc. Two hours a week.*

101, 102, 103. GENERAL PHYSICAL EDUCATION FOR PHYSICAL EDUCATION MAJORS (1) I, II, III. Activities are prescribed.

105, 106, 107. SPORTS SKILLS AND COACHING TECHNIQUES (3 each) I, II, III. Block program. Meets two hours a day five days a week. For a Health and Physical Education major or minor only.

200. GENERAL PHYSICAL EDUCATION (1 each quarter) I, II, III. Elective program in advanced sports skills with emphasis on recreational and carry-over activities. Open to any student. Two hours a week.*

261-270. ADVANCED SPORTS SKILLS AND COACHING TECHNIQUES. Sports skills and coaching techniques in the following team sports. A Health and Physical Education major must elect a minimum of two courses. No student may take more than four courses for credit toward graduation. 261. BASKETBALL (3) I; 262. BASEBALL (3) I; 263. SOCCER (3) I; 264. GYMNASTICS (3) II; 265. SWIMMING (3) II; 266. FOOTBALL (3) III; 267. HOCKEY (3) III; 268. LACROSSE (3) III; 269. TRACK AND FIELD (3) III; 270. WRESTLING (3) III.

303. CORRECTIVES—MEN (3) I, II, III. Examination for, prevention of, and correction of postural and orthopedic defects by exercise, massage, good hygiene. Prerequisite: junior standing or consent of instructor.

307. ADVANCED THEORY AND PRACTICE FOR MEN (3) I, II, III, IV. A practical experience in planning, organizing, and conducting activities in an actual class situation. Prerequisite: junior standing. Staff.

310. CARE AND PREVENTION OF SPORTS INJURIES (4) I, II, III. Emphasis on prevention, evaluation, rehabilitation, and immediate and temporary care of injuries. Lecture and laboratory experience in basic techniques related to bandaging and transportation of the individual. Prerequisite: Biology 331 or Health and Physical Education 303 and junior standing. Limited to a student in the College of Education.

* Accepted for Arts and Sciences credit.

320. OFFICIATING—FOOTBALL AND BASKETBALL (2) I. Mr. Sandy.

321. OFFICIATING—TRACK AND BASEBALL (2) III. Mr. Sandy.

329. COACHING—FOOTBALL (3) I. Strategy, generalship, methods in coaching football. Mr. Nehlen.

330. COACHING—TRACK (3) III. Strategy, generalship, methods in coaching track. Mr. Brodt.

331. COACHING—BASKETBALL (3) I. Strategy, generalship, methods in coaching basketball. Mr. Conibear.

332. COACHING—BASEBALL (3) III. Strategy, generalship, methods in coaching baseball. Mr. Young.

HEALTH, PHYSICAL EDUCATION AND RECREATION—WOMEN

Associate Professor Clement (Chairman); Professors Hooley, Logsdon, Watt; Associate Professors Andrews, Kratz, Luedtke, Torgerson, Whitney; Assistant Professors Black, Heskett, Peterson, Sidwell, Temple, Zanger; Instructors Campbell, Durentini, Hager, C. Martin, Parent, Parks, Preston, Scott; Part-time Instructors J. Kisselle, N. Martin.

COURSES FOR WOMEN

100. GENERAL PHYSICAL EDUCATION (1) I, II, III, IV. Three quarters required of each freshman woman. Foundations of physical education and demonstrated swimming proficiency are required with remaining unit or units to be taken in elective activities. Two hours a week.

101, 102, 103. Required of all freshmen women physical education majors and minors. Includes soccer, rhythmic form and analysis, foundations of physical education with one quarter of electives to satisfy proficiencies.

113. FOLK, SQUARE, AND BALLROOM DANCING (3) I, II, III. Introduction to the technique of folk, square, and ballroom dancing. Five hours a week. Mrs. Black.

114. THEORY AND PRACTICE (3) I, II, III. Theory and practice in gymnastics including tumbling and trampoline. Five hours a week. Mrs. Campbell, Mrs. C. Martin.

200. GENERAL PHYSICAL EDUCATION (1) I, II, III. An elective program with an offering of activities such as golf, dance, gymnastics, ice skating and tennis. Two hours per week.*

201, 202, 203. Required of all sophomore women physical education majors and minors. 201 and 202 offer choices in individual and dual activities and choice of swimming, basketball, or volleyball as needed. 203, Archery.*

210. COACHING AND OFFICIATING (5) I, III. Methods of teaching team sports and theory and practice in coaching and officiating in field hockey, volleyball, and basketball. Prerequisite: knowledge and skill demonstrated at Bowling Green in volleyball, basketball, and either field hockey or soccer. Miss Luedtke.

* Accepted for Arts and Sciences credit.

212. THEORY AND PRACTICE (3) I, III. Theory and practice in tennis, marching, and badminton. Prerequisite: knowledge and skill demonstrated at Bowling Green in tennis. Five hours a week. Miss Parks.

214. AQUATICS (3) I, II, III. Skills, methods, and materials in strokes, synchronized swimming, meets, speed swimming, and diving. Prerequisite: skill demonstrated at Bowling Green in basic swimming strokes. Miss Andrews.

222. ADVANCED SYNCHRONIZED SWIMMING (2) I, II, III. Provides an opportunity for the advanced synchronized swimmer to participate in the annual production and demonstrations. Designed to offer experience in choreography, lighting, publicity, and production. Laboratory hours to be arranged. May be repeated to 8 hours. Prerequisite: consent of instructor. Miss Andrews.

308. ADVANCED THEORY AND PRACTICE (3) I, II, III, IV. Participation and assistance in teaching of University classes. Five hours a week. Prerequisite: Health and Physical Education 352. Miss Clement, Miss Hager.

324. METHODS IN TEACHING DANCE (3) I, II, III. Methods and materials used in teaching folk, square, and ballroom dance. Five hours a week. Prerequisite: Health and Physical Education 113. Mrs. Heskett, Miss Whitney.

HEALTH AND PHYSICAL EDUCATION COURSES FOR MEN AND WOMEN

109. PERSONAL HEALTH (3) I, II, III. A basic course in personal hygiene.

110. COMMUNITY HEALTH (2) I, II, III. A basic course in all aspects of community health.

123. CAMP LEADERSHIP (3) I, III. Designed for a student interested in summer camp work with emphasis on types of camps and principles and practices of program planning. Mrs. Heskett, Miss Peterson.

204. COMMUNITY RECREATION (3) I, II, III. Materials, methods, and techniques of leadership, participation, and planning for recreation in social settings for all ages. Miss Andrews.

224. DANCE WORKSHOP (2) I, II, III. Offers an opportunity for experience in choreography and for participation as a member of a concert group. May be repeated to 8 hours. Prerequisite: consent of instructor. Mrs. Heskett.

301. ORGANIZATION AND ADMINISTRATION OF RECREATION (3) I. Survey of the professional field of recreation: goals, budgeting, planning, carrying through of programs in several areas, especially community, industry. Miss Hooley.

302. KINESIOLOGY AND CORRECTIVES (5) I, II, III. The skeleton muscular system; muscle action; application to problems in movement. Postural examination, prevention and correction of defects through exercise. Prerequisite: Biology 331 and 332. Miss Whitney, Mr. Livengood.

313. FIRST AID AND SAFETY EDUCATION (4) I, II, III, IV. Emphasis on prevention with consideration of case aspects of pupil injuries.

Satisfactory completion leads to Red Cross Certificate in First Aid. Staff.

314. FIRST AID—INSTRUCTOR'S COURSE (2) II, III. Leads to American Red Cross First Aid Instructor's Certificate. Prerequisite: junior standing and current Red Cross Standard and Advanced Certificates. Miss Clement, Miss Hooley, Mr. Stubbs, Mrs. Zanger.

317. MODERN DANCE (5) I, II, III. Basic dance movements, beginning and intermediate technique, analysis of rhythmic elements in movement and their application to dance, relation of music to dance, elementary factors of composition, and development of simple dance studies. Nine hours a week. Miss Whitney.

322. RED CROSS WATER SAFETY INSTRUCTOR'S COURSE—WSI (2) II, III. Completion certifies the student to conduct and to certify Red Cross swimming and life saving courses except WSI. Prerequisite: Current Senior Life Saving Certificate, evidence of teaching need, and consent of instructor. Miss Andrews, Mr. Stubbs, Mrs. Zanger.

323. CAMP ADMINISTRATION (3) II. Consideration of budgets, equipment, campsites, program, and personnel. Designed for the student preparing for a camp administrative position. Prerequisite: H.P.E. 123 or camp counseling experience. Miss Hooley.

326. DANCE DRAMA (3) III. Problems in dramatic dance production with emphasis on composing, casting, directing, costuming, lighting, makeup, and publicity with practice in the production of a dance program. Four hours a week. Prerequisite: consent of instructor. Miss Whitney.

338. CONCEPTS OF SEX EDUCATION (3) I, II, III, IV. Information and concepts of sex education including the physiological, social, psychological, and moral aspects of human sexuality. Miss Luedtke, Miss Sidwell, Miss Peterson.

342. PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOLS (3) I, II, III, IV. For the classroom teacher. Principles, objectives, curriculum, and instructional and resource materials. Not open to the student who has credit for Health and Physical Education 354. Mrs. Black, Miss Logsdon, Miss Parent.

346. METHODS IN ELEMENTARY SCHOOL HEALTH EDUCATION (3) II. Organization and teaching of health in the elementary grades. Prerequisite: Health and Physical Education 109, 110. Mrs. Black.

352. PRINCIPLES AND PRACTICES OF PHYSICAL EDUCATION IN THE SECONDARY SCHOOLS (4) I, II, III. Principles, objectives, curriculum, and methods of teaching physical education in the secondary schools. Prerequisite: Education 302 or consent of instructor. Mr. Bellard, Mr. Creason, Miss Watt.

354. PRINCIPLES AND PRACTICES OF PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOLS (4) I, II, III. Principles, objectives, curriculum, and methods of teaching physical education in the elementary schools. With emphasis on laboratory experiences. Prerequisite: Education 302. Mr. Beard, Miss Logsdon, Mrs. Torgerson.

362. DRIVER EDUCATION—INSTRUCTOR'S COURSE (3) I, II, III. To qualify a student to organize, administer, and teach a course in driver education. Prerequisite: junior standing and a driver's license. Not open to the elementary education major. Mr. Bellard, Mr. Herbert.

409. HEALTH EDUCATION IN THE SCHOOL AND IN THE COMMUNITY (4) I, II, III, IV. School and community health problems. Principles, objectives, curriculum, and methods. Prerequisite: Health and Physical Education 109, 110, or consent of instructor. Mr. Cooper, Mr. Creason, Miss Hooley, Mr. Keefe, Mr. Parsons, Miss Sidwell.

412. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION (4) I, II, III. Organization and administration of the total physical education program including intramurals, extramurals, and interscholastic athletics. Prerequisite: senior standing. Mr. Creason, Miss Kratz, Mr. Piper, Miss Scott.

424. HISTORY OF DANCE (3) II. Broad, cultural survey of dance from primitive times through 1300 stressing its relationship to the development of other art forms. Miss Whitney.

431. PROBLEMS OF INTRAMURAL AND EXTRAMURAL SPORTS (3) I, II, III. Planning, promoting, and administering intramural and extramural sports. Miss Luedtke, Mr. Sandy.

432. ADAPTED PHYSICAL EDUCATION AND RECREATION FOR THE HANDICAPPED (5) III. Theory and practical field work in programming of handicapped people in physical education and recreation. Prerequisite: Health and Physical Education 302 or 342 or consent of instructor. Miss Hooley, Miss Kratz.

433. PHYSICAL EDUCATION FOR THE CLASSROOM TEACHER OF HANDICAPPED PUPILS (4) I, II, III. Principles, objectives, instructional and resource materials, observations, and methods of teaching physical education in the special education classroom. Prerequisite: junior standing in special education or consent of instructor. Not open to a student with credit for Health and Physical Education 342 or 354. Miss Kratz.

443. PHYSIOLOGICAL EFFECTS OF MOTOR ACTIVITY (4) II. Theory and practice concerning physiological variations associated with motor performance. Three lectures and two laboratories. Prerequisite: Biology 331 and 332. Mr. Bower.

446. PUBLIC HEALTH ADMINISTRATION (4) I, II, III, IV. A comprehensive survey of health department organization, public health laws, record keeping, and its importance in planning by public health agencies.

461. HISTORY OF PHYSICAL EDUCATION (4) II. A seminar-type course with opportunity for class discussion and individual research. Mr. Keefe.

470. INDEPENDENT STUDY IN HEALTH, PHYSICAL EDUCATION AND RECREATION. (2-5) I, II, III, IV. Project must be approved by project supervisor prior to registration. May be repeated. Staff.

480. SEMINAR IN TEACHING CONTROVERSIAL ISSUES IN HEALTH EDUCATION (3) I, III, IV. Teaching methods and procedures in discussing sex education, mental health, tobacco, alcohol, and drugs. Mr. Cooper.

490. SEMINAR IN PHYSICAL EDUCATION (4) III. Analysis of dialogue concerning current issues, trends in physical education, supplemented by individual study. Prerequisite: Health and Physical Education 352 and a 2.7 accumulative average in the major. Miss Hooley, Miss Sidwell, Miss Temple.

*HISTORY

Professors Rock (Chairman), Givens, Oglevee, G. Platt, V. Platt, Sternsher, Twyman; Associate Professors Friedman, Graham, Hess, Moore, Roller, Rowney, Skaggs, Thomas; Assistant Professors Baumann, Chen, Daly, Danziger, DeCola (Firelands), Forse, Kawashima, Kiple, Resch, Seavoy, Wright; Instructors Alverson (Firelands), Carson.

151. WORLD CIVILIZATION: TO 1300 (4) I, II, III. A broad cultural survey of the ancient Near Eastern and Eastern civilizations; Greece and Rome; medieval life and institutions; Asian civilization to 1300. A general introduction to the study of history; should be followed by History 152, 153.

152. WORLD CIVILIZATION: 1300 TO 1815 (4) I, II, III. History 151 continued. Renaissance; Reformation; Age of Reason; commercial and industrial revolutions; Asian civilization, sixteenth-nineteenth century; English and French revolutions.

153. WORLD CIVILIZATION: 1815 TO PRESENT (4) I, II, III. History 152 continued. Liberalism and nationalism; imperialism and world conflict; nineteenth and twentieth century science and culture; the world in the present age.

205. THE UNITED STATES TO 1865 (4) I, II, III. A survey of the political, constitutional, economic, and cultural development of the U.S. from its early settlement to the close of the Civil War.

206. THE UNITED STATES SINCE 1865 (4) I, II, III. History 205 continued. Surveys the reconstruction period, growth of American industry, agricultural problems, progressive movement, World War I, postwar economic problems, New Deal, World War II, and aftermath.

280. ASIAN CIVILIZATION (4) I. A broad survey of traditional cultures of the major countries of East and South Asia before the arrival of the West. Emphasis on culture rather than political history. Mr. Chen, Mr. Kawashima.

404. UNITED STATES ECONOMIC HISTORY SINCE 1865 (4) II. Analysis of the development of American economic thought, agriculture, labor unions, transportation, corporations, urbanism. Prerequisite: History 206 or consent of instructor. Mr. Moore.

406. HISTORY OF OHIO (4) III. Pre-colonial background, early exploration and settlement; Northwest Territory; Ohio in the French and Indian War, American Revolution,

and War of 1812; Ohio's place in national development. Prerequisite: History 205 and 206 or consent of instructor. Mr. Wright.

407. AFRO-AMERICAN HISTORY* (4) II. An examination of the economic, social, and intellectual history of Afro-Americans from African origins to the present. Prerequisite: History 206 and consent of instructor. Mr. Friedman.

409. LATIN AMERICA: THE PERIOD BEFORE INDEPENDENCE (4) I. Latin-American history treating these phases: pre-Columbian; discovery and conquest; colonial; wars of independence. Attention is given the role of indigenous and European cultures in the development of Latin America. Mr. Kiple, Mr. Thomas.

410. LATIN AMERICA: THE TWENTY REPUBLICS (4) II. National histories of the Latin-American republics are traced. Emphasis on the common and unique features of these states, relations between the U.S. and Latin America, development of the Pan-American movement, and role of Latin America in world affairs. Mr. Kiple, Mr. Thomas.

411. MODERN MEXICO (4) III. Historical analysis of the first Latin-American state to experience a political, social, and economic revolution in the twentieth century. Explores causes of the revolution, leaders and institutions it produced, emergence of Mexico as a relatively stable and progressive state. Mr. Thomas.

412. CHILE AND THE LA PLATA (4) III. A political, economic, social, and intellectual examination of Argentina, Chile, Uruguay, and Paraguay from independence to the present. Mr. Thomas.

413. THE CARIBBEAN AND THE SPANISH MAIN (4) III. Political, economic, and social development of the Greater Antilles and Spanish Main from the seventeenth-twentieth centuries with special focus on war and trade, slavery, revolution, caudillism, and communism in the Caribbean. Mr. Kiple.

414. CANADA (4) I. European colonial rivalry, problems of European-settled colonies, emergence of colonial self-government, confederation movement, search for national identity, nature of a commonwealth nation, role as a mediator in Anglo-American relations, importance as an independent neighbor. Mr. Givens.

419. THE WESTWARD MOVEMENT IN AMERICA (4) I. Territorial and economic expansion of the U.S. Emphasis on economic, political, social development of the trans-Mississippi frontier including fur trade, mining, and land policies. Prerequisite: History 205 and 206 or consent of instructor. Mr. Danziger.

420. PROBLEMS IN THE AMERICAN WEST (4) II. An intensive study of selected problems in the history of the trans-Mississippi West: fur trade, Manifest Destiny, mining, transportation, cattle industry, Indian barrier, assimilating the Indian, farmers' frontier, modern West. Mr. Danziger.

421. AMERICAN COLONIAL HISTORY, 1492-1763 (4) I. European backgrounds of American history, establishment of European settlements and institutions, emergence of colonial culture, conflict between France and England for the New World. Mrs. Platt.

422. THE AMERICAN REVOLUTIONARY ERA, 1763-1789 (4) II. Increasing antagonism between the colonies and Britain, the Revolution, period of the Confederation, and the framing of the Constitution. Prerequisite: History 205 or consent of instructor. Mrs. Platt.

423. THE NEW NATION: THE U.S. FROM 1789-1836 (4) III. Federalist, Jeffersonian, and Jacksonian politics and ideology; rise of nationalism; War of 1812. Prerequisite: History 205 or consent of instructor. Mr. Skaggs.

425. CONFLICT AND DIVISION IN THE U.S. (4) I. Analysis of the economic, social, political institutions of the period 1836-1860; special attention is given to the Old South and to forces that produced the Civil War. Prerequisite: History 205 or consent of instructor. Mr. Twyman.

426. CIVIL WAR AND RECONSTRUCTION, 1861-1877 (4) II. Political, economic, and cultural conditions during the War and resulting problems to the peoples and governments of both sections continuing through the postwar period. Prerequisite: History 205 and 206 or consent of instructor. Mr. Twyman.

427. AMERICAN SOUTH, 1865-PRESENT (4) III. Reconstruction South, new industrial growth, evolution of Southern agriculture, racial and labor problems, the South in American political life, Southern education and culture, the South today. Prerequisite: History 206 or consent of instructor. Mr. Roller.

428. EMERGENCE OF MODERN AMERICA, 1877-1900 (4) III. Transformation of the U.S. from an isolated, agrarian nation into a modern, industrialized world power; the economic, social, cultural, and political problems which attended this change. Prerequisite: History 206 or consent of instructor. Mr. Moore.

429. PROGRESSIVE ERA AND YEARS OF REPUBLICAN ASCENDANCY, 1900-1933 (4) I. American political and economic progressivism; the *Great Crusade* of World War I; "normalcy" and the business society of the Twenties; the *Great Crash* and early depression years; intellectual, cultural, social change of the *Roaring Twenties*. Prerequisite: History 206 or consent of instructor. Mr. Roller.

430. RECENT U.S. HISTORY (4) II. History of the U.S. from 1933 to present: the New Deal, World War II, and the postwar era. Prerequisite: History 206 or consent of instructor. Mr. Sternsher.

432. AMERICAN CONSTITUTIONAL HISTORY (4) II. Colonial origins of federal Constitution and Bill of Rights. Subsequent development of constitutional and democratic government to the outbreak of the Civil War. Attention is given to varying interpretations of the Constitution and the evolution of judicial review. Prerequisite: History 205 or Political Science 201 or consent of instructor. Mr. Seavoy.

* To become a two-quarter sequence in 1971-72.

433. AMERICAN CONSTITUTIONAL HISTORY (4) III. Continuation of History 432 dealing with the constitutional impact of the Civil War and Reconstruction policies and amendments. Attention is given to varying constitutional interpretations affecting civil rights, industrialization, war, and depression. Prerequisite: History 206 or Political Science 202 or consent of instructor. Mr. Seavoy.
434. EARLY AMERICAN SOCIAL AND INTELLECTUAL HISTORY (4) I. Major trends in American thought, religion, society, culture, manners from colonial times to 1812. Prerequisite: History 205 or English 303 or consent of instructor. Mr. Skaggs.
435. NINETEENTH CENTURY AMERICAN SOCIAL AND INTELLECTUAL HISTORY (4) II. Effects of romanticism, democracy, slavery, industrialization, and transportation revolution on American society. Prerequisite: History 205 or 206 or English 409 or consent of instructor. Mr. Friedman.
436. RECENT AMERICAN SOCIAL AND INTELLECTUAL HISTORY (4) III. Impact of industrialization, urbanization, immigration, the welfare state, and world involvement on the nation's thought and society. Prerequisite: History 206 or English 304 or consent of instructor. Mr. Friedman.
437. U.S. FOREIGN POLICY TO 1917 (4) I. Development of U.S. foreign policy and diplomatic activities: American Revolution—U.S. entry into World War I. Prerequisite: History 206 or consent of instructor. Mr. Hess.
438. U.S. FOREIGN POLICY SINCE 1917 (4) II. Course and character of American response to its position as a world power since 1917. World War I, interwar compromise, U.S. in World War II and the *cold war*. Prerequisite: History 206 or consent of instructor. Mr. Hess.
440. ANCIENT NEAR EAST AND GREECE TO 650 B.C. (4) I. History of Mesopotamia, Egypt, Anatolia, Israel, Persia from the Neolithic Revolution to Iron Age imperialism; emphasis on institutions, religion, literature, art. Genesis and gestation of Aegean civilization in its constituent forms from Mycenaean fortress to Hellenic *polis*. Prerequisite: History 151 or consent of instructor. Mr. Daly.
441. HELLENIC AND HELLENISTIC CIVILIZATION: 650-146 B.C. (4) II. Maturation of Hellenism within the context of the *polis*, zenith of fifth-century Athens, failure of the *polis*. Alexander the Great and Hellenistic civilization. Rise of Rome and the making of an empire. Prerequisite: History 151 or consent of instructor. Mr. Daly.
442. ROMAN EMPIRE (4) III. Cicero and Caesar: cultural synthesis and political collapse in the Republic. Augustan Principate: stability and sterility under *Pax Romana*. Christianity and the metamorphosis of imperial civilization. Constantinian State and Late Antiquity. Prerequisite: History 151 or consent of instructor. Mr. Daly.
443. MEDIEVAL CIVILIZATION, 476-1000 (4) II. Basic political, social, economic, cultural developments from the fall of Rome to the emergence of feudal Europe. Some emphasis on developments in the Islamic and Byzantine East. Mr. Forse.
444. MEDIEVAL CIVILIZATION, 1000-1400 (4) III. Political, social, economic, cultural trends during the high and late Middle Ages. Attention to relations between the West and the Byzantine and Islamic East. Mr. Forse.
445. THE RENAISSANCE (4) I. Consideration of economic, political, literary, artistic aspects of the Renaissance in Italy and its influence on Western Europe. Mr. Oglevee.
446. THE REFORMATION (4) II. Consideration of religious, economic, social, cultural aspects of the age of the Reformation. Mr. Oglevee.
447. EUROPEAN INTELLECTUAL HISTORY: SCIENTIFIC REVOLUTION TO THE ENLIGHTENMENT (4) I. Scientific, philosophical, religious, aesthetic, historical thought during the late sixteenth, seventeenth, eighteenth centuries. Prerequisite: previous work in philosophy or literature is strongly recommended.
448. EUROPEAN INTELLECTUAL HISTORY: ROMANTICISM AND REALISM (4) II. Romanticism and realism as general intellectual movements in philosophy, literature, art, religion, science, historiography with emphasis on Rousseau, Hegel, Marx, Darwin. Prerequisite: History 447 or any of its prerequisites.
449. EUROPEAN INTELLECTUAL HISTORY: NIETZSCHE TO THE PRESENT (4) III. Neo-romanticism and modernism in the arts, Nietzsche, Freud and Jung, the new science, crisis theology, existentialism, social and historical thought. Prerequisite: History 448 or its prerequisites.
453. EUROPEAN DIPLOMATIC HISTORY, NINETEENTH CENTURY-1914 (4) I. European foreign relations and diplomatic practices stressing policies and actions of the great powers and their statesmen. Prerequisite: History 153 or consent of instructor. Mr. Rock.
454. EUROPEAN DIPLOMATIC HISTORY, TWENTIETH CENTURY (4) II. History 454 continued. Europe's diplomatic role in a rapidly changing world. Prerequisite: History 153 or consent of instructor. Mr. Rock.
458. ENGLAND, 55 B.C.-1688 (4) II. Roman Britain, Anglo-Saxon period, Norman feudalism, growth of the common law, evolution of Parliament, Protestant Revolt, overseas expansion. Mr. Givens.
459. GREAT BRITAIN, 1688 — PRESENT (4) III. Industrial and agricultural changes, struggle with revolutionary France, Victorian England, political and economic reform, two World Wars and their consequences. Mr. Givens.
462. BRITISH EMPIRE-COMMONWEALTH (4) III. Rationale of imperialism, expansion of Britain overseas, development of her colonial holdings, evolution of the concept and reality of the Commonwealth of Nations. Mr. Givens.

463. FRENCH REVOLUTION AND NAPOLEON (4) II. Impact of the French Revolution on the society of the Old Regime. Formation of the revolutionary creed; Great Revolution, Jacobin Republic, Thermidor; Napoleon and the principles of 1789. Prerequisite: History 152 or consent of instructor. Mr. Graham.

464. HISTORY OF FRANCE SINCE 1815 (4) III. Social and economic development of France, 1815-Third Republic; Jacobin radicalism, emergence of French labor movement; France between the two wars; Vichy and the Resistance; problems of the Fourth and Fifth Republics. Prerequisite: History 153 or consent of instructor. Mr. Graham.

466. GERMANY AND CENTRAL EUROPE, 1648-1918 (4) II. Growth of Prussia, impact of French Revolution, Austro-Prussian rivalry in central Europe, Bismarckian Empire and its collapse in 1918. Major expressions of Germanic intellect and culture. Prerequisite: History 152 and 153 or consent of instructor. Mr. Platt.

467. GERMANY AND CENTRAL EUROPE, 1918-PRESENT (4) III. Weimar Republic, National Socialist period, postwar reconstruction, Germany split in the *cold war*, Germany in the restabilized European community since 1955. Prerequisite: History 153 or consent of instructor. Mr. Platt.

469. MEDIEVAL AND IMPERIAL RUSSIA, 900-1825 (4) I. Racial, political, and religious origins; development of the autocracy; national and imperial problems to the death of Alexander I. Mr. Rowney.

470. MODERN RUSSIA, 1825-1945 (4) II. Traces revolutionary origins; Russia's social, economic, political position in the nineteenth and twentieth centuries. Mr. Rowney.

476. EUROPE FROM 1870 TO 1919 (4) I. Emphasizes domestic history of the European great powers; such European-wide movements as nationalism, socialism, militarism, colonialism; attention is given to intellectual and artistic trends; background of World War I. Prerequisite: History 153. Mr. Platt.

477. EUROPE FROM 1919 TO PRESENT (4) II. History 476 continued. Paris Peace Settlement; post-war economic problems; emergence of Soviet Russia, Fascist Italy, National Socialist Germany; origins and aftermath of World War II; the *cold war*. Prerequisite: History 153. Mr. Platt.

480. HISTORY OF AFRICA TO THE EIGHTEENTH CENTURY (4) I. History of the African continent including prehistory, formation of African groupings, contacts with ancient world, growth of African states and empires; background and impact of Islam; arrival of the Portuguese and slave trade.

481. HISTORY OF AFRICA FROM EIGHTEENTH CENTURY-PRESENT (4) II. Anti-slavery movement, rise of forest and savannah kingdoms, Islamic revival, impact of Christianity, European exploration, imperialism, colonialism, nationalism, and the rise of modern African states.

482. TRADITIONAL CHINA (4) I. China from pre-historic times to early nineteenth century; emphasis on the development of Chinese civilization, its influence on other nations of Asia, and dynastic changes. Prerequisite: History 280 or consent of instructor. Mr. Kawashima.

485. MODERN CHINA (4) I. Chinese response to the West in the nineteenth and twentieth centuries covering events from the First Treaty Settlement until the present. Emphasis is on social and economic change. Mr. Kawashima.

486. MODERN JAPAN (4) III. Japan since its opening to Western intercourse in 1853. Emphasis is on modernization process with concomitant political, social, economic, intellectual changes. Mr. Chen.

487. TRADITIONAL JAPAN (4) II. History of Japan to 1853. A survey of political, economic, social and cultural history before her "opening" to the West. Prerequisite: History 280 or consent of instructor. Mr. Chen.

488. HISTORY OF INDIA TO 1600 (4) II. Survey of Indian civilization from the Indus Valley culture to 1600. Development of political thought and traditions, religious thought and practices, social and economic structures, influence on other parts of Asia and on the West.

489. MODERN INDIA (4) III. Indian history since 1600. Development, character, contributions of British imperialism. Emergence of Indian nationalism and the leadership of Gandhi and Nehru. Independence and partition of India; India and Pakistan since 1947.

490. SENIOR SEMINAR IN HISTORY (4) I, II, III. For a selected senior majoring in history giving attention to the examination of historical literature, problems of historical research, discussion of various historical methods. Open to a history major by invitation only.

491. TOPICS IN HISTORY (3-5). Offered on demand. Study of selected topics or subject areas within the field of history.

495. HONORS READINGS IN HISTORY (4) I, II, III. Individual readings in consultation with the instructor in fields of special historical interest. Prerequisite: consent of the Department chairman and the instructor.

HOME ECONOMICS

Professors Halstead (Chairman), McGeever; Associate Professors L. Kivlin, Wall; Assistant Professors Glenn, Lane, Mackey, D. Williams, L. Wilson; Instructors Amend, Capps, Coe, deOliveira, Grosboll, D. Hamilton, Hann, Hatcher, Mechling, I. Skinner, C. Smith, R. Stout, D. Vatan; Part-time Assistant Instructor Bartz.

101. CLOTHING (3) I, II, III. Fundamentals of clothing construction using commercial patterns. Elements and principles of design related to clothing and wardrobe planning. One 1-hour period, two 2-hour periods. Mrs. Wall.

102. CLOTHING (3) II, III. Home Economics 101 continued with emphasis on custom methods. Socio-psychological and economic aspects

of clothing for the individual and the family. One 1-hour period, two 2-hour periods. Staff.

103. TEXTILES (4) I, II, III. Basic facts concerning fibers, yarns, and cloth construction; finishes; color and design; production costs; wearing qualities. Selection, buying, and care of fabrics for personal and household uses. Three 1-hour periods, one 2-hour period. Mrs. Capps.

105. PERSONAL AND FAMILY RELATIONSHIPS (4) I, II, III. Growth and development of the college student as an individual and in social relationships in the family, college, community; activities and functions of the present-day family. Mrs. Hamilton, Mrs. Mechling, Mrs. Skinner, Mrs. Vatan.

107. FAMILY LIFE OF THE AMERICAN NEGRO (3) I, II, III. Living patterns of the American Negro family with emphasis on historical development, present status, problems, and prognosis. Staff.

203. FLAT PATTERN DESIGN (4) I, II, III. Creative expression and application of principles of dress design through the media of flat pattern. Development of original design from sketch to finished garment. Two 1-hour periods and two 2-hour periods. Prerequisite: Home Economics 102, 103. Mrs. Glenn, Mrs. Wilson.

204. DRESS DESIGN THROUGH DRAPING (3) II, III. Basic principles and techniques of draping used in creative clothing design. Techniques in handling various fabrics and application of couturier methods of construction. Three 2-hour periods. Prerequisite: Home Economics 203. Mrs. Glenn.

205. HOME MANAGEMENT (4) I, II, III. The effect of values and philosophy on decisions regarding the use of family resources: time, energy, knowledge, ability, skills, and attitudes as they are used to achieve family goals. Principles of work simplification, history of discipline, and evaluation in home management. Miss Grosboll, Mrs. Kivlin.

206. HOUSEHOLD EQUIPMENT (4) II, III. Selection, operation, care, and arrangement of household equipment for safe operation and effective management. Prerequisite: Home Economics 205. Staff.

207. ESSENTIALS OF NUTRITION (4) I, II, III, IV. A non-technical course. Application of fundamental principles of nutrition in the selection of adequate diet for optimal health. Not open to the home economics education major. Mrs. Hann, Mrs. Mackey.

210. FOOD PREPARATION (3) I, II, III. Principles of food preparation. One 1-hour period and two 2-hour periods. Prerequisite: Chemistry 112 or 122. Mrs. Hann.

211. EXPERIMENTAL FOODS I (3) I, II, III. An experimental approach to the chemical and physical properties of foods. One 1-hour period and two 2-hour periods. Prerequisite: Home Economics 210. Staff.

212. MEAL MANAGEMENT (3) I, II, III. Management of resources for various types of meal service including food selection and buying.

One 1-hour period and one 3-hour period. Prerequisite: Home Economics 211. Mrs. Coe.

289. SUPERVISED FIELD EXPERIENCE (1-5) IV. Supervised work experience in the area of specialization. Titles to appear on transcript are: home economics education, child and family, food and nutrition, and clothing. Prerequisite: sophomore standing.

301. DEMONSTRATIONS IN HOME ECONOMICS (2) I, III. Experiences in organization of acquired knowledge and execution of individual and team demonstrations. Two 2-hour periods. Home Economics majors only. Prerequisite: Speech 102. Mrs. Amend, Miss Grosboll.

302. FOUNDATIONS FOR MARRIAGE AND FAMILY RELATIONS (4) I, II, III. Assist in development of a basic philosophy about marriage and family development in a democratic society. The relationship of emotional, psychological, and physical relationships to personal aspirations, social requirements, and family interrelationships. Prerequisite: Home Economics 105 or Sociology 101 or consent of instructor. Staff.

303. HOME FURNISHING (4) I, II, III, IV. Principles of design and their application to the treatment of interiors; selection of furniture, furnishings, and accessories of the home from the artistic, economic, and maintenance point of view. Prerequisite: Art 101. Mrs. Glenn.

304. TAILORING (3) I, II. Specialized techniques of professional tailoring through the construction of a suit or coat. Review of recent developments in clothing and textiles. Three 2-hour periods. Prerequisite: Home Economics 103, 203. Mrs. Wall, Mrs. Wilson.

307. NUTRITION (5) I, II, III. Principles of nutrition with applications to the planning of dietaries for individuals under different conditions. Four 1-hour periods and one 2-hour period. Prerequisite: Home Economics 212, Chemistry 306. Mrs. Mackey.

310. HISTORY OF COSTUME (3) I, III. History and development of costume from Egyptian times to the present, with emphasis on its relation to modern costume. Mrs. Glenn.

311. HOUSE RESIDENCE (4) I, II, III. Residence in home management. Fee: \$25 plus the cost of food and other supplies. One 1-hour period; 3 hours by appointment-residence. Prerequisite: Home Economics 205, 307; junior standing. Miss Grosboll.

320. CHILD DEVELOPMENT (3) I, II, III. Growth and development from pre-natal stages through the toddler stage. Three 1-hour periods. Prerequisite: Psychology 201. Staff.

321. CHILD DEVELOPMENT (3) I, II, III. Home Economics 320 continued. Growth and development of the pre-school child. Two 1-hour periods and two 1-hour observation periods to be arranged. Prerequisite: Home Economics 320. Staff.

322. NURSERY SCHOOL PRACTICUM (3) I, II, III. Supervised nursery school participation. Two 1-hour periods and one 3-hour participation period. Prerequisite: Home Economics 321. Miss Lane, staff.

324. PERSONAL CLOTHING (4) I, II, III. The choice, construction, and care of fabrics and clothing for one's personal use. Fabrics, design, color, care, selection, and wardrobe planning are studied; and three garments are constructed. Two 1-hour periods and two 2-hour periods. Staff.
325. MEAL SERVICE (4) I, II, III. A non-technical course in food preparation and meal service. Two 1-hour periods and two 2-hour periods. Mrs. deOliveira.
331. QUANTITY FOOD PRODUCTION (3) I. Basic principles for the production of quality foods for institutional food service; preparation techniques, recipe standardization, sanitation, the use and care of equipment, and retention of nutritive value. One 1-hour period, two 2-hour periods. Prerequisite: Home Economics 212. Staff.
332. QUANTITY FOOD PLANNING, PURCHASING AND SERVICE (3) II. Menu planning, purchasing, work plan development, cost and portion control, salesmanship and pricing in the food service industry. One 1-hour period and two 2-hour periods. Staff.
333. INSTITUTIONAL KITCHEN PLANNING, EQUIPMENT SELECTION AND LAYOUT (3) III. Floor plan drawing and interpretation, development of production flow charts, and traffic patterns. Selection and placement of equipment in institutional kitchens and dining facilities. Selection of floor and wall finishes and sanitation facilities. Two 2-hour periods. Prerequisite: Industrial Education and Technology 301. Staff.
352. HOME ECONOMICS IN SECONDARY SCHOOLS (5) I, II. Principles, objectives, curriculum, instructional and resource materials, and methods in home economics. Four scheduled and one unscheduled period. Prerequisite: Education 302 and junior standing. Miss Halstead.
353. ORGANIZATION AND TEACHING IN A FOOD SERVICE PROGRAM (3) III. Techniques of teaching, occupational analysis, curriculum planning, and supervision of cooperative education in vocational and technical schools. Prerequisite: Home Economics 352. Staff.
389. SUPERVISED FIELD EXPERIENCE (1-5) IV. Supervised work experience in the area of specialization. Titles to appear on transcript are: home economics education, child and family, food and nutrition, and clothing. Prerequisite: junior standing.
405. FAMILY ECONOMICS (5) I, II. Economic problems of families with varying patterns of living, income, goals. Exploration, interpretation, application of research to family situations. Not open to a student with credit for Business Education 240. Four scheduled and one unscheduled period. Mrs. Kivlin.
406. HOUSING THE FAMILY (4) II, III. Procuring, maintaining, financing, adapting housing for families with varying living patterns. House design and structure; site and neighborhood planning; government role in housing. Staff.
407. PROBLEMS IN FAMILY RELATIONSHIPS (5) I, III. Study and research of the structure, functions, and problems of present day families in the U.S. Emphasis on learning methods of research in family life. Four scheduled and one unscheduled period. Prerequisite: Home Economics 105 or consent of instructor. Mrs. Kivlin.
408. INVESTIGATIONS IN THE FAMILY LIFE OF MINORITY GROUPS (4) I, IV. Directed investigation of the family life of racial and cultural minority groups in the United States. Prerequisite: senior standing, or Home Economics 105 or Home Economics 302, or permission of the instructor. Staff.
410. STUDIES IN HOME ECONOMICS (5) II, III. Integrative study which examines areas of home economics with emphasis on recent developments. Four scheduled and one unscheduled period. Prerequisite: Home Economics 352. Staff.
421. PARENT EDUCATION (3) II. Study and application of various principles and techniques useful in working with parents of young children. Staff.
422. CONCEPT DEVELOPMENT OF YOUNG CHILDREN (3) III. A review of the contemporary emphasis on theories of intellectual development of young children with an examination of research pertaining to specific concept areas and the development of related experiences. Staff.
423. ORGANIZATION OF CENTERS FOR YOUNG CHILDREN (3) III. Factors to be considered in the organization and management of centers for young children. Staff.
431. EXPERIMENTAL FOODS II (4) II. Experimental methods in quality control and recipe standardization. Scientific reasoning applied to the methods of food preparation. Subjective and objective evaluation of results. Two 1-hour periods and two 3-hour periods. Prerequisite: Home Economics 212, Chemistry 307 or consent of instructor. Staff.
432. ADVANCED NUTRITION (4) II. An interpretation and analysis of nutrition literature and related research. Fundamental principles of nutrition in diets for healthy human beings. Prerequisite: Home Economics 307. Staff.
433. ADVANCED FOOD PRODUCTION MANAGEMENT (5) III. Management and administrative practices, selection, direction and training of personnel. Scheduling, wage scale and salesmanship in industrial food service. Two 1-hour periods and two 3-hour periods. Prerequisite: Home Economics 331, 332, Management 354. Staff.
434. DIET THERAPY (5) III. Principles involved in planning special and modified diets in abnormal conditions and disease. Prerequisite: Chemistry 307, Home Economics 432. Staff.
435. NUTRITION FOR INFANTS AND YOUNG CHILDREN (2) I. The relationship of growth patterns to nutritional needs, selection, preparation and serving of foods to infants and young children. Development of healthy emotional attitudes toward food which will result in good lifetime eating habits. Prerequisite: Home Economics 307 and 321. Staff.
489. SUPERVISED FIELD EXPERIENCE (1-5) IV. Supervised work experience in the area of

specialization. Titles to appear on transcript are: home economics education; child and family, food and nutrition, and clothing. Prerequisite: senior standing.

490. PROBLEMS IN HOME ECONOMICS (1-5). Offered on demand. For advanced students wanting to conduct intensive study of selected problems in home economics. For undergraduate credit only. Prerequisite: consent of Department.

INDUSTRIAL EDUCATION AND TECHNOLOGY

Professors Streichler (Chairman), Austin, Hill; Associate Professors Horton, Spaulding, Swanson; Assistant Professors Bach, Innis, Kruppa, Miner, Nelson, Repp, Scherff; Instructors Gedeon, Palumbo, Pendleton.

104. DESIGN AND ENGINEERING GRAPHICS I (4) I, II, III, IV. Design as a process and engineering graphics as a vehicle to communicate problem solutions. Design analysis, sketching and instrument drawing applied to design problems involving industry and technology. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Mr. Nelson, Mr. Scherff.

113. MATERIALS PROCESSING I (4) I, III, alternate summers. Processing equipment, methods, operations, procedures, and design utilized in the production of non-metallic products; raw materials sources; and methods of conversion. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Mr. Kruppa.

114. MATERIALS PROCESSING II (4) I, II, alternate summers. A study of material properties, fabricating equipment, and methods and procedures utilized in the production of metallic products. Two 1-hour lectures, one 2-hour and one 3-hour laboratory. Mr. Repp.

121. INDUSTRIAL MATHEMATICS (5) I, II, III, alternate summers. Mathematics as applied in industry and technology. Problems in geometry, algebra, trigonometry, and calculus. Mr. Innis.

141. PRIVATE PILOT (3) I, II, III, IV. Prepares the beginning flight student for the private pilot's certificate. Receipt of FAA certificate results in a University grade of Satisfactory. Work includes 40 hours of ground school, 16 hours of solo, and 16½ hours of dual instruction. Additional fees to be arranged with flight director. Hours to be arranged.

152. FOUNDATIONS OF INDUSTRIAL EDUCATION AND TECHNOLOGY (2) I, II, IV. Evolution, roles, and interrelationships of the several forms of industrial education, emphasizing relationships to general education and technological and industrial development. Mr. Kruppa, Mr. Streichler.

191. ENERGY, POWER, INSTRUMENTATION AND CONTROL—AUTOMATION (4) I, III, alternate summers. Study of automation through the examination of energy conversion into useful electrical, fluid or mechanical power and associated transmission, instrumentation, and controlling, devices. Experiences in research and

experimentation requiring analysis and diagnosis of automated systems. Two 1-hour lectures and one 2-hour and one 3-hour laboratories. Mr. Palumbo.

204. DESIGN AND ENGINEERING GRAPHICS II (5) II, III, alternate summers. The application of design analysis and engineering graphics, including descriptive geometry, vector analysis, and graphical mathematics. Design problems in power generation and transmission, construction, and manufacturing. Two 1-hour lectures and two 3-hour laboratories. Mr. Scherff.

208. GRAPHIC COMMUNICATIONS (4) I, II, III, alternate summers. Broad exploration in the graphic communications area. Study and experience in design, copy-preparation, photo-conversion, image carriers, and image transfer methods. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Mr. Austin.

214. MANUFACTURING PROCESSES (4) II, III, alternate summers. Processing methods, equipment, tooling, organization, and control employed in production of metallic and non-metallic products. Two 1-hour lectures, one 2-hour and one 3-hour laboratory. Prerequisite: Industrial Education and Technology 113, 114. Mr. Repp.

235. CONSTRUCTION TECHNOLOGY (4) I, III, alternate summers. Construction problems and orderly solutions of problems related to construction, including architectural representation, conventions, construction procedures, and building estimation. Prerequisite: Industrial Education and Technology 113, 114. Mr. Bach, Mr. Miner.

243. STRENGTH OF MATERIALS (4) III, alternate summers. A comprehensive study of simple and combined stresses, deformation, shear, torsion, and deflection of machine parts and structural members. Three lecture-recitations and one 3-hour laboratory. Prerequisite: A basic foundation in vector algebra, differentiation and integration is recommended. Mr. Scherff.

252. ELEMENTS OF INSTRUCTION IN INDUSTRIAL EDUCATION (3) I, II, III, alternate summers. Modes of instruction as related to the learner and functions and purposes of industrial education. Prerequisite: Industrial Education and Technology 152. Mr. Swanson.

289. INDUSTRIAL INTERNSHIP—INITIAL (5) I, II, III, IV. Study and work in a manufacturing, construction, or service industry in a position related to the student's intended major area of concentration. Duration: 10 weeks in a campus-approved position. Prerequisite: Industrial Education and Technology 152 or consent of the Department. Mr. Scherff, Mr. Streichler.

291. ENERGY, POWER, INSTRUMENTATION AND CONTROL—CYBERNETICS (4) I, II, alternate summers. The study of cybernetics through the examination of systems logic, instruments, control, and process regulation. Experiences in research and development requiring analysis and diagnosis of cybernetic systems. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Mr. Palumbo.

301. ARCHITECTURAL GRAPHICS (5) I, II, III, alternate summers. Architectural design and construction and the development and use of elevation, plan, detail, and perspective drawings in planning and designing domestic, business, and industrial structures. Two 1-hour lectures and two 3-hour laboratories.
304. MECHANICAL DESIGN (4) I, alternate summers. Design and selection of mechanical elements, fasteners, power transmitting devices, hydraulic systems and tools and dies. Standard manuals and commercial catalogs are utilized. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Prerequisite: Industrial Education and Technology 204, 291 or permission of instructor. Mr. Nelson, Mr. Scherff.
305. TECHNICAL ILLUSTRATION (4) III, alternate summers. The study of technical illustration for design presentation, assembly, repair, and advertising. Experiences with a variety of equipment, materials, and techniques to accomplish various industrial purposes. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Prerequisite: permission of instructor. Mr. Nelson.
306. LIGHT BUILDING CONSTRUCTION I (4) I, alternate summers. Methods and procedures for construction of light wood frame, masonry, metal, and synthetic structures, including discussion of prefab and assembly-line housing, building codes, FHA specifications, and estimates. Prerequisite: Industrial Education and Technology 235, 301. Mr. Bach, Mr. Miner.
307. LAND PLANNING AND DEVELOPMENT (4) II, alternate summers. Current practices in land planning, zoning, and community and subdivision design including sub-surface utility systems and transportation systems. Prerequisite: Industrial Education and Technology 235. Mr. Nelson.
308. GRAPHIC COMMUNICATIONS (5) I, II, alternate summers. Graphic communications in industry and society with printed materials including design, design conversion, reproduction, finishing, and binding techniques in quantity production of printed information. Two 1-hour lectures and two 3-hour laboratories. Prerequisite: Industrial Education and Technology 208. Mr. Austin.
309. GRAPHIC COMMUNICATIONS (4) I, III, alternate summers. Applications of color separation, chemical, thermal, and electrostatic methods in design and layout, composition, form and platemaking, reproduction, and finishing processes in producing visual information including production and management techniques. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Prerequisite: Industrial Education and Technology 308. Mr. Austin.
311. MACHINE TOOL PROCESSES (5) I, III, alternate summers. Methods employed in set-up and operation of precision machine tools, tool preparation and maintenance, and quality control. Two 1-hour lectures and two 3-hour laboratories. Prerequisite: Industrial Education and Technology 214. Mr. Repp, Mr. Spaulding.
313. HANDICRAFTS (4) I, II, III, IV. Exploration of the creative possibilities inherent in a wide variety of materials and tool operations. Development of lifetime recreational interests and abilities to direct activities in schools, camps for the handicapped, and adult education. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Mr. Hill.
316. TECHNOLOGY AND ELEMENTARY EDUCATION (4) I, II, III, IV. A study of the technology of American industry (tools, materials, processes, and organization), with emphasis on construction activities and their relationship to subject areas in the elementary curriculum. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Mr. Gedeon.
321. CASTING PROCESSES (4) I, II, alternate summers. The significance and role of foundry operations in industry with emphasis on pattern making, core making, molding, melting, furnace operation, pouring of metals, and cleaning of castings. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Prerequisite: Industrial Education and Technology 113 and 114. Mr. Miner.
323. MATERIALS PROCESSING (5) I, III, alternate summers. Design and construction of non-metallic products with emphasis upon machine and finishing processes and their related problems in manufacturing. Two 1-hour lectures and two 3-hour laboratories. Prerequisite: Industrial Education and Technology 113. Mr. Kruppa.
331. SHEET METAL FORMING AND FABRICATION (4) II, III, alternate summers. Forming and fabrication methods employed in the sheet metal industries, materials characteristics, and tool and machine processes. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Prerequisite: Industrial Education and Technology 114. Mr. Hill.
335. COMMERCIAL AND INDUSTRIAL CONSTRUCTION I (4) III, alternate summers. A study of methods and materials used in construction of commercial and industrial complexes including pre-assembled components, pre-cast and pre-stressed concrete forms, and material handling and estimation. Prerequisite: Industrial Education and Technology 235 and 301. Staff.
347. ELECTRICITY (5) I, III, alternate summers. Fundamental concepts of electricity including circuits and circuit components, power generation, alternating and direct current, meters, and test equipment. One 2-hour lecture and two 3-hour laboratories. Prerequisite: permission of instructor. Staff.
348. ELECTRONICS (5) II, alternate summers. Semiconductors, electron tubes, and related circuits. Applications of power supplies, amplifiers, oscillators, and transmission and receiving systems. One 2-hour lecture and two 3-hour laboratories. Prerequisite: Industrial Education and Technology 347. Staff.
352. INSTRUCTIONAL SCOPE AND SEQUENCE IN INDUSTRIAL EDUCATION (3) I, II, III, alternate summers. Principles, objectives, instructional

strategies and content, and evaluation in industrial education. Prerequisite: Industrial Education and Technology 252 and Education 302. Mr. Horton.

361. WELDING (4) I, IV. Varieties of welding processes in joining metals, strength of materials in welded joints, technological developments in the welding industry, testing, and principles of industrial forging. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Prerequisite: Industrial Education and Technology 214 or consent of instructor. Mr. Bach.

371. HANDICRAFTS IN INDUSTRIAL EDUCATION (4) I, II, III, IV. A survey of activities and materials as they may be applied in rehabilitation, special education, and recreation. Design and development of products in plastics, non-ferrous metals, leather, and other materials. One 2-hour lecture and one 2-hour and one 3-hour laboratory. Mr. Hill.

381. PHOTOGRAPHY (4) I, II, III, IV. Camera principles, portraiture, pictorial composition, lighting, developing, printing, enlarging, and photo-finishing techniques. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Staff.

388. FIELD STUDIES IN INDUSTRY (3) I, II, III, IV. Study of a wide range of industries through visits and observation with emphasis on industrial organization, labor practices, raw materials, manufacturing processes, and the interrelationships of practices, products, technologies, and human problems. Mr. Innis.

389. INDUSTRIAL INTERNSHIP—Intermediate (5) I, II, III, IV. Repeatable to 10 hours. Study and work in a manufacturing, construction, or service industry related to the student's major area of concentration for 10 weeks in a campus-approved position. Prerequisite: Industrial Education and Technology 289 and consent of Department. Mr. Scherff, Mr. Streichler.

391. ENERGY, POWER, INSTRUMENTATION AND CONTROL—ENERGY CONVERTERS (5) I, III, alternate summers. Advanced study in energy converters applying science and mathematics principles to basic thermal and photo cycles used to convert energy into useful power. Two 1-hour lectures and two 3-hour laboratories. Prerequisite: Industrial Education and Technology 291 or consent of instructor. Mr. Palumbo.

406. LIGHT BUILDING CONSTRUCTION II (4) III, alternate summers. Advanced course in light building fabrication including systems required for comfort control and convenience as well as interior finish materials, methods, and estimation. Prerequisite: Industrial Education and Technology 306. Mr. Bach, Mr. Miner.

407. CIVIL CONSTRUCTION (4) I, alternate summers. A study of the materials and methods of civil construction with emphasis on its needs, planning, and development through completion of specific projects. Staff.

421. INDUSTRIAL ENVIRONMENTAL CONTROL (4) I, IV on demand. Thermal, air, noise, solid, and water pollution produced by separate and combined technologies, effects and corrective procedures. Mr. Scherff.

435. COMMERCIAL AND INDUSTRIAL CONSTRUCTION II (4) I, alternate summers. A study of material, equipment, and methods used for interior finish, environmental control, and interior transportation systems of commercial and industrial structures and cost estimation. Prerequisite: Industrial Education and Technology 335. Staff.

436. PLANNING AND DESIGN OF INDUSTRIAL FACILITIES II, IV on demand. The planning, estimating, design, and modeling of industrial facilities with consideration of management, personnel, production, aesthetics, and the environment. Mr. Nelson, Mr. Scherff.

449. ORGANIZATION AND ADMINISTRATION OF INDUSTRIAL EDUCATION (3) III, IV. Financial and business procedures; course, laboratory, and equipment planning; maintenance programs; student-personnel systems; tool and supply storage; public relations, cocurricular responsibilities. Prerequisite: Industrial Education and Technology 352. Mr. Horton, Mr. Repp.

450-463. INDUSTRIAL EDUCATION LABORATORIES (4) I, II, III, IV. For an advanced student who wishes to engage in intensive study and investigation with materials and processes in any one subject area laboratory in the Department. Two 1-hour lectures and one 2-hour and one 3-hour laboratory. Prerequisite: consent of the Department.

450—ARCHITECTURAL GRAPHICS, Mr. Nelson;

451—CASTING PROCESSES, Mr. Miner;

452—DESIGN IN INDUSTRY, Mr. Swanson; 453—ELECTRONICS. Staff; 454—ENERGY, POWER, INSTRUMENTATION AND CONTROL, Mr. Palumbo;

455—ENGINEERING GRAPHICS, Mr. Nelson, Mr. Scherff; 456—GRAPHIC COMMUNICATIONS, Mr. Austin; 457—HANDICRAFTS, Mr. Hill; 458—MACHINE TOOL PROCESSES, Mr. Repp, Mr. Spaulding; 459—MATERIALS PROCESSING, Mr. Miner; 460—PHOTOGRAPHY, Staff; 461—SHEET METAL FABRICATION, Mr. Hill; 462—TECHNOLOGY AND ELEMENTARY EDUCATION, Mr. Swanson; 463—WELDING PROCESSES, Mr. Bach.

470. COORDINATING COOPERATIVE EDUCATION PROGRAMS (4) II, IV. Preparation for implementing and coordinating cooperative education programs with emphasis on liaison among the student, the school, and industry. Mr. Swanson.

489. INDUSTRIAL INTERNSHIP—ADVANCED (5) I, II, III, IV. Study and work in a manufacturing, construction, or service industry in a position related to the student's major area of concentration or thesis topic. Includes seminar attendance. Prerequisite: graduate standing or 15 hours credit in Industrial Internship 289 and 389 and consent of Department. Mr. Scherff, Mr. Streichler.

490. PROBLEMS IN INDUSTRIAL EDUCATION AND TECHNOLOGY (1-5). Offered on demand. For the advanced student wanting to conduct an intensive study of selected problems in industrial education. Undergraduate credit only. Prerequisite: consent of Department. Staff.

JOURNALISM

Professor Del Porto (Director); Associate Professor Pettibone; Assistant Professors Black, Bridges, Dansker, Gordon, Johnson (on leave), Schweibold, Ware; Part-Time Lecturers Day, Fries, Little, Ward.

103. INTRODUCTION TO MASS COMMUNICATIONS (4) I, II, III, IV. Survey of modern journalism including the newer mass communications media. Role and influence of the press, radio, television, and related fields of advertising and public relations.

104. INTRODUCTION TO NEWS WRITING (3) I, II, III, IV. Practice in basic types of news stories with emphasis on mechanics, style, summary leads, and organization of material. Prerequisite: English III or equivalent.

107. INTRODUCTION TO PHOTOJOURNALISM (4) I, II, III, IV. Introductory course stressing the importance of pictures in newspapers, magazines, television, advertising. Practice in picture taking and darkroom procedures. One lecture and one 3-hour laboratory. The student furnishes some materials. Mr. Gordon.

211. REPORTING (3) I, II, III. Researching and writing complex and specialized types of news stories. Practice in covering assignments for the campus newspaper. Prerequisite: grade of C or better in Journalism 104.

302. COPY EDITING (4) I, II, III, IV. Theory and practice in editing local and wire news, headline writing, picture editing, evaluating news, layout and design. Prerequisite: grade of C or better in Journalism 211.

303. INDUSTRIAL EDITING (4) II. Theory and practice in editorial functions and problems involved in producing other-than-newspaper types of publications including the newsletter, brochure, booklet, book, industrial and trade magazine. Prerequisite: grade of C or better in Journalism 301.

304. FEATURE WRITING (4) II. Study and practice in writing the simple newspaper feature story, short magazine article, and longer illustrated article. Articles are submitted for publication. Prerequisite: Grade of C or better in Journalism 211 or consent of instructor.

307. PHOTOGRAPHIC COMMUNICATION (4) I, II. Practice in advanced problems of photography and evaluation of photographs for reproduction and communications. Two class meetings and one 2-hour laboratory. The student furnishes some materials. Prerequisite: Journalism 107 or consent of instructor. Mr. Gordon.

310. GRAPHICS OF COMMUNICATION (4) I, III. Study of type, copyfitting, and the use of graphic elements in the layout of newspaper and magazine pages, advertising, and other forms of communication in print. Mr. Schweibold.

312. REPORTING OF PUBLIC AFFAIRS (4) I, II, III. Practice in covering governmental and community affairs. Reporting science, education, business, medicine and other specialized areas.

Prerequisite: grade of C or better in Journalism 211. Mr. Dansker.

315. PRESS MANAGEMENT (4) I. Business problems of publishing—organization, financing, circulation, promotion—and the mechanics of publication including various types of reproduction, adaptability of each, comparative costs, and related problems.

320. NEWSPAPER ADVERTISING (4) II. Newspaper advertising theory and practice; emphasis on advertising production for the small daily or weekly newspaper. Mr. Schweibold.

330. RADIO-TELEVISION NEWS (4) I, II, III. Techniques of covering, writing, and editing news for radio and television broadcasting. Includes rewriting AP wire stories and use of still and movie cameras in preparing television newscasts. Prerequisite: Journalism 107 and grade of C or better in Journalism 312 or consent of instructor. Mr. Ware.

340. PRINCIPLES OF PUBLIC RELATIONS (4) I, II. Public relations, problems, policies, practices applied to business and industry or public and private institutions. Emphasis on media and methods of communicating with the public. Mr. Pettibone.

402. LAW OF JOURNALISM (4) II. Legal limits on freedom of the press, rights and duties of the press, libel, constitutional guarantees, contempt, copyright, privacy, special problems of the electronic media. Mr. Del Porto.

403. THE EDITORIAL (4) III. Techniques of editorial writing and the role of editorial opinion in modern mass media. Prerequisite: Journalism 211 or consent of instructor. Mr. Johnson.

404. MAGAZINE ARTICLE WRITING (4) II. Preparation of articles aimed at magazine markets. Emphasis on market analysis, researching topic, effective writing style. Prerequisite: grade of C or better in Journalism 304 or consent of instructor.

405. HISTORY AND ETHICS OF JOURNALISM (4) I, II. English background of the American press and development from 1690 to the present. Discussion of problems in newspaper and magazine publishing and news broadcasting. Mr. Pettibone.

407. COLOR PHOTOGRAPHY (4) III. Theory and application of negative and reversal color processes and their limitations and advantages. Production of color transparencies, negatives, and prints. Student provides supplies. Prerequisite: Journalism 307. Mr. Gordon.

412. JOURNALISM PRACTICE (4) I. Intern program involving summer work following the junior year with an employer in the field of the student's major interest. Seminar meetings each week and conferences with the instructor during the fall quarter. Open to journalism majors only. Mr. Del Porto.

414. SUPERVISION OF HIGH SCHOOL PUBLICATIONS (4) III. For a teacher or a prospective teacher of high school journalism or an adviser of a school newspaper or yearbook. Problems of editorial supervision, business management, production. Mr. Pettibone.

416. **MAGAZINE PUBLISHING (4) III.** Examination of practices, problems, and trends in magazine publishing: readership, editorial objectives, content, format, production, management. Prerequisite: Journalism 303. Mr. Schweibold.
431. **INTERPRETIVE REPORTING (4) I.** Research and writing of depth reports, interpretive news, profiles, background stories, and news analyses. Investigative reporting of current events and issues. Prerequisite: journalism major or graduate standing.
433. **GOVERNMENT AND THE PRESS (4) III.** Origins and concept of freedom of information and its evolution in constitutional law and judicial decisions; contemporary problems of censorship in publishing, broadcasting, film. Mr. Del Porto.
435. **THE PRESS AND SOCIETY (4) II.** Study of the press as an institution; its role, content, effects, and responsibilities as a cultural force in society.
440. **PUBLIC RELATIONS TECHNIQUES (4) II.** Principal public relations tools and practice in their use: publicity materials, institutional advertising, industrial publications, reports, pamphlets, and contact public relations in business, industry, or an association. Prerequisite: Journalism 301, 310, 340. Mr. Pettibone.
461. **SPECIAL PROBLEMS IN JOURNALISM (1-4) I, II, III.** Research problems, practical projects, or intensive reading designed to meet the needs of the student's special interest in journalism. Open to a senior with approval of the director. May be repeated to 6 hours.

LATIN-AMERICAN STUDIES

401. **LATIN-AMERICAN STUDIES SENIOR SEMINAR (4) II.** To be offered once a year. A course for a senior majoring in Latin-American Studies, giving attention to the examination of literature in the fields involved, problems of research and writing, and discussion of the methods employed by the various disciplines. Required of a Latin-American Studies major.

LIBRARY SCIENCE

Associate Professor Rees (Chairman); Instructor M. Amos.

203. **INTRODUCTION TO LIBRARIANSHIP (4) I, II, III.** The history of books and libraries, the growth of the profession, types of libraries in the modern world, and varieties of library organization.
342. **CHILDREN'S LITERATURE (5) I, II, III.** See English 342. Not open to a student with credit for English 342.
351. **THE ELEMENTARY SCHOOL LIBRARY (4) I, II.** Organization and administration of library service in the elementary school. Miss Rees.
352. **THE SECONDARY SCHOOL LIBRARY (4) III.** Organization and administration of library service in the secondary school. Miss Rees.

355. **THE TEACHING OF READING IN THE ELEMENTARY SCHOOL (3) I, II, III, IV.** See Education 355. Not open to the student with credit for Education 355.
401. **PERIODICALS (4) III.** Offered 1970-71 and alternate years. Development of English and American magazines with emphasis on educational use.
403. **REFERENCE SERVICES AND MATERIALS (4) I, II, III.** Basic sources of information and how to use them to answer questions by library patrons. Mrs. Amos.
404. **HISTORY OF BOOKS AND LIBRARIES (4) II.** Development of books and libraries from earliest times to the present. Historical review with emphasis on their role as agents of communication. Miss Rees.
405. **GOVERNMENT PUBLICATIONS (4) III.** Offered 1971-72 and alternate years. Nature, use, acquisition, and organization of printed materials issued by federal, state, and local governments and international agencies. Prerequisite: Library Science 403 or consent of instructor.
407. **BOOK SELECTION (5) I, II, III.** Principles of book selection and order work. Miss Rees.
408. **CLASSIFICATION AND CATALOGING (5) I, II, III.** Basic technical procedures in the preparation of books. Mrs. Amos.
411. **LIBRARY MATERIALS FOR SECONDARY SCHOOLS (4) III.** Books, periodicals, and related materials for secondary school students with specific reference to reading interests, needs, and abilities. Includes adult titles for the adolescent; materials for gifted child and retarded reader. Prerequisite: Library Science 407 or consent of instructor. See Education 420. Miss Rees.
420. **READING STUDY SKILLS IN CONTENT AREAS (4) I, II, IV.** A survey course of developmental reading in the middle and secondary schools. Emphasis is placed on word attack skills, vocabulary, comprehension, speed, and reading interests. Materials, methods, and provisions for individual differences in developmental and content area reading are considered. Prerequisite: methods course and Education 302 or see Education 420. Not open to the student with credit for Education 420.
421. **INTRODUCTION TO FOLKLORE (4) I.** See English 421. Not open to a student with credit for English 421.
427. **PREPARATION OF INSTRUCTIONAL MATERIALS (4) I, II, III, IV.** See Education 427. Not open to a student with credit for Education 427.
428. **UTILIZATION OF EDUCATIONAL MEDIA (4) I, II, III, IV.** See Education 428. Not open to a student with credit for Education 428.
441. **STORYTELLING (3) I, III.** Technique and practice of storytelling in libraries, classrooms, etc. Survey of sources and selection of traditional and modern literature to tell and read aloud. Prerequisite: English 342 or Library Science 342 or consent of instructor. Mrs. Amos.

442. STUDIES IN CHILDREN'S LITERATURE (4) II. See English 442. Not open to a student with credit for English 442.

490. PROBLEMS IN LIBRARY SCIENCE (4) III. An advanced seminar course with emphasis on investigation of a topic approved by the Department and the preparation of a major paper. A student with a major in library science may, with permission of the Department, repeat to 8 hours.

491. FIELD WORK (4) III. Supervised field work in a library approved by the Department.

MANAGEMENT

Professors Waterhouse (Chairman), Henderson, Rahdert; Associate Professor Vogt; Assistant Professors Hahn, Hunady, Lasher, Varney, Ward; Instructors Hodge, Paxton. Part-time Lecturer Bivins.

300. PRODUCTION AND OPERATIONS MANAGEMENT (4) I, II, III. Operations of the firm; fundamentals of operations research; design of production systems; operation, coordination, and control of production activity; major analytical tools for management; plant projects. Prerequisite: Statistics 212 or equivalent.

305. PRINCIPLES OF ORGANIZATION AND MANAGEMENT (4) I, II, III. Fundamentals of organization theory; objectives, policies, decision-making authority, executive development, leadership, communication, attitude, and effective human relations as they are related to management principles.

330. PROCUREMENT (4) II. Recognition of needs for industrial, governmental, and institutional organizations; the decision process of purchasing—value analysis, negotiating terms, and selecting a supplier. Prerequisite: Management 300 or 305.

354. PERSONNEL AND MANPOWER MANAGEMENT (4) I, II, III. Personnel administration; its objectives, organization, functions, and role in the operation of any form of enterprise. Includes staff and line responsibility for handling personnel problems.

360. ORGANIZATIONAL THEORY AND BEHAVIOR (4) I, II, III. A survey of the application of behavioral science concepts in the study of behavior within formal, complex organizations. Emphasis upon the interaction of the organization, the individual, the group, and the overall social environment.

409. INTERNSHIP (1-4) I, III. Experience in an approved business position. A student participates in a seminar in which he formally evaluates his work experience. This program must be arranged in advance and approved by the coordinator. The work experience must be completed within one year of the time the student is accepted into the program. Credit is determined by the quality and extent of the work experience. Course not open to students with credit from any similar program in the College of Business Administration.

426. QUANTITATIVE DECISION THEORY (4) III. The use of quantitative methods in business administration and the application of these methods to problems of inventory, production, marketing, and financial management. Prerequisite: Statistics 212, Quantitative Analysis and Control 380.

430. PROCUREMENT AND MATERIALS MANAGEMENT (4) III. A depth study of materials management; techniques and problems; the social, economic, and legal aspects of the materials cycle and related areas in the materials management process including cost-reduction, techniques, measuring performance, and future development of materials systems. Prerequisite: Management 330.

441. METHODS AND STANDARDS IN PRODUCTION MANAGEMENT (4) I, II, III. Emphasizes the effective determination of work standards and work design through student projects in work simplification and measurement, work sampling, line balancing, PERT-CPM, and plant layout. Lectures and laboratory. Prerequisite: Management 300.

442. PRODUCTION SYSTEMS AND CONTROL (4) III. Emphasizes analysis of the factory production system and control of system aspects such as production control, inventory control, quality control, and cost control. Prerequisite: Management 300.

458. WAGE AND SALARY ADMINISTRATION (4) I, II. Policies and procedures of wage and salary administration. Analyzes compensation methods, personnel rating, and fundamentals of the wage and salary program. Prerequisite: Management 300 or 354.

459. HUMAN RELATIONS (4) I, III. Problems of understanding and securing cooperation among individuals and groups; factors influencing human behavior in organizations. Prerequisite: Management 300 or 305 and Psychology 201.

465. ADVANCED ORGANIZATIONAL THEORY AND BEHAVIOR (4) II. Concepts relating to understanding organizations and their functions. An investigation of significant behavioral research and its application to organization design, development, and maintenance.

470. PRODUCTION AND PERSONNEL PROBLEMS (4) I, II, III. Analysis of production and personnel management problems requiring decisions by a high-level manager. Case study and a simulation game. Prerequisite: Management 300 and one 400-level course in management.

471. INTERNATIONAL MANAGEMENT (4) III. A survey of the organizational and operational aspects of international business management, stressing problems of conducting business outside the continental United States. Prerequisite: Management 300 or 305.

491. STUDIES IN MANAGEMENT (1-4). Offered on demand. Selected areas are treated in depth. Areas not covered by existing courses but which are developing rapidly as important parts of the discipline are examined. Offered to an individual on a lecture basis

or in a seminar, depending on student need and course content. May be repeated up to 8 hours.

495. READINGS FOR HONORS IN MANAGEMENT (1-3) I, II, III. For a superior student who desires an individual reading program to broaden his knowledge of management literature by study and investigation on a semi-independent basis. Prerequisite: academic standing in the upper 20 per cent of the student's class.

MARKETING

Professors Mandell (Chairman), Davidson, Hoskins; Associate Professors Barker, Holmes; Assistant Professor Hasenjaeger; Lecturer Lieb.

300. PRINCIPLES OF MARKETING (4) I, II, III. Principles underlying economic functions, organization, management of marketing. Prerequisite: Economics 202 or consent of instructor.

340. PERSONAL SELLING (4) I, II, III. Economic and behavioral relationships among customer needs, buying motives, seller's performance affecting sales of industrial goods, consumer goods, intangibles; theory, principles, role playing in selling.

401. PROBLEMS IN MARKETING MANAGEMENT (4) I, II, III. Integrating course utilizing readings and case studies involving organization and management of marketing institutions and functions. Prerequisite: Marketing 300.

402. MARKETING DYNAMICS (4) I, II, III. Examination of buyer behavior and its effects on marketing policies, functions, institutions. Prerequisite: Marketing 300.

403. MARKETING PLANNING (4) I, II, III. Integrating, capstone course; a student develops and presents a marketing plan for a real and unsolved problem. Prerequisite: Marketing 300, 401, 420.

409. MARKETING INTERNSHIP (1-4) I. Experience in an approved business position; a student participates in a seminar in which he formally evaluates his work experience. Program must be arranged in advance and approved by the coordinator. Work experience must be completed within one year from the time the student is accepted into the program. Credit is determined by the quality and extent of the work experience. Not open to a student with credit for Accounting 409, Business Administration 409, or Economics 409.

410. PRINCIPLES OF ADVERTISING (4) I, II, III. Principles underlying advertising. Includes study of social and economic aspects, merchandising, research, motivation, media, appropriation, and techniques as these relate to advertising. Prerequisite: Marketing 300 or consent of instructor.

411. ADVERTISING CREATIVITY (4) II. Examination of the creative process applied to promotion. Theory and practice of creative aspects of advertising: copy, layout, and production. Prerequisite: Marketing 410.

412. ADVERTISING PROBLEMS (4) III. Case studies evaluating opportunities for effective use

of advertising, building promotional programs, selection of advertising media, methods of determining the effectiveness of advertising. Prerequisite: Marketing 410.

420. MARKETING RESEARCH (4) I, II. Marketing research as a source of information relevant to the solution of marketing problems. Technical aspects of research are presented as they relate to the manager's ability to judge the soundness of research proposals and evaluate research findings. Prerequisite: Marketing 300.

421. ADVANCED MARKETING RESEARCH (4) III. Provides experience in using principles of research to solve marketing problems. Survey and experimental research projects from formulation to presentation of findings. Topics include sample design, questionnaire construction, data collection, tabulation, analysis. Prerequisite: Marketing 420.

430. PRINCIPLES OF RETAILING (4) I, II, III. Principles underlying the evolution, organization, and operation of retailing. Prerequisite: Marketing 300 or consent of instructor.

436. RETAIL MERCHANDISING (4) III. Merchandising functions: buying, selling. Merchandise planning, budgeting, procuring, pricing; sales promotion, inventory evaluation, cost analysis, and control. Prerequisite: Marketing 430.

441. SALES MANAGEMENT (4) I, II, III. Management of the sales function of a firm. Administration of the sales force and its activities in manufacturing and wholesaling enterprises are evaluated. Topics include sales organization, operation, planning, and analysis. Prerequisite: Marketing 300.

450. INTERNATIONAL MARKETING (4) II. Marketing structure and policies employed in export and import trade. Consideration of legal, cultural, and economic factors in marketing abroad. Includes forecasting, channels of distribution, pricing, sales promotion, advertising. Prerequisite: Marketing 300.

491. STUDIES IN MARKETING (1-4) I, II, III. Selected areas treated in depth. Areas not covered by existing courses but which are rapidly developing as an important part of the discipline are examined. Offered to an individual, on a lecture basis, or in a seminar, depending on student needs and course content. May be repeated to 8 hours. Prerequisite: consent of Department chairman.

495. READING FOR HONORS IN MARKETING (1-4) I, II, III. For a superior student who wishes to engage in an individual reading program to broaden his knowledge of marketing literature by study and investigation of particular areas on a semi-independent basis. Prerequisite: academic standing in the upper 20 per cent of a student's class.

*MATHEMATICS

Professors Graue (Chairman), Krabill, Mathias, Reichaw (Visiting); Associate Professors Al-Amiri, Eakin, Hollister, Kirby, Leetch, Long, Satyanarayana, Terwilliger, Townsend; Assistant Professors Applebaum, Blass, Brown, Diminnie, Finkelstein,

Fong, Gresser, Hayden, Hern, Johnson, McMorris, Meronk, Ng, Norton, O'Brien, Rickey, Sabbagh, Snipes, Weber, Williams, Wohler, Woodruff.

The student should enter the mathematics program at the point most appropriate to his preparation, interests, and course of study. Brief descriptions of the various options are given below to facilitate the choice of courses by the student and his adviser.

Mathematics 131-231-232 is the traditional calculus sequence for the well qualified student and is a prerequisite for all upper division mathematics courses. Mathematics 130 is intended for the student who has an inadequate mathematics background for this sequence.

Mathematics 124-125 is a concept-oriented calculus and linear algebra sequence for students in the social and managerial sciences designed to prepare them for math-oriented courses in their areas.

Mathematics 121 and 122 are terminal courses designed to expose the student to selected topics in modern mathematics which lend themselves to treatment at a relatively unsophisticated level.

Where a course is listed as a prerequisite to another course, a grade of C or better is required. This requirement is in the best interest of the student and exceptions are made only with the consent of the instructor and the Chairman of the Mathematics Department.

121. TOPICS IN MODERN MATHEMATICS (5) I, II, III, IV. The language of sets, introductory logic, number systems, and other topics. Not open to the student who presents three or more years of high school mathematics or who has credit for any college mathematics course. Prerequisite: one year of high school algebra.

122. TOPICS IN MODERN MATHEMATICS (4) I, II, III, IV. A survey of calculus, algebra, probability, and other topics. For a student not expecting to continue mathematics. Not applicable to major or minor requirements. Prerequisite: three years of high school mathematics or Mathematics 121.

124. ELEMENTARY ANALYSIS I (5) I, II, III, IV. Sets, functions, differential and integral calculus for functions of one variable with applications to the management and social sciences. Prerequisite: three years of high school mathematics or two years of high school algebra or consent of chairman.

125. ELEMENTARY ANALYSIS II (5) I, II, III, IV. Continuation of Mathematics 124 including topics in matrix algebra, differential and integral calculus for functions of more than one variable with applications to the management and social sciences. Prerequisite: Mathematics 124 or Mathematics 131.

130. PRECALCULUS MATHEMATICS (5) I, II, III, IV. Real and complex number systems, functions, coordinate geometry, and trigonometry. Not open to the student who presents four years of high school mathematics and has an ACT score of 26 or higher.*

131. ANALYTIC GEOMETRY AND CALCULUS (5) I, II, III, IV. Plane analytic geometry and calculus of functions of one variable. Prerequisite: four years of high school mathematics and an ACT mathematics score of 23 or higher,* or a grade of C or better in Mathematics 130 or consent of the department chairman.

210. INTRODUCTION TO PROBABILITY (4) I, II, III. Sample spaces, events, probability functions, probability density functions, expectations, variance. Designed for a student in the areas of the life, social, and managerial sciences. Prerequisite: Mathematics 125 or 131.

231. ANALYTIC GEOMETRY AND CALCULUS (5) I, II, III. Continuation of Mathematics 131. Prerequisite: Mathematics 131.

232. ANALYTIC GEOMETRY AND CALCULUS (5) I, II, III. Continuation of Mathematics 231. Prerequisite: Mathematics 231.

241. ELEMENTARY MATHEMATICS (5) I, II, III, IV. Set theory, set theoretic development of the natural numbers, numeration systems, rational numbers. For an elementary education major only.#

242. ELEMENTARY MATHEMATICS (4) I, II, III, IV. Percentage and its applications, an introduction to algebra and geometry, and mensuration. For an elementary education major only. Prerequisite: Mathematics 241.#

243. ELEMENTARY MATHEMATICS (5) I, III. Sets; the processes of arithmetic; an introduction to the real number system; an introduction to geometry. For elementary education majors only. Prerequisite: At least three years of high school algebra and geometry and a satisfactory score on the ACT Mathematics Test. Not open to students with credit for Mathematics 241 and/or Mathematics 242.#

244. ELEMENTARY MATHEMATICS (4) I, II. A systematic study of the real number system, algebra, and geometry as mathematical systems. For elementary education majors only. Prerequisite: Grade of at least C in Mathematics 242 or Mathematics 243.#

245. ELEMENTARY MATHEMATICS (4) I, II. Continuation of Mathematics 244. Prerequisite: Grade of at least C in Mathematics 244.# Prerequisite: Mathematics 332.

311. HISTORY OF MATHEMATICS (4) I. History of mathematics through the calculus. Prerequisite or parallel: Mathematics 332.

332. INTRODUCTION TO VECTOR SPACES AND MATRICES (4) I, II, III, IV. Vector spaces and linear transformations. Matrices and determinants. Prerequisite: Mathematics 232.

* The student with an ACT mathematics score of 23, 24 or 25 should consult his adviser or a mathematics department representative to decide between Mathematics 130 and 131.

Not for Arts and Sciences or Business Administration credit.

333. MULTIVARIABLE CALCULUS (4) I, II, III. Solid analytic geometry, partial derivatives, multiple integrals. Prerequisite: Mathematics 332.
334. ADVANCED CALCULUS (4) III. Partial differentiation, differential, extremal problems for functions of several variables, implicit function theorem, improper integrals, line integrals, vector field theory, Green's and Stokes' theorems. Prerequisite: Mathematics 333.
335. NUMERICAL CALCULUS (4) III. Basic numerical algorithms for computer use, polynomial interpolation, quadrature, solution of non-linear equations and linear systems. Three lectures and two hours of laboratory. Not open to the student with credit for Computer Science 304. Prerequisite: Computer Science 101, Mathematics 332.
337. DIFFERENTIAL EQUATIONS (4) I, II, III. Equations of first, second, and higher order; linear equations with constant coefficients; series solutions; numerical methods; applications. Prerequisite or parallel: Mathematics 333.
339. ALGEBRAIC STRUCTURES (4) I, II, III. Survey of structures and constructions from classical mathematics which play a fundamental role in the axiomatic development of modern algebra. Prerequisite: Mathematics 333 or consent of instructor.
401. ELEMENTARY NUMBER THEORY (4) I, IV. Elementary theory of congruences; quadratic reciprocity law; diophantine problems; classical construction problems and other selected topics. Prerequisite or parallel: Mathematics 333.
402. INTRODUCTION TO MODERN GEOMETRY (4) I, III, IV. An axiomatic development of elementary properties and interrelationships of projective, affine, Euclidean, and non-Euclidean geometries. Prerequisite or parallel: Mathematics 333.
403. INTRODUCTION TO MODERN ALGEBRA (4) I, II, III, IV. Elementary properties of groups, rings, and fields. Prerequisite: Mathematics 339.
404. INTRODUCTION TO MODERN ALGEBRA (4) I, II, III. Theory of vector spaces and linear transformations. Introduction to linear algebras. Characteristic roots and similarity. Prerequisite: Mathematics 403.
405. ELEMENTARY PROJECTIVE GEOMETRY (4) II. Fundamental theorems of projective geometry; Euclidean geometry as a portion of the larger field. Prerequisite or parallel: Mathematics 333.
411. ELEMENTARY TOPOLOGY (4) I. General properties of sets; topology of plane sets, closed sets, open sets in metric spaces; functions, continuous mapping, homeomorphisms, connectedness, and topological spaces. Survey of some of the classical problems such as classification of manifolds, fixed-point theorems, and the four-color problem. Prerequisite: Mathematics 332.
421. FOUNDATIONS OF MATHEMATICS (4) I, II, IV. Classic material in the fields of geometry and algebra examined from an advanced point of view. Hypothetico-deductive nature of mathematics is clarified; properties of postulate sets. Boolean algebra, symbolic logic, and the calculus of propositions. Prerequisite: Mathematics 403.
422. FOUNDATIONS OF MATHEMATICS (4) II, III. Mathematics 421 continued. Prerequisite: Mathematics 421.
431. GEOMETRY OF CURVES AND SURFACES (4). To be offered once a year. Arc length, curvature, and torsion of space curves; Frenet-Serret formulas; the first and second fundamental forms on surfaces; local geometry of surfaces in Euclidean space; theorem egregium of Gauss; and geodesic curves. Prerequisite: Mathematics 334 or consent of chairman.
433. GEOMETRIC INTEGRATION THEORY (4). Offered on demand. Differentiable and integrable functions on Euclidean space, integration on chains, vector fields and differential forms on manifolds, and Stokes' theorem. Prerequisite: Mathematics 334 or consent of chairman.
437. TOPICS IN DIFFERENTIAL EQUATIONS (4) II. Existence theorems, linear and nonlinear equations of the second order, Laplace transform and applications, series solutions, numerical solutions, partial differential equations of mathematical physics, Fourier series, and solution of boundary value problems. Prerequisite: Mathematics 337.
441. THEORY OF PROBABILITY AND MATHEMATICAL STATISTICS (4) I, II, IV. Discrete probability, random variables, probability distributions, and mathematical expectation; continuous random variables, probability densities, mathematical expectation, and distributions of sums of random variables; the central limit theorem. Prerequisite or parallel: Mathematics 333.
442. THEORY OF PROBABILITY AND MATHEMATICAL STATISTICS (4) II. Sampling distributions, tests of hypotheses, correlation and regression analysis, and analysis of variance. Prerequisite: Mathematics 441.
451. NUMERICAL ANALYSIS (4) II, IV. Development of numerical methods which are efficient, accurate, and suitable for high-speed digital computation; zeros of polynomial and transcendental functions; numerical differentiation and integration; solution of linear systems by direct and by iterative methods. Selected algorithms are programmed in FORTRAN IV for solution on the computer. Prerequisite: Computer Science 101 and Mathematics 333. Not open to a student with credit for Computer Science 451.
452. NUMERICAL ANALYSIS (4) III. Continuation of Mathematics 451. Matrix inversion; computation of eigenvalues and eigenvectors of matrices; least squares, trigonometric, and Chebyshev approximation; numerical solution of initial value and boundary value problems in ordinary differential equations; introduction to numerical solution of partial differential equations. Prerequisite: Mathematics 333 and 337 and Computer Science 101.
461. INTRODUCTION TO THE THEORY OF FUNCTIONS OF A COMPLEX VARIABLE (4) III.

Complex numbers, analytic functions, complex integration, power series, residues and poles, conformal mapping, and analytic continuation. Prerequisite: Mathematics 334 or 409.

465. (409) INTRODUCTION TO ANALYSIS I (4) I, II, III. Alternate summers. Real number system; metric spaces, sequences, limits; continuity; differentiation; Riemann integration. Prerequisite: Mathematics 333.

466. (410) INTRODUCTION TO ANALYSIS II (4) II, III. Sequences and series of functions, convergence and uniform convergence, interchange limit operations, existence theorem for ordinary differential equations, partial differentiation, multiple integration. Prerequisite: Mathematics 465.

467. INTRODUCTION TO ANALYSIS III (4) III. Continuation of topics from Mathematics 466; other selected topics such as Riemann-Stieltjes integration and the theory of differentiation and integration of functions of several variables.

490. PROBLEMS IN MATHEMATICS (1-4) I, II, III. Readings and independent study of particular interest to an individual student of high potential. May be repeated. Prerequisite: Consent of instructor and chairman of the Department.

491. TOPICS IN MATHEMATICS (4). Offered on demand. Selected topics in mathematics not included in existing courses. The scheduling of this course may be initiated by the department or by a group of students with departmental approval. May be taken twice for credit. Prerequisite: Consent of instructor.

HONORS COURSES IN MATHEMATICS

Upon invitation from the faculty of the Department of Mathematics, a student may undertake the Honors Program in Mathematics. Participation is open to the mathematics major whose performance in analytic geometry and calculus has indicated his interest in mathematics and his probable success. Graduation with Honors in Mathematics entails the indicated additional work in Mathematics 295, 395, 495 above the requirements of the major. Participation is voluntary and may be discontinued without prejudice.

295. HONORS COURSE IN MATHEMATICS (1) I, II, III. A series of lectures by various department members, surveying the major areas of mathematics. To be taken upon completion of Mathematics 332.

395. HONORS COURSE IN MATHEMATICS (2) I, II, III. Resources of a mathematics library; techniques involved in conducting a search for articles bearing on a selected topic. Prerequisite: Mathematics 295 and the invitation of the Department chairman.

495. HONORS COURSE IN MATHEMATICS (1) I, II, III. Directed study in some field of mathematics including preparation and presentation of a research topic. To be taken concurrently with two or more hours of Mathematics 490. Prerequisite: Mathematics 395 and the invitation of the Department chairman.

MILITARY SCIENCE

Professor Colonel Kirchner (Chairman); Assistant Professor Major Walker, Captain Robertson, Captain Stanger, Captain McConnell; Enlisted Instructors Sergeant Major Montenegro, Master Sergeant Ragland; Administrative Assistants Staff Sergeant Stanton, Staff Sergeant Alvarez.

BASIC COURSE

101. MILITARY SCIENCE I (2) I. First-year basic. History, organization and objectives of ROTC Program; familiarization with selected Army weapons systems and small unit communications systems; leadership training and drill experience.

102. MILITARY SCIENCE I (2) II. Military Science 101 continued. The role of the United States Army in national security and the U.S. defense establishment; introduction to marksmanship training. An elective subject from the following general academic areas is required to supplement the course: effective communication, science comprehension, general psychology, political development, and political institutions. Prerequisite: Military Science 101.

103. MILITARY SCIENCE I (2) III. Military Science 102 continued. Continuation of progressive training in leadership, drill, and command. Introduction to tactics; map reading emphasizing terrain evaluation, military grid reference systems, and integrated use of map and compass. Prerequisite: Military Science 102.

201. MILITARY SCIENCE II (2) I. Second-year basic. Study of the Army Mobility Systems to create an awareness of the scope and complexity of transportation problems; familiarization with the organization, mission and functions of the U.S. Army Combat Developments Command; introduction to the planning, coordination and conduct of military operations, emphasizing the role of infantry, armor and artillery; advanced map reading including the study of overlays, aerial photographs, mosaics and photomaps; leadership training and drill experience. Prerequisite: Military Science I or, by placement, credit for previous military training (active duty or military school).

202. MILITARY SCIENCE II (2) II. Military Science 201 continued. American military history from the origin of the U. S. Army to the present, with emphasis on the factors which led to the organizational, tactical, logistical, operational, strategic, and social patterns found in the present-day Army. Prerequisite: Military Science 201.

203. MILITARY SCIENCE II (2) III. Military Science 202 continued. Introduction to the principles and fundamentals of small unit tactics; review of the organization of the basic military team and provides an understanding of the duties and responsibilities of military leaders as well as the methods of employment of basic military units; leadership training and drill experience. Prerequisite: Military Science 202.

ADVANCED COURSE

301. MILITARY SCIENCE III (3) I. First-year advanced. Development of an understanding of the principles, methods and techniques fundamental to military instruction; development of an understanding of the principles of internal defense and internal development operations; the role of the branches of the Army, to include the history, development, mission, organization and employment; continuation of progressive training in leadership, drill, and command emphasizing student participation in the role of a junior leader. Prerequisite: Military Science 203; direct enrollment in the two-year advanced course program by placement, credit or previous military training (active duty or military school).

302. MILITARY SCIENCE III (3) II. Military Science 301 continued. Development of an understanding of the psychological approach to leadership; practice in the application of leadership principles to commonplace problems appropriate to a junior leader; continuation of the study of the branches of the Army. An elective from the following general academic areas is required to supplement the course: effective communication, science comprehension, general psychology, political development, and political institutions. Prerequisite: Military Science 301.

303. MILITARY SCIENCE III (3) III. Military Science 302 continued. Review of the principles of small unit tactics to develop an understanding of their application; familiarization with high level communications equipment and systems; continuation of the study of the branches of the Army; continuation of progressive training in leadership, drill, and command, emphasizing student participation in the role of a junior leader; orientation for ROTC Advanced Summer Camp. Prerequisite: Military Science 302.

401. MILITARY SCIENCE IV (3) I. Second-year advanced. Basic concepts and fundamentals of Army administrations; military justice; internal defense and development; the fundamentals of the Army supply system and troop movements; understanding staff organization and staff officer responsibilities; development of essential characteristics of leadership through progressive drill and command emphasizing student planning and execution of various drills and ceremonies with a fourth-year student exercising control of the cadet brigade. Prerequisite: Military Science 303.

402. MILITARY SCIENCE IV (3) II. Military Science 401 continued. A general knowledge and appreciation of the factors influencing world change in order that a student, as a potential military or civilian leader, is able to make a more informed analysis of relations between the United States and individual nations or group of nations. An elective subject from the following general academic areas is required to supplement this course: effective communication, science comprehension, general psychology, political

development and political institutions.

Prerequisite: Military Science 401.

403. MILITARY SCIENCE IV (3) III. Military Science 402 continued. Use of combat intelligence in operational planning; review of map reading in a tactical planning environment; basic knowledge of organizing a military unit for combat; knowledge of the fundamental principles and techniques of employment of small units in tactical situations; orientation on service life for a future officer; and the continuation of progressive training in leadership, drill, and command with a fourth-year student exercising control of the cadet brigade. Prerequisite: Military Science 402.

*MUSIC

Professor Kennedy (Director).

THEORY, COMPOSITION, HISTORY, AND LITERATURE

Assistant Professors Chamberlain (Co-Chairman), DePue (Co-Chairman), Marini, Wilson; Instructors Beerman, Lundy, Pepper.

107. BASIC MUSICIANSHIP (2-6) I. Elementary course in the fundamental equipment of the musician, divided into three areas of instruction: a. theory—2 hours, b. literature—2 hours, c. sight-singing and dictation—2 hours. Required of each freshman in the School of Music unless formally waived in whole or part. The tutorial fee may be waived in whole or in part after examination.

108. BASIC MUSICIANSHIP (2-6) II. Music 107 continued. Prerequisite: Music 107.

109. BASIC MUSICIANSHIP (2-6) III. Music 108 continued. Prerequisite: Music 108.*

201. SIGHTSINGING AND DICTATION (2) I. Further development of visual and aural recognition of melodic line. Rhythmic reading, singing of diatonic and chromatic material including scales, intervals, and modes; rhythmic harmonic, and melodic dictation. Prerequisite: Music 109 or equivalent.*†

202. SIGHTSINGING AND DICTATION (2) II. Music 201 continued. Use of alto and tenor clef. Prerequisite: Music 201 or consent of instructor.†

203. SIGHTSINGING AND DICTATION (2) III. Music 202 continued.†

204. HARMONY (3) I. Non-harmonic tones; altered chords, modulation, harmonic counterpoint. Prerequisite: Music 109 or equivalent.*

205. HARMONY (3) II. Music 204 continued. Prerequisite: Music 204.

206. HARMONY (3) III. Music 205 continued. Prerequisite: Music 205.

* For a music major, the completion of Music 109 with a grade of C or better is a prerequisite to Music 201, 204, 218.

† May be waived by examination. Proficiency demonstrated by the completion of Music 203 is a prerequisite for graduation of a music major or minor.

218. HISTORY OF MUSIC (3) I. A study of the periods and schools of Western art music. Prerequisite: Music 109 or equivalent.*
219. HISTORY OF MUSIC (3) II. Music 218 continued.
220. HISTORY OF MUSIC (3) III. Music 219 continued.
301. CHORAL LITERATURE (2). Offered on demand. A survey of choral literature; performance and analysis of styles from the Renaissance to the contemporary period.
302. SIGHTSINGING AND DICTATION (2) III. Advanced practice in reading of complex melodic material; melodic and harmonic dictation. Prerequisite: Music 203.**
304. ANALYSIS (3) I, II, III. Analysis of the small and large forms of composition from various periods. A survey of musical form from plain chant to present. Prerequisite: Music 206 or equivalent.
308. KEYBOARD HARMONY (2) I. Utilization of keyboard skills relating to score reading, transposition, extemporization, accompanying.
309. KEYBOARD HARMONY (2) II. Continuation of keyboard skills developed in Music 308; practical aspects of accompanying.
310. KEYBOARD HARMONY (2) III. Music 309 continued.
315. ORCHESTRATION (3) I, II, III. Score analysis, individual arranging, and writing for the various independent families of the orchestra—woodwinds, brass, strings, percussion—as well as scoring for the full symphony orchestra.
316. COMPOSITION (3) I, II, III. Original composition in songs and instrumental forms. May be repeated to 18 hours. Prerequisite: consent of instructor.
317. MASTERPIECES OF MUSIC (4) I, II, III. An introduction to the music of the most important composers of the eighteenth, nineteenth, and twentieth centuries. No previous knowledge of music is assumed. Not open to a music major.
318. SYMPHONIC LITERATURE (2). Offered on demand. A listening course tracing the development of the symphony and symphonic poem to the modern period through analysis of structure, orchestration, instrumentation. Prerequisite: Music 218, 219, 220.
320. BAND ARRANGING (3) II, III. Scoring for bands, choirs, ensembles, full band.* **
396. SERVICE PLAYING (2) I. Offered 1972-73 and alternate years. Hymn playing, transposition, modulation, improvisation, and accompanying at the organ. Prerequisite: Music 204, 205, 206, or consent of instructor.
397. SERVICE PLAYING (2) II. Music 396 continued.
398. SERVICE PLAYING (2) III. Music 397 continued.
401. HISTORY AND LITERATURE OF JAZZ (3) I, II, III. A study of jazz from African influences through present developments, with attention to personalities involved in stylistic change.
403. COUNTERPOINT (2) I. Sixteenth-century counterpoint. Prerequisite: Music 206 or equivalent.
404. COUNTERPOINT (2) II. Eighteenth-century counterpoint; tonal counterpoint in three and four voices; canon, invention, fugue, chorale-prelude.
405. COUNTERPOINT (2) III. Twentieth-century counterpoint. Analysis and writing in linear, dissonant, twelve-tone contrapuntal styles.
406. PROBLEMS IN MUSIC HISTORY (4) I, II, III. An introduction to research through topics and problems in music history. Prerequisite: consent of instructor. May be repeated to 12 hours.
407. PERFORMANCE PRACTICE (3) I, II, III. A study of performance practice in music, including improvisation, ornamentation, accompaniment, instrumentation, rhythm, and tempo. Prerequisite: Music 218, 219, 220. May be repeated for credit with approval of department.
408. CHAMBER MUSIC LITERATURE (2) I, II, III. Study of selected major chamber music works of various periods. Reading on all forms and media. May be repeated to 6 hours.
409. MODERN MUSIC (3) I, II, III. The study of musical styles and compositional techniques of the twentieth century through the historical approach, considering various influences of the past. Prerequisite: Music 220.
410. CONTEMPORARY MUSIC SEMINAR (3) I, II, III. The study of musical styles and techniques of the twentieth century through a compositional and analytical approach, considering various influences of the past. May be repeated to 18 hours. Open automatically to composition majors, to others by consent of instructor.
412. OPERA LITERATURE (3). Offered on demand. A study of styles, interpretation, traditional performances of various schools of opera. Prerequisite: Music 218, 219.
415. ORGAN CONSTRUCTION (3) III. Chronological survey of the history of design and construction of the organ.
417. MUSIC IN AMERICA (3) I, II, III. A survey of music from the earliest settlements to the present including ethnic music, jazz, the Broadway theatre, and native composers.
418. FOLK AND TRADITIONAL MUSIC OF THE WESTERN CONTINENTS (3) I. Music of oral tradition and folk music of Western high art cultures discussed and related to their individual cultures. Prerequisite: Music 317 or equivalent.
419. MUSIC CULTURES OF THE PACIFIC, THE NEAR EAST, AND ASIA (3) II. Music of non-Western high art cultures, traditional and folk musics of non-Western cultures discussed and related to their individual cultures. Prerequisite: Music 317 or equivalent.

* For a music major, the completion of Music 109 with a grade of C or better is a prerequisite to Music 201, 204, and 218.

** Prerequisite may be waived by examination.

420. PROBLEMS AND TECHNIQUES OF ETHNOMUSICOLOGY (3) III. Topics and techniques which have been developed by those working in the field of ethnomusicology. Open to students interested in all music as an aspect of culture.

490. READINGS AND RESEARCH (2-5) I, II, III. Directed independent reading and research in the history, philosophy, aesthetics or education. Prerequisite: 23 hours of music history and theory and consent of instructor.

MUSIC EDUCATION

Assistant Professor Hansen (Chairman), Professors Hohn, Trusler; Associate Professors Alexander, Kelly, Skinner; Assistant Professor J. Moore; Instructors Jordan, Mathey, Piersol; Part-Time Instructor McCrystal.

255. MUSIC IN THE ELEMENTARY SCHOOL (4) I, II, III. Objectives, materials, procedures involved in the teaching of music in the first six grades.

351. GENERAL MUSIC (2) I, II, III. Singing, moving to music, playing piano and classroom instruments, gaining knowledge of the elements, symbols, and elementary theory of music. Not open for credit to the music major or minor.

352. GENERAL MUSIC (2) I, II, III. Listening to music intelligently, music literature appropriate for children, understanding the elements of music in various forms and styles of composition. Not open for credit to the music major or minor. Prerequisite: Music 351.

353. GENERAL MUSIC (2) I, II, III. Role of music in the total school curriculum as an art and the musical needs of children; developing skills in teaching procedures and related aspects of teaching. Not open for credit to the music major or minor. Prerequisite: Music 351 and 352.

354. GENERAL MUSIC (4) I, II, III. Accelerated course covering material studied in Music 351, 352, 353. High level of attainment expected; open to a student with a wide background in music. Not open for credit to the music major or minor nor to the student with credit for Music 351, 352, 353.

355. METHODS IN MUSIC IN JUNIOR HIGH SCHOOL (3) I, II, III. Subject matter and materials for music in junior high school.

356. METHODS IN MUSIC IN SENIOR HIGH SCHOOL (2) I, II, III. Subject matter and materials for music in senior high school.

357. INSTRUMENTAL ORGANIZATION AND ADMINISTRATION (3) I, II, III. For elementary and secondary schools.

358. METHODS FOR TEACHING THE DIS-ADVANTAGED CHILD (4) I, II. An introduction to teaching music to disadvantaged children, with emphasis upon appropriate materials and techniques. Laboratory experiences with dis-

advantaged children provided. Prerequisite: consent of instructor.

451. ADVANCED METHODS FOR CLASSROOM MUSIC (4) II. An in-depth study of classroom music instruction including an examination of methods, instructional hardware, organizational patterns, and curricular models. Prerequisite: 255, 355.

455. MUSIC AND THE ALLIED ARTS (4) III. An examination of recent efforts to integrate music and the arts. Designed to acquaint prospective music teachers with the problems and merits of such studies, and to aid them in developing valid procedures for courses in this area. Prerequisite: Art 101.

456. CHORAL TECHNIQUES AND ORGANIZATION (3) I, III. Advanced course in music education for the vocal-choral major designed to prepare him to direct a choral program in the high school, church, community.

PERFORMANCE STUDIES

Associate Professor Linden (Chairman); Professors Allen, Betts, Makara, Raab; Associate Professors Burnett, Glasmire, Howard, Rose; Assistant Professors Baker, Cobb, Eikum, Marks, R. Moore, Novak, Pope, Rogers, Starr, Wolcott; Instructors Anderson, Auer, Chase, Cioffari, Duvall, Hammond, Kim, Melle, Schwartz; Part-Time Instructors Forbes, Lipkin, K. Moore.

One credit is awarded for each half hour of private instruction. Performance majors are entitled to 3 credits for one clock hour lesson. A fee of \$30 for each half hour of private instruction is assessed each quarter. A student enrolled for applied music has access to practice rooms and equipment with schedules and regulations determined by the School of Music. With the exceptions of piano classes (160a, 160b, 160c), there is no charge for class instruction.

Each student in Performance and Music Education must have an area of emphasis. An entering student must audition before a faculty committee to determine acceptance and standing. If a student wishes to change his area of emphasis, it must be with the approval of the area faculties involved.

A full public recital is required for each Performance major during his senior year. A Music Education major with an instrumental or vocal emphasis is required to present the equivalent of a half recital. A full recital may be given with the consent of the instructor.

Each student is required to pass a proficiency examination in his major area at the third-quarter juries. Failure to pass this proficiency examination results in probationary status for one quarter at the end of which significant improvement must be demonstrated or applied instruction will be terminated and the student's standing in the School of Music will be reviewed.

Faculty jury examinations are scheduled throughout the school year. Students may be excused from these examinations with the consent of the instructor.

Not for Arts and Sciences or Business Administration Credit.

Music Performance

120. PERCUSSION CLASS (1) I, II, III.
125. PERCUSSION CLASS (1) I, II, III. Prerequisite: Music 120.
121-122-123, 221-222-223, 321-322-323, 421-422-423. PRIVATE PERCUSSION INSTRUCTION (1-3).
130. TRUMPET CLASS (1) I, II, III.
135. FRENCH HORN CLASS (1) I, II, III.
136. TROMBONE CLASS (1) I, II, III.
137. BARITONE-TUBA CLASS (1) I, II, III.
131-132-133, 231-232-233, 331-332-333, 431-432-433. PRIVATE BRASS INSTRUCTION (1-3).
Trumpet—a Edwin Betts, George Novak
Trombone—b David Glasmire
French Horn—c David Rogers
Tuba-Baritone—d Ivan Hammond
140. CLARINET CLASS (1) I, II, III.
146. OBOE CLASS (1) I, II, III.
147. BASSOON CLASS (1) I, II, III.
141-142-143, 241-242-243, 341-342-343, 441-442-443. PRIVATE WOODWIND INSTRUCTION (1-3).
Clarinet—a Edward Marks, David Melle, Jon Piersol
Oboe—b Cleon Chase
Bassoon—c Robert Moore
Saxophone—d Louis Marini
Flute—e David Melle, Harold Skinner
160a. CLASS PIANO (1) I, II, III. Fee: \$15.
160b. CLASS PIANO (1) I, II, III. Prerequisite: Music 160a. Fee: \$15.
160c. CLASS PIANO (1) I, II, III. Prerequisite: Music 160b. Fee: \$15.
161-162-163, 261-262-263, 361-362-363, 461-462-463. PRIVATE PIANO INSTRUCTION (1-3).
Walter Baker, Frances Burnett, Elizabeth Cobb, Lois Forbes, DuWayne Hansen, Eleanor Lipkin, John Lundy, Kay Moore, Jerome Rose, Toma Schwartz.
170. VOICE CLASS (1) I, II, III.
171-172-173, 271-272-273, 371-372-373, 471-472-473. PRIVATE VOICE INSTRUCTION (1-3).
Warren Allen, Alfred Anderson, Judith Auer, William Duvall, Rex Eikum, Richard Mathey, Virginia Starr.
180. VIOLIN CLASS (1) I, II, III.
185. VIOLA CLASS (1) I, II, III. Prerequisite: Music 180.
186. CELLO CLASS (1) I, II, III.
187. STRING BASS CLASS (1) I, II, III.
181-182-183, 281-282-283, 381-382-383, 481-482-483. PRIVATE STRING INSTRUCTION (1-3).
Violin—a Young Nam Kim, Paul Makara, Emil Raab
Viola—b Bernard Linden
Cello—c Peter Howard
String Bass—d Richard Cioffari
Harp—e Linda Petrella
191-192-193, 291-292-293, 391-392-393, 491-492-493. PRIVATE ORGAN INSTRUCTION (1-3).
Vernon Wolcott.

Courses In Repertoire, Pedagogy And Diction

210. PIANO REPERTOIRE (2) I. Survey of literature for stringed keyboard instruments from the reign of Queen Elizabeth, when English virginal music flourished, through Bach and French rococo.
211. PIANO REPERTOIRE (2) II. Survey of literature for piano from the early stages of classicism under the Bach sons through Haydn, Mozart, and Beethoven.
212. PIANO REPERTOIRE (2) III. Survey of romantic and contemporary piano literature.
215. ORGAN REPERTOIRE (2) I. Survey of organ literature before 1750 excluding the music of J. S. Bach.
216. ORGAN REPERTOIRE (2) II. Organ music of J. S. Bach.
217. ORGAN REPERTOIRE (2) III. Survey of organ literature from 1750 to the present.
311. VOCAL REPERTOIRE (2) I. Analysis of the performance of song literature, seventeenth-eighteenth century, with emphasis on awareness of harmonic, formal, and compositional techniques employed by composers.
312. VOCAL REPERTOIRE (2) II. Analysis of the performance of song literature, nineteenth century-present, with emphasis on awareness of harmonic, formal, and compositional techniques employed by composers.
313. VOCAL REPERTOIRE (2) III. Music 312 continued.
314. SINGER'S DICTION—Italian (3) III. Analysis of the theory and basic concepts involved in applying the principles of lyric Italian diction as concerns the singer, simple grammatical construction, and use of the dictionary.
366. PIANO PEDAGOGY PRACTICUM (3) I. Methods and materials for teaching individuals and classes of children and adults.
367. PIANO PEDAGOGY PRACTICUM (3) II. Elementary materials with an opportunity for practical experience in private teaching situations. Prerequisite: Music 366 or in some cases, consent of instructor.
368. PIANO PEDAGOGY PRACTICUM (3) III. Class piano techniques and materials with an opportunity for practical teaching experience. Prerequisite: Music 367 or in some cases, consent of instructor.
411. SINGER'S DICTION—English (3) II. Study of phonetics as it pertains to the singer to achieve clarity, accuracy, ease, uniformity in the singing of English.
453. BRASS PEDAGOGY (3) I or II or III. Brass teaching techniques and the literature for brass instruments.
454. WOODWIND PEDAGOGY (3) I or II or III. Teaching techniques and materials for woodwind instruments.
458. STRING PEDAGOGY (3) I or II or III. Upper and lower strings. Principles of teaching stringed instruments. Investigation of related literature and materials.

459. ORGAN PEDAGOGY (3) I or II or III. Principles and techniques of teaching and literature applied to various levels of organ study.

Courses In Conducting

207. CONDUCTING I (2) I. Fundamental beat and cuing techniques.

208. CONDUCTING II (2) II. Continuation of baton techniques. Prerequisite: Music 207.

209. CONDUCTING III (2) III. Advanced study and analysis of baton technique and score reading with a concentration option of either instrumental or choral conducting. Prerequisite: Music 208.

100-300. SMALL ENSEMBLES (1) I, II, III. Small ensembles, listed below, are formed under the supervision of the School of Music and are offered on demand. Music 100 for a freshman or a sophomore and Music 300 for a junior or a senior may be repeated, but credit earned in Music 100-300 may not exceed 12 hours.

All students majoring in Performance or with an instrumental or vocal emphasis in Music Education will participate in Small Ensembles when assigned. Assignments will be made on the basis of the needs of the student's program. Students should not register for the class. Registration will be made after the groups are assigned.

A specific minimum number of credits is required in each program, and this number will apply to graduation. All work done above the minimum may be counted as music electives, but the total may not exceed 12. All noteworthy activities will be placed on the student's permanent record.

The following areas of chamber music are offered:

- 100a, 300a. Percussion
- 100b, 300b. Brass
- 100c, 300c. Woodwind
- 100d, 300d. Strings
- 100e, 300e. Piano
- 100f, 300f. Vocal (Opera Theater*
vocal groups*)
- 100g, 300g. Collegium Musicum (Renaissance
Ensemble, Madrigal Singers*,
Baroque Ensemble*, New
Music Ensemble)
- 100h, 300h. Jazz Workshop*

LARGE ENSEMBLES (1) I, II, III. Open to any student of the University possessing the necessary musical ability. Any student taking individual voice lessons may register for Music 277, 278, 279, 477, 478, 479 only with the consent of his voice instructor and the conductor of the ensemble. All credit earned in large ensembles is placed on the student's permanent academic record, but not more than 12 hours may apply toward degree requirements.

238. Symphonic or Concert Band
(freshman-sophomore)

* Audition or faculty assignment required.

- 239. Marching Band (freshman-sophomore)*
- 277. A Cappella Choir (freshman-sophomore)
- 278. Collegiate Chorale (freshman-sophomore)
- 279. University Chorus (freshman-sophomore)
- 289. Symphony Orchestra (freshman-sophomore)
- 289. Chamber Orchestra (freshman-sophomore)
- 438. Symphonic or Concert Band (junior-senior)
- 439. Marching Band (junior-senior)**
- 477. A Cappella Choir (junior-senior)
- 478. Collegiate Chorale (junior-senior)
- 479. University Chorus (junior-senior)
- 489. Symphony Orchestra (junior-senior)
- 489. Chamber Orchestra (junior-senior)

PHILOSOPHY

Associate Professor Lineback (Chairman); Professors Goodwin, Hartnack; Associate Professors Cormier, Scherer; Assistant Professors Bradie, Katzner, Littlefield, Robins, Spader, Stuart; Instructors Braun, Daye, Kappler.

101. INTRODUCTION TO PHILOSOPHY (4) I, II, III. A discussion of the principal problems of philosophy; the existence of God, mind-body, origin and validity of knowledge, and freedom and determinism. Restricted to a freshman or sophomore student.

202. ETHICS (4) I, II, III. Inquiry into the meaning of good and evil and right and wrong in the context of contemporary moral issues. Primarily intended for a sophomore or a junior. A freshman or a senior may take this course only with the permission of the instructor.

204. AESTHETICS (4) I, II, III. Nature and meaning of "beauty", approached historically and applied to present-day experience. Courses in art, music appreciation, and history are beneficial. Primarily intended for a sophomore or junior. A freshman or senior may take this course only with the permission of the instructor.

205. INTRODUCTION TO LOGIC (4) I, II, III. Analysis of language, informal fallacies, and deductive arguments. Primarily intended for a sophomore or a junior. A freshman or a senior may take this course only with the permission of the instructor. A student who has credit for 303 may not register for 205.

206. THE LOGIC OF SCIENCE (2) I, II, III. Analysis of inductive reasoning, including, for example, analogies, Mill's methods, statistics, and the scientific method. Primarily intended for a

* A freshman band member may defer his enrollment in H.P.E. 100 until the second quarter; however, if he enrolls in both Music 239 and H.P.E. 100, attendance at both is mandatory for receiving credit from both.

** One hour credit for band activities requires participation for the full quarter in the fall quarter, a student registered for credit in Music 239 or 439 continues after Marching Band in one of the band groups. A student who wishes to participate in only one or the other activity does so on a non-credit basis.

- sophomore or junior. A freshman or senior may take this course only with the permission of the instructor. Not offered in 1971-72.
302. HISTORY OF ETHICS (4) I. In depth examination of ancient, medieval, and modern ethical theories in relation to their historical context, with emphasis on such philosophers as Plato, Aristotle, Hume, Mill, and Kant. Prerequisite: one course in philosophy or consent of instructor.
303. SYMBOLIC LOGIC (4) I, II, III. Introduction to the notation and proof procedures used by modern logicians to deal with special problems beyond the competence of traditional logic. Topics include propositional calculus, truth tables, predicate calculus, and nature and kinds of logical proofs.
310. HISTORY OF ANCIENT PHILOSOPHY (4) I. An introduction and survey of Greek philosophy, including the Presocratics, Plato, Aristotle, and the post-Aristotelians.
311. HISTORY OF MEDIEVAL PHILOSOPHY (4) II. Survey of major philosophical positions of the Middle Ages starting with those of St. Augustine and ending with those of the Renaissance philosophers.
312. HISTORY OF MODERN PHILOSOPHY (4) III. Survey of Western philosophical thought from the Renaissance to the end of the nineteenth century.
313. CONTEMPORARY PHILOSOPHY (4) I. Survey of Western philosophy since 1900, with emphasis on logical positivism, analysis, phenomenology, existentialism, and major philosophers in each school.
317. PHILOSOPHY OF RELIGION (4) I, II, III. An examination of the nature of religion and of such central religious concepts as those of gods and God; of faith, revelation, and religious belief; of evil and righteousness; and of the meaning of life. Readings from a variety of sources, largely contemporary.
321. INDIAN PHILOSOPHY (4) III. A philosophical consideration of the traditional schools such as Nyaya-Vaisesika, Sankhya-Yoga, Buddhism and Vedanta. Particular emphasis on epistemology, systems of formal inference, causality, metaphysics, mind-body relationships, and methodological presuppositions. Prerequisite: one course in philosophy or consent of instructor.
322. CHINESE PHILOSOPHY (4) II. A survey of the traditional schools such as Confucianism, Taoism, Legalism, Chinese Buddhism and their later development. Particular emphasis on problems of ethics, the nature of man and society, epistemology, metaphysics and logic. Course content to vary from year to year.
323. HISTORY OF RELIGIONS (4). Not offered 1971-72. The "bibles" of seven major living religions of the Far East—Hinduism, Buddhism, Jainism, Confucianism, Taoism, Shintoism, and Sikhism—including inquiry into the cultural backgrounds of India, China, and Japan.
324. HISTORY OF RELIGIONS (4). Not offered 1971-72. The "bibles" of the four major living religions of the Near East—Zoroastrianism, Hebraism, Christianity, and Islam—including inquiry into the cultural backgrounds of Egypt, Babylonia, Israel, Greece, and Rome.
325. MODERN SOCIAL THEORIES (4) I. A consideration of concepts such as freedom, alienation, human nature, the state, etc. as the function in communist, fascist, and democratic ideology.
403. ADVANCED SYMBOLIC LOGIC (4) III. Structure and properties of axiomatic systems including consistency and completeness, the theory of propositional and predicate logic, and related topics. Theory rather than problem solving is stressed. Prerequisite: Philosophy 303 or consent of instructor.
412. THEORY OF KNOWLEDGE (4) I. An examination of questions concerning the origin, content, and certainty of knowledge; philosophical psychology; and problems of perception. Prerequisite: 4 hours of philosophy or consent of instructor.
414. METAPHYSICS (4) II. An examination of the relation of appearance to reality, problem of universals, the mind-body problem, and other traditional metaphysical questions. Prerequisite: one course in philosophy, excluding Philosophy 205 and 206.
415. AMERICAN THOUGHT (4) I, II, III. A survey of philosophical thought in America with special emphasis on the pragmatists (Pierce, James, and Dewey), Royce, and Whitehead.
418. PHILOSOPHY OF HISTORY (4) I. Examination of the nature of historical knowledge and of certain metaphysically oriented theories of history. Prerequisite: one course in philosophy, excluding Philosophy 205 and 206.
419. SEVENTEENTH CENTURY RATIONALISM (4) II. Offered 1970-71 and alternate years. A study of the philosophies of Descartes, Spinoza, and Leibniz. Prerequisite: Philosophy 312.
420. EIGHTEENTH CENTURY EMPIRICISM (4) II. Offered 1971-72 and alternate years. A study of the philosophies of Locke, Berkeley, and Hume. Prerequisite: Philosophy 312.
425. PROBLEMS IN SOCIAL AND POLITICAL PHILOSOPHY (4) III. A philosophical examination of one or more concepts such as justice, authority, the state, representation, freedom, natural law, etc. Prerequisite: one course in philosophy, excluding Philosophy 205 and 206, or consent of instructor.
431. PHILOSOPHY OF THE PHYSICAL SCIENCES (4) II. Philosophical consideration of methods, presuppositions, and concepts of the physical sciences. Special problems covering meanings of law, measurement, causality, prediction, and reduction. Prerequisite: 4 hours of philosophy and/or course work in the physical sciences.
432. PHILOSOPHY OF THE BEHAVIORAL SCIENCES (4) III. Philosophical consideration of

methods, presuppositions, and concepts of behavioral sciences. Special problems covering the meaning of life, the possibility of forming values, freedom and determinism in relation to problems of prediction, vitalism versus mechanism, and meaning of man and society. Prerequisite: 4 hours of philosophy and/or course work in the social sciences.

440. SEMINAR IN PHILOSOPHY (4) I, II, III. Examination in depth of one specific philosopher, philosophical movement, or problem. Determined by the need and interest of the student. Prerequisite: 4 hours in philosophy, excluding Philosophy 205 and 206, or consent of instructor.

490. READINGS AND RESEARCH (1-4) I, II, III. Supervised independent work in selected areas of philosophy. Prerequisite: 15 hours of philosophy and consent of chairman of the Department. May be repeated to 8 hours.

*PHYSICS

Professor D. Bowman (Chairman); Associate Professors Singleton, Stoner; Assistant Professors Cobb, Crandall, Duncan, Flamm, McKay, Ptak, Mucker, Shirkey; Instructor R. Herbert, Technician Mueller.

100. INTRODUCTION TO PHYSICS (4) I, II, III. Designed primarily for the non-science student; major principles and concepts of physics with emphasis on the scientific approach to problems. This course cannot be used as part of a major or minor.

110. INTRODUCTION TO VECTOR PHYSICS (3) I, II, III. Units, significant figures, use of slide rules, dimensional analysis, application of vectors and vector principles to forces and fields, work-energy-power, and conservation laws. Prerequisite: working knowledge of trigonometry.

131. MECHANICS (4) I, III. Four lecture-recitations weekly. Measurement, differential, and integral calculus applied to kinematics in one, two, and three dimensions; vector notation and vector algebra; Newtonian mechanics; gravitation; statics; conservation laws. Prerequisite: working knowledge of trigonometry.

211. COLLEGE PHYSICS (4) I, III. Mechanics and heat. Three lecture-recitations and one 3-hour laboratory. Prerequisite: Physics 110.

212. COLLEGE PHYSICS (4) I, II. Simple harmonic motion, wave motion, electricity, and magnetism. Three lecture-recitations and one 3-hour laboratory. Prerequisite: Physics 211.

213. COLLEGE PHYSICS (4) II, III. Sound, light, atomic and nuclear physics. Three lecture-recitations and one 3-hour laboratory. Prerequisite: Physics 212.

225. APPLIED MECHANICS (5) II. Force systems, equilibrium, fluid statics, statically determinate structures. Primarily for the pre-engineer. Five lecture-recitations. Prerequisite: Physics 131.

232. UNIVERSITY PHYSICS (5) I, II. Four lecture-recitations and one laboratory weekly.

Harmonic oscillations, wave motion, sound, optics, thermodynamics. Prerequisite: Physics 131 or both Physics 110 and Mathematics 131. Co-requisite: Mathematics 131.

233. UNIVERSITY PHYSICS (5) II, III. Four lecture-recitations and one laboratory weekly. Electricity and magnetism. Prerequisite: Physics 232. Corequisite: Mathematics 231.

302. SOUND AND ULTRASONICS (4) III. Offered 1971-72 and alternate years. Theory of sound and wave motion including ultrasonic phenomena. Four lecture-recitations. Prerequisite: Physics 213 or 233, Mathematics 232. Mr. Crandall.

303. ELECTRONICS (5) II. Discussion and laboratory practice in networks, vacuum tube characteristics, transistors, and associated circuitry. Three lecture-recitations, two 3-hour laboratories. Prerequisite: Mathematics 232, Physics 213 or 233. Mr. Crandall.

304. OPTICS AND SPECTROSCOPY (4) III. Offered 1972-73 and alternate years. Geometrical and physical optics and elementary theory and practice in spectroscopy. Four lecture-recitations. Prerequisite: Physics 213 or 232, Mathematics 232. Mr. Bowman.

306. INTERMEDIATE HEAT (4) I. Offered 1972-73 and alternate years. Thermodynamic laws, entropy, specific heats, vapor pressures, heat transfer, thermometry. Four lecture-recitations. Prerequisite: Physics 211 or 232, Mathematics 232. Mr. Shirkey.

313. ADVANCED PHYSICS LABORATORY (3) I, II, III. Independent laboratory work to be chosen from the intermediate areas of classical and modern physics. May be repeated to a total of 9 hours. One discussion meeting and two 3-hour laboratory periods per week. Prerequisite: Physics 232. Mr. Crandall.

334. MODERN PHYSICS (5) I, III. Four lecture-recitations and one laboratory weekly. Special relativity and quantum mechanics. Topics from atomic and molecular physics, nuclear physics, solid-state physics, and X-rays. Co-requisite: Mathematics 232.

350. ACOUSTICS OF MUSIC AND SPEECH (4) I. Nature of vibration; sound waves, sources of musical sounds—strings, air columns, percussion, voice, noise; acoustics of rooms; recording, reproduction, and synthesis of sound. Not open to a student majoring in physical science. Mr. Flamm.

403. INTRODUCTION TO STELLAR STRUCTURE (4) III. Offered 1971-72 and alternate years. Basic data, equilibrium conditions, development of stellar models, white dwarfs. Four lectures. Prerequisite: Physics 334 plus consent of instructor. Mr. Ptak.

404. ATOMIC PHYSICS (4) II. Offered 1971-72 and alternate years. Resume of phenomena leading to the present concepts of atomic structure. Four lecture-recitations. Prerequisite: Physics 213 or 334, Mathematics 232. Mr. Bowman.

407. RECENT DEVELOPMENTS IN ASTRO-PHYSICS (4) III. Offered 1972-73 and alternate years. Observational techniques, stellar evolution, galaxies, quasars and pulsars, X-ray sources and supernova remnants, cosmology. Four lectures. Prerequisite: Physics 334. Mr. Ptak.

409. NUCLEAR PHYSICS (4) III. Offered 1971-72 and alternate years. Introduction to nuclear structure and phenomena, nuclear reactions, elementary particle interactions. Four lecture-recitations. Prerequisite: Physics 404. Mr. Shirkey.

410. SOLID STATE PHYSICS (4) I. Offered 1972-73 and alternate years. Continuum and atomic theories of solids, lattice vibrations, specific heat of solids, electron theory of metals and semiconductors. Four lecture-recitations. Prerequisite: Physics 404 or 416. Mr. Stoner.

411. X-RAYS (4) II. Offered 1972-73 and alternate years. Introduction to the generation and uses of X-rays. Prerequisite: Physics 213 or 233, Mathematics 233. Mr. Bowman.

412. MOLECULAR SPECTRA (4) I. Offered 1971-72 and alternate years. Analytical approach to the origin of spectra of simple molecules. Prerequisite: Physics 334. Mr. Singleton.

413. SENIOR PHYSICS LABORATORY (1-3) I, II, III. Introduction to physical research; library and laboratory work. Prerequisite: 24 hours of physics with good standing.

416. WAVE MECHANICS (4) II. Offered 1971-72 and alternate years. Harmonic motion, small oscillations, waves in continuous media. Fourier analysis, wave packets, Schroedinger's wave equation. Prerequisite: Physics 341. Mr. Cobb.

417. QUANTUM MECHANICS (4) III. Offered 1971-72 and alternate years. Applications of Schroedinger's equation to one-dimensional, three-dimensional, and two-body problems; hydrogen atom; perturbation theory; electron spin; operator formulation of quantum mechanics. Prerequisite: Physics 416. Mr. Cobb.

418. ELECTROMAGNETIC FIELD THEORY I (4) II. Offered 1972-73 and alternate years. Maxwell's theory of the electromagnetic field with applications in propagation, absorption, reflection, transmission of radiation. Prerequisite: Physics 341, Mathematics 233. Mr. Singleton.

419. ELECTROMAGNETIC FIELD THEORY II (4) III. Offered 1972-73 and alternate years. Physics 418 continued with applications of electromagnetic field theory to guided waves and physical optics. Prerequisite: Physics 418. Mr. Singleton.

441. INTRODUCTION TO THEORETICAL PHYSICS (4) I. Approximating with differentials, vector analysis, the linear oscillator, vibrating systems, eigenvalue problems. Prerequisite: Physics 233, Mathematics 232. Mr. Ptak.

442. INTRODUCTION TO THEORETICAL PHYSICS (4) II. Fourier analysis, the method of Frobenius, electrostatic potential theory, complex variables. Prerequisite: Physics 341. Mr. Ptak.

490. SPECIAL PROBLEMS IN PHYSICS (2-3). Offered on demand. Readings and research on recently developing topics chosen to fit the needs of students.

*POLITICAL SCIENCE

Professors Barrell, Claflin, Reichert; Associate Professor Spragens; Assistant Professors D. Anderson, R. Anderson, Giardina, Krauter (Firelands), J. Merriam, Stephens; Instructors K. Merriam, Jones.

GENERAL COURSES IN POLITICAL SCIENCE

101. INTRODUCTION TO POLITICS (4) I, II, III. Study of fundamental concepts and problems of politics. The enduring questions of politics are examined by analyzing contemporary political problems and by comparing a wide variety of modern political institutions in many different cultures. Restricted to freshmen and sophomores. Required of majors.

201. AMERICAN GOVERNMENT: PROCESSES AND STRUCTURE (4) I, II, III. Introductory study of constitutional basis and development, political processes (parties, nominations and elections, interest groups, public opinion), and organization of the American governmental system.

202. AMERICAN GOVERNMENT: FUNCTIONS AND POLICIES (4) I, II, III. An examination of legislation, programs, and issues in these areas of public policy: regulation and promotion of business and labor; economic policies; education; transportation; civil rights; welfare; poverty; urban renewal and housing; foreign affairs and national defense.

290. INTRODUCTION TO POLITICAL INQUIRY (3) III. Sources and methods of political inquiry. Use of library resources; documents, journals, reference works; research strategies; empirical methods of data collection and analysis: survey techniques, voting analysis, attitude scaling, index construction, data processing, correlation, and other statistical tools. Required of a major. Prerequisite: 6 hours of political science or consent of the instructor. Mr. Hamilton.

400. SEMINAR IN CONTEMPORARY POLITICAL SCIENCE (4) III. Political science as a discipline and profession. Exploration of forms of political inquiry and research; scientific and methodological orientations toward values and scholarship; study of public and professional status of political science. Required of a political science major. Prerequisite: 12 hours of political science. Mr. Hamilton.

490. INDIVIDUAL PROBLEMS (1-3) I, II, III. Offered on demand. Supervised individual readings to meet the student's need for extended reading in familiar areas or for exploratory readings in fields not covered by courses. Prerequisite: consent of the supervising instructor.

491. FIELD STUDY (1-3). Offered on demand.

COURSES IN POLITICAL THEORY

301. MODERN POLITICAL IDEOLOGIES (4) I, II, III. Examination and discussion of the nature and function of political power as seen in the ideologies of democracy, capitalism, liberalism, conservatism, Communism, anarchism, socialism, and Fascism. Mr. Reichert, Mr. Merriam.
304. AMERICAN POLITICAL THOUGHT (3) III. American political thought as reflected in the colonial, Federalist, Civil War, and recent phases of American political life. Mr. Reichert, Mr. Stephens.
402. WESTERN POLITICAL THOUGHT I (4) I. Introduction to classics of political philosophy of ancient and medieval periods, focusing upon major ideas and concepts of the western political tradition from Plato to Machiavelli. Mr. Reichert.
403. WESTERN POLITICAL THOUGHT II (4) II. Examination of the idea of the modern democratic state as it took form in the political writings of Hobbes, Locke, Hume, Bentham, Burke, Rousseau, Mill, and other major figures in the tradition. Mr. Reichert.

COURSES IN PUBLIC LAW

416. CONSTITUTIONAL LAW I (3) I. Supreme Court cases relating to U.S. governmental structure and relationships. Prerequisite: Political Science 201.
417. CONSTITUTIONAL LAW II (3) II. Constitutional doctrines relating to the Bill of Rights, as illustrated by key Supreme Court cases on procedural rights.
418. CONSTITUTIONAL LAW III (3) III. Constitutional doctrines relating to substantive rights as illustrated by key Supreme Court cases.
419. JURISPRUDENCE (4) III. Offered 1972-73 and alternate years. Survey of some of the leading theories, concepts, and branches of law with emphasis on Anglo-American thought and practice. Mr. Claflin.

COURSES IN PUBLIC ADMINISTRATION

421. PUBLIC ADMINISTRATION I (4) I. Principles of formal organization, line and staff, headquarters and field, bureaucracy; contemporary organization theory, informal organization, authority and status systems, decision making, communication, coordination and control. Prerequisite: Political Science 101 or 201.
422. PUBLIC ADMINISTRATION II (3) II. Political role of administrators, planning and policy formation, leadership, personnel systems, fiscal administration, legislative and judicial controls, administrative responsibility. Prerequisite: Political Science 101 or 201.
423. COMPARATIVE PUBLIC ADMINISTRATION (3) III. Offered 1971-72 and alternate years. Systems of the U.S., Britain, Europe, and the new states of Asia and Africa; emphasis

on influences of culture and history and the difficulties of exporting Western institutions to developing nations.

COURSES IN AMERICAN GOVERNMENT

331. STATE GOVERNMENT (4) I. Federal-state relations; state constitutions; parties and elections in the states; and state legislative, executive, and judicial branches, with emphasis on Ohio. Mr. Barrell.
332. LOCAL GOVERNMENT (4) II. Units of local government, state-local relations, municipal corporations and charters, forms of municipal government, county and metropolitan problems. Consideration of political and service functions of local government. Emphasis on Ohio. Mr. Barrell.
341. PUBLIC OPINION (3) I. Study of the processes of opinion formation and change and the operation of public opinion processes in a democracy including various models of linkages between public opinion and public policies. Prerequisite: Political Science 101 or 201 or a comparable level course in sociology or psychology, or consent of instructor. Mr. D. Anderson.
345. THE LEGISLATIVE PROCESS (3) II. Analysis of legislative behavior and decision making, forces involved in the formation of public policy, and proposed reforms of American legislatures. Prerequisite: Political Science 101 or 201 or consent of instructor. Mr. D. Anderson.
346. THE PRESIDENCY AND THE EXECUTIVE PROCESS (3) I. Organization, functions, and powers of the office of President and Vice-President with emphasis on their roles in the political process. Prerequisite: Political Science 101 or 201. Mr. Spragens.
347. JUDICIAL BEHAVIOR (3) I. Offered 1971-72 and alternate years. American judiciary, particularly the Supreme Court, as a political institution; decision-making process and interaction of the courts with the rest of the political system.
430. METROPOLITAN GOVERNMENT (3) III. The forces of urbanization, suburbanization, and metropolitanization; attention to the political and socio-economic consequences of the latter; projected and proposed solutions to metropolitan problems. Mr. Jones.
442. VOTER BEHAVIOR (3) III. Patterns of election participation and sources of partisan identification. Examination of political uses and implications of voter behavior data. Prerequisite: Political Science 201 or consent of instructor. Mr. D. Anderson.

COURSES IN COMPARATIVE GOVERNMENT

351. GOVERNMENT AND POLITICS OF EUROPE (4) I. Analysis of the political systems of selected countries of Europe: political culture (including constitutional development), governmental structures, political parties, interest

groups, political processes, and foreign relations. This course will primarily focus upon the northern European political systems, including Great Britain, Scandinavia, and Western Germany.

352. GOVERNMENTS AND POLITICS OF EUROPE (4) II. Analysis of the political systems of selected countries of Europe: political culture (including constitutional development), governmental structures, political parties, interest groups, political processes, and foreign relations. This course will primarily focus upon southern European political systems, including France, Italy, Spain, and other Mediterranean-European political systems.

354. GOVERNMENT AND POLITICS OF THE SOVIET UNION (4) III. Analysis of political system of the Soviet Union: political culture (including the development of the Communist ideology); authoritative structures, with special emphasis on the Communist Party, political processes; and foreign relations.

355. GOVERNMENTS AND POLITICS OF LATIN AMERICA (4) I. Analysis of political systems of Latin America: influence of demographic, geographic, and socio-economic factors on politics; role of major political interests such as the army, the Catholic Church, labor, students; political parties; political processes; governmental institutions; significant policy problems. Mr. R. Anderson.

361. GOVERNMENTS AND POLITICS OF THE MIDDLE EAST (4) I. Analysis of governmental and political processes of the Middle East with emphasis on Iran, Israel, Turkey, United Arab Republic. Mr. Merriam.

366. GOVERNMENTS AND POLITICS OF SOUTHEAST ASIA (4) II. An analysis of political processes, organizations, trends, and governmental structures within Southeast Asia: Burma, Thailand, Laos, Cambodia, Vietnam, Malaysia, Singapore, Indonesia, the Philippines. Mr. Shuck.

368. THE AFRICAN POLITICAL SYSTEM (4) III. Detailed analysis of the African struggle for independence, the creation of national unity and the movement towards Pan-Africanism vis-a-vis the larger international system. Mr. Giardina.

456. MAJOR GOVERNMENTS OF LATIN AMERICA (4) II. Detailed analysis of specific political systems of Latin America, with concentration on Argentina, Brazil, Chile, Cuba, Mexico, Peru. Prerequisite: Political Science 255 or a Latin-American history course or consent of instructor. Mr. R. Anderson.

460. THE POLITICS OF DEVELOPING NATIONS (4) II. Comparative analysis of problems of the developing nations; economic, social, political transformation; challenge of the old traditions; and the rise to power of new leaders. Mr. Merriam.

COURSES IN INTERNATIONAL RELATIONS

371. INTRODUCTION TO INTERNATIONAL RELATIONS (4) I. Analysis of the nature of the international community, motivations and goals

of foreign policies of modern states, methods and techniques of implementing these policies, and controls and restraints on their use. Mr. Clafin, Mr. Giardina.

372. CONTEMPORARY WORLD POLITICS (4) II. An analysis of the major factors and forces that have shaped international politics since World War II. Mr. Clafin.

374. AMERICAN FOREIGN POLICY (4) III. An analysis and evaluation of the contemporary foreign policies of the United States. Mr. Clafin.

471. STRATEGIES OF PEACE (2) I. Offered 1971-72 and alternate years. A seminar course in which some of the leading attempts and proposals to deal with the problem of war are examined in depth. Mr. Clafin.

473. INTERNATIONAL LAW I (4) II. History, nature, sources, and applications of international law. The relationship between law and society at the international level. Mr. Giardina.

474. INTERNATIONAL LAW II (4) III. Taught on demand. A continuation of Political Science 473. Mr. Giardina.

475. INTERNATIONAL ORGANIZATION (4) III. Analysis and evaluation of the United Nations and other international organizations and a consideration of some of the main concepts and problems related to them. Mr. Giardina.

477. INTER-AMERICAN RELATIONS (4) III. Survey of political, economic, cultural, and military relations between the U.S. and Latin-American countries. Mr. R. Anderson.

*PSYCHOLOGY

Professors Johnson (Chairman), Arnold, Badia, Freeburn, Guion, Leventhal, Rosenberg, Schuck, P. Smith; Research Professors J. P. Scott, O. W. Smith; Associate Professors Cranny, DeRosa, Doherty, P. Green, J. T. Greene, Kausch, Keeley, Kumler, Nagy, Ragusa, Routh, Samejima, Shemberg, Silverman, Warehime, Wright; Assistant Professors Flanders, Hoemann, Tweney.

201. GENERAL PSYCHOLOGY (5) I, II, III, IV. A broad introductory course prerequisite to all courses in the Department. Considerations of the scientific approach to the study of behavior with applications to personal and social behavior. A student is expected to participate in Departmental research. Open to a freshman psychology major.

270. QUANTITATIVE METHODS I (3) I, II, IV. Elementary coverage of descriptive statistics and correlation. Two 1-hour lectures and one 2-hour laboratory. Prerequisite: Psychology 201 or consent of instructor.

271. QUANTITATIVE METHODS II (3) II, III, IV. Elementary coverage of parametric and non-parametric tests of significance. Two 1-hour lectures and one 2-hour laboratory. Prerequisite: Psychology 270.

290. INTRODUCTION TO LABORATORY METHODS IN PSYCHOLOGY (3) I, II, III. Training in the use of apparatus, handling of human

and animal subjects, experimental control, elementary problems, and data interpretation in writing of formal laboratory reports. Prerequisite: Psychology 201, 270.

302. EDUCATIONAL PSYCHOLOGY (4) I, II, III, IV. (See Education 302.) Concepts and factors affecting the application of psychological principles to the educative process. Prerequisite: Psychology 201.

303. DEVELOPMENTAL PSYCHOLOGY (3) I, IV. An introduction to the major concepts and principles of developmental psychology. Major theoretical systems are introduced as they relate to the ontogenesis of behavior with emphasis on the available empirical findings. Prerequisite: Psychology 201.

304. DEVELOPMENTAL PSYCHOLOGY (3) II, IV. Psychology 303 continued. Prerequisite: Psychology 303.

305. PSYCHOLOGY OF PERSONALITY ADJUSTMENT (3) I, III, IV. Problems of personal adjustment. Related problems of theory and measurement of personality. Prerequisite: Psychology 201.

311. SOCIAL PSYCHOLOGY (3) I, III. Introduction to social behavior covering behavior principles, socialization, social influence, small groups, leadership, communication, and attitudes with emphasis on interpersonal interaction. Prerequisite: Psychology 201 or Sociology 101.

312. PRINCIPLES OF SOCIAL INTERACTION (3) II. Practical application of learning principles to human social interaction. A learning approach to normal interpersonal behavior with emphasis on causal determinants of overt behavior. Prerequisite: Psychology 201 or Sociology 101.

320. CONDITIONING (4) I. Examination of classical conditioning and instrumental learning from an empirical and theoretical point of view. Laboratory hours by arrangement. Prerequisite: Psychology 271, 290.

321. HUMAN LEARNING (4) II. Survey of the principles of human learning with emphasis on verbal learning, performance and memory. Three lecture hours; laboratory hours by arrangement. Prerequisite: Psychology 271, 290.

322. THINKING AND CONCEPT FORMATION (4) III. Areas of experimentation that involve symbolic processes: abstraction, mediated transfer, concept formation, reasoning, problem solving. Three lecture hours; laboratory hours by arrangement. Prerequisite: Psychology 271, 290.

330. MOTIVATION I (4) I. Historical and methodological considerations of the concept of motivation. Emphasis on physiological and phylogenetic aspects of motivation. Content areas include ethology, bodily conditions, homeostatic regulation, activity, and exploration. Laboratory hours by arrangement. Prerequisite: Psychology 271, 290.

331. MOTIVATION II (4) II. Primary emphasis on human motives. Examination of social motivation, psychoanalytic theory, self-actualization approaches. Prerequisite: Psychology 271, 290.

340. SENSATION AND PERCEPTION (4) III. Sensory and perceptual processes. Laboratory hours by arrangement. Prerequisite: Psychology 271, 290.

352. INDUSTRIAL PSYCHOLOGY I (3) I. Psychology of performance at work. Emphasis on analysis and evaluation of human work. Prerequisite: Psychology 201.

403. PERSONALITY THEORY (4) I, IV. Systematic study of the scientific constructs involved in personality theory. Various contemporary theories are considered with their historical antecedents with particular assessment of their relationship to general psychology. Prerequisite: 8 hours in psychology.

404. ADVANCED DEVELOPMENTAL PSYCHOLOGY (3) III, IV. Major theoretical systems relevant to developmental psychology are reviewed from the standpoint of research findings. Special attention is given to methodology appropriate for research with children.

405. PSYCHOLOGY OF ABNORMAL BEHAVIOR (5) I, II, III, IV. Consideration of data and concepts used by psychologists in understanding, labeling, and modifying behavior which deviates from social expectations.

408. PHYSIOLOGICAL PSYCHOLOGY (5) I. Structure and functioning of the nervous system; relationship between the nervous system and behavior. Prerequisite: Psychology 290.

411. THE PSYCHOLOGY OF INTERPERSONAL COMMUNICATION (4) I. Communication of meaning and the development of communication skills via verbal, vocal, gesticular, body position, and use of spatial cues. Prerequisite: Psychology 201.

412. EXPERIMENTAL GROUP DYNAMICS (4) I. Theories, methods, and current problems in experimental research in group dynamics. Experimental hours by arrangement. Prerequisite: Psychology 201 or Sociology 101, Psychology 270 or Sociology 307, and Psychology 290.

440. GENERAL SEMINAR (4) I, II, III. An intensive seminar in specific content areas offered depending upon demand and upon interest of staff members. May be repeated three times. Prerequisite: consent of instructor.

452. INDUSTRIAL PSYCHOLOGY II (3) II. Theory and techniques of personnel selection and development with consideration of social issues in employment policy. Prerequisite: Psychology 352 or consent of instructor.

453. INDUSTRIAL PSYCHOLOGY III (3) III. Behavioral modification in organizational settings. Prerequisite: Psychology 452 or consent of instructor.

460. INTRODUCTION TO PSYCHOLOGICAL TESTING (4) III, IV. Theory and methods of measuring human behavior; survey of representative group tests of intelligence, interest, aptitude, personality. Prerequisite: Psychology 201, 270 or equivalent.

463. THEORIES OF INTELLIGENCE (4) III, IV. Traditional and current theories of intelligence are

approached from the view of structure, development, operation with consideration of various techniques designed for evaluation of intellectual potential and intellectual functioning. Prerequisite: Psychology 460 or Education 402.

470. QUANTITATIVE METHODS III (5) III, IV. Introduction to the analysis of variance. Three lecture hours and one 2-hour laboratory. Prerequisite: Psychology 270, 271.

480. COMPARATIVE PSYCHOLOGY (4) II. Behavior of organisms at different phylogenetic levels. Emphasis on correlation between complexity of behavior and complexity of central nervous system function. Prerequisite: Psychology 408.

484. BEHAVIOR GENETICS I (3) II. Effects of hereditary factors on behavior. Experimental methods and results of animal and human behavior genetics in such areas as sensory and perceptual processes, intellectual abilities, personality and temperament, and mental disorders. Consideration of the importance of the interactions of genotypes and environments as behavioral determinants. Biology 251 is recommended.

485. BEHAVIOR GENETICS II (3) III. Psychology 484 continued with emphasis on work in the laboratory. One lecture hour and four laboratory hours. Prerequisite: Psychology 484.

490. SPECIAL PROBLEMS IN PSYCHOLOGY (1-5) I, II, III, IV. Supervised independent minor research or intensive reading on selected problems in psychology. No student may register for this course without written approval of the staff member concerned. May be repeated to 9 hours.

495. SENIOR HONORS SEMINAR (3) I. An intensive seminar in general psychology for a senior major. A student is required to plan and carry out a research project under the direction of a faculty member. Prerequisite: senior major, approval by Department Undergraduate Committee.

496. SENIOR HONORS SEMINAR (3) II. Psychology 495 continued.

497. SENIOR HONORS SEMINAR (3) III. Psychology 496 continued.

QUANTITATIVE ANALYSIS AND CONTROL

Professors Bomeli (Chairman), Donley, Huffman, Kane, Schmeltz; Associate Professors Buckwell, Hartley, Johnson, Mott, Neumann, Wheeler*; Assistant Professors Asman, Gallart, Hoyt, Patton, Ross, Smith, Wagner; Instructors Bamburowski, Bowerman, Burmester, Cunningham, Poetker, Townsend.

COURSES IN ACCOUNTING

221. PRINCIPLES OF ACCOUNTING (4) I, II, III. The accounting methodology for accumulation of business data and reporting of financial

activities with emphasis on the accounting system as a control over data validity and business operations. Prerequisite: completion of Mathematics 124 or 131 or consent of instructor.

222. PRINCIPLES OF ACCOUNTING (4) II, III. The continuation of 221 with emphasis on special problems of accounting valuation. Interpretation and use of accounting reports in making business decisions. Prerequisite: Accounting 221.

320. SURVEY OF ACCOUNTING (6) I. Designed for the junior or senior wishing rapid coverage of the principles of accounting. Credit not granted for 320 if 221 and 222 completed.

321. INTERMEDIATE ACCOUNTING—FINANCIAL (4) I, II, III. Application of generally accepted accounting principles to enterprise transactions. Consideration of valuation methods, recording procedures, measuring periodic income, and financial statement presentation. Prerequisite: Accounting 222.

322. INTERMEDIATE ACCOUNTING—FINANCIAL (4) I, II, III. Continuation of Accounting 321 with emphasis on evaluation of financial reports. Prerequisite: Accounting 321.

331. MANAGERIAL ACCOUNTING I (4) I, II, III. The science of providing data for the planning and controlling of routine operations, for non-routine decisions, for policy-making and long-range planning, and for inventory valuation and income determination. Prerequisite: Accounting 222.

332. MANAGERIAL ACCOUNTING II (4) I, II, III. Accounting 331 continued. Prerequisite: Accounting 331.

340. INCOME TAXES—INDIVIDUAL (1) III. Income tax concepts such as income, exclusions, deductions, adjusted gross income, capital gain and losses, exemptions, tax credits, and determination of income from business or trade or profession.

395. READINGS FOR HONORS IN ACCOUNTING (1-4) I, II, III. For a superior junior student who wishes an individual reading program to broaden his knowledge of accounting literature by study and investigation of particular areas on a semi-independent basis. Prerequisite: academic standing in the upper 20 per cent of the student's class, approval of Department.

409. ACCOUNTING INTERNSHIP (1-5) I, II, III. Not open to a student with credit for a 409 course in the College of Business Administration. Program must be approved in advance by program coordinator and student's Department chairman. Work experience and its evaluation in a seminar must be completed within one year. Credit is determined by seminar performance and quality and extent of work experience.

421. BUSINESS COMBINATIONS (3) I. Contemporary accounting theory and practice for business combinations and consolidations, branch and home office accounting, and foreign branch accounting. Prerequisite: Accounting 322

422. TOPICS IN ADVANCED FINANCIAL ACCOUNTING (3) II. Examines the problems of

* On leave 1970-71 academic year.

accounting for partnerships, terminating businesses, estates, trusts and receiverships, consignments, and national income accounting. Prerequisite: Accounting 322.

423. GOVERNMENTAL AND INSTITUTIONAL ACCOUNTING (3) III. Methods and problems of controlling and reporting on the resources (funds) segregated for conducting specific activities of non-profit-seeking entities; emphasis on budgetary control. Prerequisite: Accounting 222 or consent of instructor.

424. FINANCIAL REPORTING FOR MULTI-NATIONAL BUSINESS FIRMS (3) I. Case study of worldwide recording and reporting problems, impact of cultural and legal constraints, and objective appraisal of American accounting principles and pronouncements. Prerequisite: Accounting 222 or consent of instructor.

429. PROBLEMS IN ACCOUNTING PRACTICE (4) II. Comprehensive review and integration of accounting theory and practice, using the problem method.

431. ACCOUNTING SYSTEMS (3) III. Design, installation, and maintenance of accounting information systems in business firms of all sizes. Utilization of manual and mechanical techniques of handling data to provide accounting information and control. Prerequisite: Accounting 322, 332.

439. THE ROLE OF THE FINANCIAL EXECUTIVE (4) III. The accounting phase of management; investigating the means of meeting informational requirements of various managerial functions; internal financial control and analysis; behavioral effects of accounting.

441. FEDERAL INCOME TAX (3) I, II. Tax influences on decision making in a trade or business. Emphasis on the recognition of income and the maximization of deductions. Prerequisite: Accounting 322.

442. ADVANCED FEDERAL INCOME TAX (3) II, III. The theory of taxation; major tax regulations and their effects upon business firms; tax research methodology. Prerequisite: Accounting 322 and 441.

451. AUDITING I (3) I, III. Auditing procedures and practices of independent verification of financial records as used by internal auditors and public accountants; working paper preparation; evaluation of specific internal control systems. Prerequisite: Accounting 322. Staff.

452. AUDITING II (3) II. Auditing theory, objectives, and standards; reliance on internal control; nature of audit evidence; auditing fields; sampling ethics, independence, and other current topics. Prerequisite: Accounting 451. Staff.

491. STUDIES IN ACCOUNTING (1-5). Offered on demand. Investigation in depth of selected areas or contemporary problems. May be offered individually as well as in classes, depending on student needs and the nature of material.

495. READINGS FOR HONORS IN ACCOUNTING (1-5) I, II, III. For a superior senior specializing in accounting who wishes an individual reading

program to broaden his knowledge of accounting literature by study and investigation on a semi-independent basis. Prerequisite: academic standing in the upper 20 per cent of the student's class, approval of the Department.

See also Graduate Business Administration 520, 621, 622 and Accounting 621, 622, 623, 631, 643, 654, and 691 in the *Graduate Bulletin*.

*GENERAL COURSES IN QUANTITATIVE ANALYSIS AND CONTROL

160. INTRODUCTION TO DATA PROCESSING (3) I, II, III. An introductory course in data processing principles, including logical analysis, computer programming, the nature of the computer, and the nature of the computer environment in business. Prerequisite: Completion of College Mathematics requirement 124 or 131 or consent of instructor.

260. ADVANCED ELECTRONIC DATA PROCESSING: LANGUAGES AND PROBLEMS (4) I, II. A review and extension of the PL/1 language and the introduction of a second language. Selected problems applying the computer to various functional areas of business. Prerequisite: Quantitative Analysis and Control 160 or equivalent.

380. INTRODUCTION TO OPERATIONS RESEARCH (5) I. The basic philosophy underlying the formulation of business problems in quantitative terms. Linear programming, dynamic programming, inventory theory, network theory, and other techniques. Prerequisite: Mathematics 124 or 131, sophomore business core, or consent of instructor.

460. COMPUTER ORGANIZATION AND OPERATING SYSTEMS (4) II. Organization of computing equipment, input-output, and storage systems. Computer design of operating systems with consideration towards multi-processing, time sharing, and on-line operations. Prerequisite: Quantitative Analysis and Control 260, 471.

471. INFORMATION SYSTEMS (4) I. Analysis and design of computer-based information systems. Analysis of information requirements, design and processing methods, and data management. Prerequisite: adequate knowledge of at least one computer language, Quantitative Analysis and Control 380.

472. CASES IN INFORMATION SYSTEMS (4) III. The study of information systems in action. The case approach is used. Prerequisite: Quantitative Analysis and Control 260, 380, 460, 471.

480. OPERATIONS RESEARCH II (4) III. A continuation of Quantitative Analysis and Control 380 with emphasis on queuing theory, simulation, non-linear programming, stochastic inventory theory, advanced linear and dynamic programming, and current developments in operations research. Prerequisite: Quantitative Analysis and Control 380, Mathematics 131.

See also Graduate Business Administration 662, 663, 664, and 580, 681, and 682 in the *Graduate Bulletin*.

COURSES IN STATISTICS

111. ELEMENTARY STATISTICAL METHODS I (4) I, II, III. Analysis of basic data, frequency distributions, index numbers, times series, probability, and probability distributions. Prerequisite: completion of Mathematics 124 or 131 or consent of instructor.

212. ELEMENTARY STATISTICAL METHODS II (4) I, II, III. Sampling distributions, estimation, hypothesis testing, regression and correlation, sampling theory, non-parametric statistics, and analysis of variance. Prerequisite: Statistics 111; non-business students with consent of instructor.

301. TIME SERIES ANALYSIS (4) I. Analysis of trend, seasonal, and cyclical movements in time series; exponential smoothing; forecasting methods; index number theory and practice. Prerequisite: Statistics 212 or consent of instructor.

302. COMPUTER SIMULATION OF STOCHASTIC SYSTEMS (4) II. Techniques of setting up stochastic models of inventory, production, queuing, scheduling, and economics systems and then performing sampling experiments, using the computer, to study these systems. Prerequisite: Statistics 212, Quantitative Analysis and Control 160. Mathematics 131 is recommended.

313. INTRODUCTION TO STATISTICAL INFERENCE (4) III. Continuous and discrete n -dimensional random variables and their distributions; moment generating functions; estimation by moments and maximum likelihood; hypothesis testing by the Neyman-Pearson Lemma and likelihood ratio tests. Prerequisite: Statistics 212, Mathematics 231.

402. REGRESSION ANALYSIS (4) I. Offered 1971-72 and alternate years. Linear, non-linear, and multiple regression and correlation analysis; analysis of variance and covariance. Prerequisite: Statistics 212 or consent of instructor.

403. STATISTICAL INFERENCE (4) II. Offered 1972-73 and alternate years. Introduction to statistical methods for business decisions. Classical and Bayesian decision theory; sampling theory; decision rules; risk and uncertainty in testing hypothesis. Prerequisite: Statistics 212 or consent of instructor.

406. SAMPLE DESIGN (4) III. Offered 1972-73 and alternate years. Planning of surveys; sampling as a tool of scientific inference in management and in research; bias and errors in sampling procedures; variances; sample size. Prerequisite: Statistics 212 or consent of instructor.

410. INTRODUCTION TO EXPERIMENTAL DESIGN (4). Offered 1971-72 and alternate years. Principles of constructing and analyzing statistical designs for experimental investigations. Analysis of variance and basic experimental design.

See also Graduate Business Administration 510, 611 and 612 in the *Graduate Bulletin*.

*ROMANCE LANGUAGES

Professors Gallant (Chairman), M. J. Flys, Povsic, Wolfe; Associate Professors Baynard, Beysterveldt, Pallister, Pretzer; Assistant Professors Balducci, M. Flys, Ghibaudo, Hebein, M. Locey, Madden,

Ruiz; Instructors Bradford, Buron, Hahler, Herbst, Hyatte; Part-time instructor Hillocks.

Majors are offered in French, Latin, and Spanish. A minor is available in Italian. Generally, one year of high school study of a language is equivalent to one quarter of college study. Credit toward graduation is not allowed for 101, 102, 103, 201, 202 when the equivalent credit has been accepted from high school as part of the admission credits except that a student is allowed to duplicate one unit of his high school study with University credit. No credit toward graduation is allowed for 101 or 102 until 103 is completed.

TEACHING METHODS

EDUCATION 358. MODERN FOREIGN LANGUAGES IN THE ELEMENTARY SCHOOLS (4) II. Objectives, methods, curricula, instructional and resource materials in foreign language teaching in the elementary school. Open only to the elementary education major with a language minor or with consent of instructor. Prerequisite: Education 342 or Education 302.

EDUCATION 373. FOREIGN LANGUAGE IN SECONDARY SCHOOLS (4) I, III. Principles, objectives, curricula, instructional and resource materials, and methods of teaching foreign language in secondary schools. Two lectures and three laboratories. Prerequisite: Education 302 and junior standing.

COURSES IN FRENCH

For Programs of Study Abroad, see page 112.

101. ELEMENTARY FRENCH (4) I, II, III. Beginning oral-aural study of the language, with attention to grammar. Four class periods and scheduled oral practice each week.

102. ELEMENTARY FRENCH (4) I, II, III. French 101 continued. Four class periods and scheduled oral practice each week. Prerequisite: French 101 or one year of French in high school or equivalent.

103. ELEMENTARY FRENCH (4). French 102 continued. Four class periods and scheduled oral practice each week. Prerequisite: French 102, one and one-half years of French in high school, or placement.

201. INTERMEDIATE FRENCH (4) I, II, III. Four class periods and laboratory. Prerequisite: French 103 or two years of French in high school or equivalent.

202. INTERMEDIATE FRENCH (4) I, II, III. French 201 continued. Four class periods and scheduled oral practice each week. Prerequisite: French 201 or three years of French in high school or equivalent.

351. FRENCH COMPOSITION AND CONVERSATION I (3) I, II. Intended for the improvement of oral and written skills in the language with emphasis on composition. Prerequisite: French 202 or equivalent.

352. FRENCH COMPOSITION AND CONVERSATION II (3) II, III. French 351 continued. Intended for the improvement of oral and written skills in the language with

emphasis on conversation. Prerequisite: French 202 or equivalent.

353. FRENCH PHONETICS (3) II, III. Practical study of French pronunciation and the fundamental principles of syllabification, stress, linking, and intonation. Prerequisite: French 202 or equivalent.

361. INTRODUCTION TO FRENCH LITERATURE I (3) I, III. Chronological evaluation of outstanding works in French literature from the Middle Ages through the seventeenth century. Designed to give insight into the various movements and genres. Prerequisite: French 202 or equivalent.

362. INTRODUCTION TO FRENCH LITERATURE II (3) I, II. French 361 continued, dealing with masterpieces from the eighteenth century to present, and focusing on various movements and genres. Prerequisite: French 202 or equivalent.

371. FRENCH CIVILIZATION I (3) II, III. Political, social, intellectual, artistic life of the French people from prehistoric times to the Industrial Revolution. Intended as background for literary studies and as preparation for the teaching of French. Cannot be taken for credit by a student who has studied for two or more quarters in France. Prerequisite: French 202 or equivalent.

372. FRENCH CIVILIZATION II (3) I, III. French 371 continued, dealing with political, social, intellectual, artistic life of modern France. Cannot be taken for credit by a student who has studied for two or more quarters in France. Prerequisite: French 202 or equivalent.

451. ADVANCED COMPOSITION (3) I. Aimed at developing increased facility at written composition through practice in grammatical patterns. Prerequisite: French 351.

452. ADVANCED CONVERSATION (3) II. Intended for the development of increased speaking facility. Prerequisite: French 352.

455. APPLIED LINGUISTICS (3) III. Analysis of the phonological, morphemic, syntactical, semantic aspects of French and application of these aspects to language learning. Prerequisite: 12 hours beyond French 202.

465. SEVENTEENTH CENTURY FRENCH LITERATURE I (3) I. Offered 1972-73 and alternate years. Analysis of the literature of the Baroque Age especially of the works of Corneille. Prerequisite: French 361.

466. SEVENTEENTH CENTURY FRENCH LITERATURE II (3) II. Offered 1972-73 and alternate years. Classical theatre: Moliere and Racine. Prerequisite: French 361.

467. SEVENTEENTH CENTURY FRENCH LITERATURE III (3) III. Offered 1972-73 and alternate years. Non-dramatic literature of the classical period. Prerequisite: French 361.

471. EIGHTEENTH CENTURY FRENCH LITERATURE I (3) I. Offered 1971-72 and alternate years. A study of Les Philosophes, emphasizing the works of Voltaire and Diderot. Prerequisite: French 362.

472. EIGHTEENTH CENTURY FRENCH LITERATURE II (3) II. Offered 1971-72 and alternate years. Dramatic literature of the period, especially the plays of Marivaux and Beaumarchais. Prerequisite: French 362.

473. EIGHTEENTH CENTURY FRENCH LITERATURE III (3) III. Offered 1971-72 and alternate years. Rousseau and preromantisme in French literature. Prerequisite: French 362.

477. NINETEENTH CENTURY FRENCH LITERATURE I (3) I. Offered 1971-72 and alternate years. Masterpieces of the romantic period. Prerequisite: French 362.

478. NINETEENTH CENTURY FRENCH LITERATURE II (3) II. Offered 1971-72 and alternate years. Major works of the realistic and naturalistic writers. Prerequisite: French 362.

479. NINETEENTH CENTURY FRENCH LITERATURE III (3) III. Offered 1971-72 and alternate years. Masterpieces of the parnassians, the symbolists, the decadent poets, and "poemes en prose". Prerequisite: French 362.

481. MODERN FRENCH LITERATURE I (3) I. Offered 1972-73 and alternate years. French novel and theatre during 1900-1930 with emphasis on Proust, Gide, Apollinaire, and the surrealists. Prerequisite: French 362.

482. MODERN FRENCH LITERATURE II (3) II. Offered 1972-73 and alternate years. French novel and theatre during 1930-1945 with emphasis on Celine, Malraux, Camus, Sartre. Prerequisite: French 362.

483. MODERN FRENCH LITERATURE III (3) III. Offered 1972-73 and alternate years. French novel and theatre from 1945 to present with emphasis on black comedy, poetic theatre, and the new novelists. Prerequisite: French 362.

489. FRENCH LITERATURE: ADVANCED STUDIES (3) II. Intensive study of an author, a literary school, a genre, or a selected theme. May be repeated to 9 hours if topics are clearly different. Prerequisite: French 361, 362.

491. READINGS IN FRENCH LITERATURE (1-3) I, II, III. Independent reading for the advanced student who wishes to study a particular period or author. Prerequisite: consent of chairman of Department and instructor.

COURSES IN ITALIAN

101. ELEMENTARY ITALIAN (4). Beginning oral-aural study of the language with attention to grammar. Four class periods and scheduled oral practice each week.

102. ELEMENTARY ITALIAN (4). Italian 101 continued. Four class periods and scheduled oral practice each week. Prerequisite: Italian 101 or one year of Italian in high school or equivalent.

103. ELEMENTARY ITALIAN (4). Italian 102 continued. Four class periods and scheduled oral practice each week. Prerequisite: Italian 102, one and one-half years of Italian in high school, or placement.

201. INTERMEDIATE ITALIAN (4). Four class periods and laboratory. Prerequisite: Italian 103

or two years of Italian in high school or equivalent.

202. INTERMEDIATE ITALIAN (4). Italian 201 continued. Four class periods and scheduled oral practice each week. Prerequisite: Italian 201 or three years of Italian in high school or equivalent.

351. ITALIAN COMPOSITION AND CONVERSATION I (3) II. Offered 1971-72 and alternate years. Intended for the improvement of oral and written skills in the language with emphasis on composition. Prerequisite: Italian 202 or equivalent.

352. ITALIAN COMPOSITION AND CONVERSATION II (3) III. Offered 1971-72 and alternate years. Intended for the improvement of oral and written skills in the language with emphasis on conversation. Prerequisite: Italian 202 or equivalent.

361. INTRODUCTION TO ITALIAN LITERATURE I (3) I. Offered 1972-73 and alternate years. Chronological evaluation of outstanding works in Italian literature from the Middle Ages through the seventeenth century. Designed to give insight into the various movements and genres. Prerequisite: Italian 202 or equivalent.

362. INTRODUCTION TO ITALIAN LITERATURE II (3) II. Offered 1972-73 and alternate years. Italian 361 continued, dealing with masterpieces from the eighteenth century to the present and focusing on various movements and genres. Prerequisite: Italian 202 or equivalent.

371. ITALIAN CIVILIZATION I (3) II. Offered 1972-73 and alternate years. Political, social, intellectual, artistic life of the Italian people from the Middle Ages through the nineteenth century. Intended as background for literary studies and as preparation for the teaching of Italian. Prerequisite: Italian 202 or equivalent.

372. ITALIAN CIVILIZATION II (3) III. Offered 1972-73 and alternate years. Italian 371 continued, dealing with political, social, intellectual, artistic life of modern Italy. Prerequisite: Italian 202 or equivalent.

COURSES IN LATIN

101. ELEMENTARY LATIN (5) I. Beginning study of the language with appropriate attention to grammar, reading, and translation of simple texts. Five class periods and scheduled laboratory each week.

102. ELEMENTARY LATIN (5) II. Latin 101 continued. Five class periods and scheduled laboratory practice each week. Prerequisite: Latin 101 or equivalent.

103. INTRODUCTION TO LATIN (5) I, IV. Accelerated study of fundamentals of Latin language combined with readings of selected authors from different periods for a student who wishes to gain or refresh his ability to read Latin. May replace Latin 101, 102. Prerequisite: consent of instructor.

201. INTERMEDIATE LATIN (5) I, III. Review of grammar with emphasis on syntax and readings of Cicero and other authors. Prerequisite: Latin 102 or equivalent.

202. INTERMEDIATE LATIN (5) I, II. Latin 201 continued. Prerequisite: Latin 201 or equivalent.

351. LATIN PROSE COMPOSITION (5) III. Systematic study and practical application of Latin syntax with emphasis on word order and sentence structure. Prerequisite: Latin 202 or equivalent.

405. LATIN COMEDY (3) II. Offered 1971-72 and alternate years. A survey of the origins and development of Latin comedy. Reading and evaluation of selected texts including one complete play of either Terentius or Plautus. Prerequisite: Latin 351 or equivalent.

414. ADVANCED LATIN GRAMMAR (3) I. A course aimed at developing an increased ability to understand the structural peculiarities of classical Latin. Prerequisite: Latin 351 or equivalent.

465. VIRGIL, THE AENEID (3) I. Offered 1972-73 and alternate years. Content of the *Aeneid*; metrical reading and interpretation of the sixth book and parts of the last six books. Prerequisite: Latin 351 or equivalent.

471. CICERO'S ESSAYS (3) II. Offered 1972-73 and alternate years. Study of two representative works in this field. Prerequisite: Latin 351 or equivalent.

472. CICERO'S LETTERS (3) II. Offered 1971-72 and alternate years. Reading and translation of selected letters. Prerequisite: Latin 351 or equivalent.

475. HORACE (3) III. Offered 1971-72 and alternate years. Metrical reading, translation, evaluation of representative works. Prerequisite: Latin 351 or equivalent.

476. LIVY (3) II. Offered 1971-72 and alternate years. Reading, translation, evaluation of some of the most significant parts of the *Historiae*. Prerequisite: Latin 351 or equivalent.

480. CLASSICAL MYTHOLOGY (3) II. Offered 1972-73 and alternate years. A study in English of Greek and Roman myths, their historical meaning, and their influence on life, literature, and art. No knowledge of Latin is required.

481. ROMAN LIFE (3) II. Offered 1971-72 and alternate years. A study in English of the daily life and customs in Rome as described in literature and attested by history, art, archeology. No knowledge of Latin is required.

489. LATIN LITERATURE: ADVANCED STUDIES (3) III. Intensive study of an author, genre, or selected theme. May be repeated to 9 hours if topics are clearly different. Prerequisite: Latin 351, consent of instructor.

491. READINGS IN LATIN LITERATURE (1-3) I, II, III. Advanced reading for the student who wishes to study a special period or a great author. Prerequisite: consent of chairman of the Department and instructor.

COURSES IN SPANISH

For Programs of Study Abroad, see page 112.

101. ELEMENTARY SPANISH (4) I, II, III. Beginning oral-aural study of the language with attention to grammar. Four class periods and scheduled oral practice each week.

102. ELEMENTARY SPANISH (4) I, II, III. Spanish 101 continued. Four class periods and

scheduled oral practice each week. Prerequisite: Spanish 101 or one year of Spanish in high school or the equivalent.

103. ELEMENTARY SPANISH (4). Spanish 102 continued. Four class periods and scheduled oral practice each week. Prerequisite: Spanish 102, one and one-half years of Spanish in high school, or placement.

201. INTERMEDIATE SPANISH (4) I, II, III. Four class periods and laboratory. Prerequisite: Spanish 103 or two years of Spanish in high school or equivalent.

202. INTERMEDIATE SPANISH (4) I, II, III. Spanish 201 continued. Four class periods and scheduled oral practice each week. Prerequisite: Spanish 201 or three years of Spanish in high school or equivalent.

351. SPANISH COMPOSITION AND CONVERSATION I (3) I, II. Intended for the improvement of oral and written skills in the language with special emphasis on composition. Prerequisite: Spanish 202 or equivalent.

352. SPANISH COMPOSITION AND CONVERSATION II (3) II, III. Spanish 351 continued. Intended for the improvement of oral and written skills in the language with emphasis on conversation. Prerequisite: Spanish 202 or equivalent.

361. INTRODUCTION TO SPANISH LITERATURE I (3) I, III. Chronological evaluation of outstanding works in Spanish literature from the Middle Ages through the seventeenth century. Designed to give insight into the various movements and genres. Prerequisite: Spanish 202 or equivalent.

362. INTRODUCTION TO SPANISH LITERATURE II (3) I, II. Spanish 361 continued, dealing with masterpieces from the eighteenth century to present and focusing on various movements and genres. Prerequisite: Spanish 202 or equivalent.

363. INTRODUCTION TO SPANISH-AMERICAN LITERATURE (3) I. A study of works representative of major types of literature from the colonial period to the present. Prerequisite: Spanish 202.

371. SPANISH CIVILIZATION (3) I, III. Chronological survey of the political, social, intellectual, artistic life of Spain. Essential background for a literature student and for one preparing to teach Spanish. Cannot be taken for credit by a student who has studied for two or more quarters in Spain. Prerequisite: Spanish 202 or equivalent.

373. SPANISH-AMERICAN CIVILIZATION (3) II, III. Political, social, intellectual, artistic developments in Spanish-American life. Prerequisite: Spanish 202 or equivalent.

451. ADVANCED COMPOSITION (3) I. Aimed at developing increased facility at written composition through practice in grammatical patterns. Prerequisite: Spanish 351.

452. ADVANCED CONVERSATION (3) II. Intended for the development of increased speaking facility. Prerequisite: Spanish 352.

455. APPLIED LINGUISTICS (3) III. Analysis of the phonological, morphemic, syntactical,

semantic aspects of Spanish and application of these aspects to language learning. Prerequisite: 12 hours beyond Spanish 202.

461. SPANISH LITERATURE IN THE MIDDLE AGES (3) I. Offered 1971-72 and alternate years. Development of the Spanish language and literature from the earliest period to the Renaissance. Prerequisite: Spanish 361.

465. SPANISH POETRY OF THE GOLDEN AGE (3) I. Offered 1972-73 and alternate years. Lyric poetry of the Renaissance and Baroque periods, emphasizing stylistic differences between Castilian and Andalusian schools. Prerequisite: Spanish 361.

466. SPANISH THEATRE OF THE GOLDEN AGE (3) II. Offered 1972-73 and alternate years. Drama in the Golden Age of Spanish literature with emphasis on the works of Lope de Vega and Calderon. Prerequisite: Spanish 361.

467. SPANISH PROSE OF THE GOLDEN AGE (3) III. Offered 1972-73 and alternate years. Principal types of prose fiction in the Golden Age of Spanish literature, emphasizing the picaresque novel and the writings of Cervantes. Prerequisite: Spanish 361.

471. SPANISH ROMANTICISM (3) II. Offered 1971-72 and alternate years. Outstanding works of prose fiction, poetry, and drama of the first half of the nineteenth century. Prerequisite: Spanish 362.

472. SPANISH NOVEL OF THE NINETEENTH CENTURY (3) III. Offered 1971-72 and alternate years. Outstanding works of prose fiction in the period of realism with reference to social, political, philosophical ideas of the nineteenth century. Prerequisite: Spanish 362.

475. GENERATION OF 1898 (3) I. Offered 1971-72 and alternate years. Literary production of representative essayists, novelists, poets at the turn of the century in Spain. Prerequisite: Spanish 362.

476. CONTEMPORARY SPANISH LITERATURE (3) II. Offered 1971-72 and alternate years. Outstanding authors in the twentieth century with emphasis on lyric poetry. Prerequisite: Spanish 362.

481. SPANISH-AMERICAN LITERATURE: COLONIAL PERIOD (3) I. Offered 1972-73 and alternate years. Chronological survey of writers and works from the time of discovery through the colonial period. Prerequisite: Spanish 361 or 363.

482. SPANISH-AMERICAN LITERATURE: NINETEENTH AND TWENTIETH CENTURIES (3) II. Offered 1972-73 and alternate years. Poetry, short stories, essays of major Spanish-American writers. Prerequisite: Spanish 362 or 363.

483. SPANISH-AMERICAN NOVEL (3) III. Offered 1972-73 and alternate years. Selected novels which reflect the geography, social practices, literary movements of Spanish America. Prerequisite: Spanish 362 or 363.

489. HISPANIC LITERATURE: ADVANCED STUDIES (3) II. Intensive study of an author, a literary school, a genre, or a selected theme.

May be repeated to 9 hours if topics are clearly different. Prerequisite: Spanish 362 or 363.

491. READINGS IN HISPANIC LITERATURE (1-3) I, II, III. Independent reading for the advanced student who wishes to study a particular period or author. Prerequisite: consent of chairman of Department and instructor

*SOCIOLOGY

Professors Balogh (Chairman), Groat, Neal; Associate Professors Denisoff, Kivlin, (Assistant Chairman), McCaghy, J. Perry, Snyder, Tomeh; Assistant Professors Callahan, Fox, Gyman, Nagi, Perkuchin, Pugh, Rothrock, Spreitzer, Vincze, Wahrman; Instructor R. Perry; Visiting Lecturers Bertsche, Rietzke, Schmitz, Topping; Firelands Instructor Bishop.

COURSES IN SOCIOLOGY

101. PRINCIPLES OF SOCIOLOGY (3) I, II, III, IV. Elements and concepts of social organization, social change, and group relationships. Prerequisite: sophomore standing or declared major in sociology if freshman standing.

202. SOCIAL PROBLEMS (3) I, II, III, IV. Sociological analysis of contemporary social problems. Prerequisite: Sociology 101.

301. SOCIAL PSYCHOLOGY (3) I, II, III, IV. An interdisciplinary approach to the study of social behavior. Special emphasis is given to the process of interaction and interpersonal influence. Prerequisite: Psychology 201, Sociology 101, either Sociology 306 or 351.

306. METHODS OF SOCIOLOGY (3) I, III. Analysis of scientific methods in social research and consideration of various research designs. Prerequisite: Sociology 101.

307. INTRODUCTION TO STATISTICS (4) I, II, III. Elementary coverage of data presentation, measures of dispersion, correlation, regression, probability, probability distributions, sampling distributions, hypothesis testing, and analysis of variance. Prerequisite: 6 hours of sociology.

311. THE COMMUNITY (3) I, III. An analysis of communal life from its beginnings in the folk society, emphasizing contemporary urban-metropolitan communities, folk-urban contrasts, and community types. Prerequisite: Sociology 306 or 351.

315. AMERICAN SOCIETY (3) II, IV. Models of contemporary American society, dominant value—orientations. Prerequisite: Sociology 306 or 351.

316. MINORITY GROUPS (3) I, III. Study of the problem and adjustment of minority groups in American society and the conditions that favor and hinder the acceptance of such minorities as integral elements in the national population. Prerequisite: either Sociology 306 or 351.

317. SOCIAL STRATIFICATION (3) I. An historical, theoretical, and empirical examination of caste, class, status, social mobility, and their impact on ethnic relations and power structures. Prerequisite: Sociology 306 or 351.

341. JUVENILE DELINQUENCY (3) I, III. Analysis and processes of development, treatment, prevention, and control of juvenile delinquency. Prerequisite: Sociology 306 or 351.

351. SOCIOLOGICAL THEORIES (3) I, II, III, IV. An introduction to the major theories and concepts of sociology. Prerequisite: Sociology 101.

352. COLLECTIVE BEHAVIOR (3) II. An analysis of the way in which new social groupings and order arise from unstructured situations. Standard topics include behavior of such collectivities as riots, mobs, and crowds. Prerequisite: Sociology 306 or 351.

361. THE FAMILY (3) I, IV. An examination of traditional and contemporary family types with special consideration of current similarities and differences of family organization in various cultural environments. Prerequisite: Sociology 306 or 351.

403. SOCIAL RESEARCH (3) I. Methods and applications of research on social phenomena with special emphasis on problems that arise in the social sciences. Prerequisite: Sociology 306, 307, 351.

407. SOCIOLOGY OF MASS COMMUNICATION (3) III. An analysis of social processes and consequences of interaction and communication in which people are exposed to mass media. Prerequisite: Sociology 306 or 307, Sociology 351.

412. POPULATION PROBLEMS (3) II, IV. Population growth and distribution; their bearing on current economic, political, and social problems. Prerequisite: Sociology 306 or 307, Sociology 351.

413. THE MODERN CITY (3) I. A comparative study of modern cities, their development, their present state, and their problems. Prerequisite: Sociology 306 or 307, Sociology 351.

415. INDUSTRIAL SOCIOLOGY (3) I. A comparative analysis of the social impact of industrialization, and the interrelationships among industry, business, community, and society. Prerequisite: Sociology 306 or 307, Sociology 351.

416. POLITICAL SOCIOLOGY (3) II. Political behavior in society from the standpoint of both classical and contemporary sociology. Prerequisite: Sociology 306 or 307, Sociology 351.

418. SOCIAL CHANGE (3) III. Processes of social change and the rational direction of society. Prerequisite: Sociology 306 or 307, Sociology 351.

419. PROBLEMS OF DEVELOPING AREAS. (3) III. Evaluation of cultural, demographic, institutional and technological aspects of developing areas. Emphasizing the socio-cultural factors affecting change. Prerequisite: Sociology 306 or 307, Sociology 351.

441. CRIMINOLOGY (3) II, III. The nature, causes, treatment, and prevention of crime. Prerequisite: Sociology 306 or 307, Sociology 351.

442. CORRECTIONS (3) III, IV. A socio-psychological approach to the origins and development of federal, state, and local penal institutions. Prerequisite: Sociology 306 or 307, Sociology 351.

452. CONTEMPORARY SOCIOLOGICAL THEORIES (3) II, III. Concepts and frames of reference of major contemporary theories. Prerequisite: Sociology 306 or 307, Sociology 351.

480. SENIOR SEMINAR (4). Offered on demand. Systematic study of selected topics in several areas of knowledge within the field of sociology. May be repeated. Prerequisite: Sociology 306, 307, 351; Sociology 403 or 452.

490. READINGS AND RESEARCH (1-4) I, II, III, IV. Supervised independent work in selected areas. Extensive reading of the more advanced literature in a particular field or carefully planned research. May be repeated to 6 hours. Prerequisite: Sociology 480, consent of instructor, consent of Department chairman or assistant chairman.

COURSES IN ANTHROPOLOGY

231. CULTURAL ANTHROPOLOGY (3) I, II, III, IV. Basic concepts and objectives in the study of culture. A survey of the range of cultural phenomena and approaches to their study. Prerequisite: Sociology 101.

302. CULTURE AND PERSONALITY (3) II. The relation between culture and personality in the study of man's social systems. Selected materials deal with the process of socialization and cross-cultural study of group values and norms that affect the individual. Prerequisite: Sociology 101, 231, 301.

331. ETHNOGRAPHY (3) I, II, III. A survey of non-Western cultures. Culture area(s) emphasized vary with staff and student interest. Area announced in the schedule of classes (Africa, Near East, native North America, Latin America, Asia, Pacific). May be repeated to 9 hours. Prerequisite: Sociology 231 or consent of instructor.

332. ARCHEOLOGY (3) II, IV. Introduction to prehistory of man. Survey of early cultural development throughout the world. Prerequisite: Sociology 231.

333. PHYSICAL ANTHROPOLOGY (3) III. Human origins and races of man. Prerequisite: Sociology 231.

334. ETHNOLOGY (3) II, IV. A cross-cultural analysis of the social system of non-literate peoples. Prerequisite: Sociology 231.

431. COMPARATIVE FAMILY SYSTEMS (3) III. A comparison of major family systems in different societies including structures and functions of kinship systems and the interaction of the family with other social institutions. Prerequisite: Sociology 231 and consent of instructor.

432. PRIMITIVE RELIGION (3) II. Factors accounting for the universality of religion as well as differences in particulars: varieties of

belief about the sacred and secular, myths and rituals, and change in religious systems. Prerequisite: Sociology 231 or consent of instructor.

453. ETHNOLOGICAL THEORY (3) I. Historical survey of anthropological theories and the varying uses of the concept of culture in the social sciences. Prerequisite: Sociology 231 and consent of instructor.

COURSES IN SOCIAL WORK

321. SOCIAL WELFARE INSTITUTIONS (3) I, II, III. Analysis of socio-cultural aspects of social welfare institutions in American society. Prerequisite: 6 hours of sociology or consent of instructor.

322. SOCIAL WORK METHODS (3) II. Analysis of the development of the fields and methods of social work. Recommended for a student interested in the field of social work. Prerequisite: Sociology 321 or consent of instructor.

323. FIELD WORK (3) I. Field work experience in an approved agency. Offered during the summer for a student interested in the field of correction or social work. Arrangements must be approved in advance by the Department chairman or assistant chairman. Prerequisite: junior standing and 6 hours of sociology.

423. FIELD WORK (3) I, II, III. Field work experience in an approved community agency. Arrangements (usually one full day per week plus scheduled individual conferences, for two consecutive quarters) must be approved in advance by the instructor. Prerequisite: Sociology 323—may be waived on recommendation of the Department chairman for a student in the field of correction.

*SPEECH

Professors Miesle (Chairman), Bauer, Herman, Hyman, Obee, Rickey, D. Tucker, R. Tucker, Yeager; Associate Professors Addington, Boughton, Brown, Cheney, Egan, Hepler, Hilyard, Kepke, Koutstaal, McManus, Neidecker, Shine, Stone, Topping; Assistant Professors Clark, B. Greenberg, H. Greenberg, Hood, Lee, Lit, Masters, Myers, Schubert, Watson, Weatherton, White; Instructors Lomas, Ober, Scott, Wilcox. WBGU-TV: Baker, Benefiel, Bird, Curley, Davis, Dickenson, Fogt, Frost, Furman, Gargas, Jarvi, Konecny, Kreienkamp, Landrum, Leutz, Schubert, Spitler, Williams, Wombold. WBGU-FM: Gottschalk.

COURSES IN GENERAL SPEECH

201. ARTS AND SCIENCES OF SPEECH (3) I, II, III. Designed to provide an understanding and insight of the field of speech as a whole. Attention is directed toward basic issues faced by each of the areas of speech and their interrelationships. Prerequisite: Speech 102.

202. ORAL INTERPRETATION (4) I, II, III. Logical and emotional meaning in prose, poetry, and drama for oral reading; selection of materials for programs; and techniques of expression.

226. PHONETICS (4) I, II, III. An introductory course dealing with fundamental principles of

production and recognition of the sounds of spoken English and their application to acting, interpretation, broadcasting, and speech correction.

302. ADVANCED ORAL INTERPRETATION (5) I, II, III. Analysis and communication of logical and emotional meaning as found in significant literature. Experimentation with various forms of oral interpretation such as Reader's Theatre, choral reading, television, and radio. Emphasis is on advanced, individualized work. Prerequisite: Speech 202.

351. THE ADMINISTRATION OF COCURRICULAR SPEECH PROGRAMS (4) III. An elective recommended to all majors or minors in speech and drama in the College of Education. It covers the techniques and mechanics necessary for handling cocurricular forensic, dramatic, and broadcasting activities.

490. PROBLEMS IN SPEECH (1-5) I, II, III. For the advanced student who wishes to do intensive study in rhetorical-communication, radio-television-film, theatre, or therapy, independently or in conjunction with courses regularly being offered. May be repeated. Prerequisite: consent of the Department.

COURSES IN RADIO-TELEVISION-FILM

262. INTRODUCTION TO BROADCAST ANNOUNCING (4) I, II, III. Broadcast announcing styles and basic principles and practices of announcing including articulation, vocabulary, and pronunciation.

360. RADIO AND TELEVISION BROADCASTING (4) I, II, III. Analysis of operational procedures in stations and networks and the growth and development of radio and television industries and their place in modern society.

361. RADIO WRITING AND PRODUCTION (4) 1. Writing, production, and direction of various types of radio programs with emphasis on writing and producing the radio documentary and drama. Prerequisite: Speech 262 or consent of instructor.

363. TELEVISION STUDIO OPERATIONS AND PROGRAMS (3) I, II, III. Basic theory for use of studio facilities in program production situations; basic experience in operating camera chains, microphones, settings, properties, films, and music; and analysis of program needs.

368. RADIO WORKSHOP (1-2) I, II, III. Development of program ideas through all stages of planning, writing, and directing the finished program. Emphasis on individual program projects for possible use on Station WBGU. May be repeated to 3 hours.

463. PRODUCING AND DIRECTING FOR TELEVISION (3) II. Producing, writing, and directing various types of television programs. Prerequisite: Speech 363 or consent of instructor.

464. FILM MAKING (4) II, III. Introduction to the concepts, theories, and mechanics of film production with specific attention to the applications of the cinema to television news, documentaries, informational presentations, and

feature and art film production. Three 2-hour lectures and one 2-hour laboratory.

465. RADIO AND TELEVISION PROGRAM ANALYSIS (3). Offered on demand. Critical evaluation of recorded and live broadcast programs, both network and local, including influences affecting program development.

466. HISTORY AND CRITICISM OF THE FILM (4) I. Designed to introduce the student to the historical development of the film. One session a week is devoted to a discussion of some aspect of film history. A two-hour block each week comprises a viewing session where a wide variety of historical, documentary, theatrical, and avant garde films are presented. The fourth meeting is devoted to a discussion of the films viewed. Critical papers and outside viewing assignments are required.

468. TELEVISION WORKSHOP (1-2) III. Development of program ideas through all stages of planning, writing, and directing the finished program. Emphasis on individual program projects for possible use on WBGU-TV. May be repeated to 3 hours. Prerequisite: Speech 463.

COURSES IN RHETORIC-COMMUNICATION

102. PRINCIPLES OF SPEECH (4) I, II, III. Basic principles of oral communication and the field of speech, with attention to individual needs.

103. ARGUMENTATION (4) I, II, III. Basic principles of argumentation with emphasis on analysis, evidence, reasoning, and refutation. Attention to the application of these principles to various forms of public address.

110. INTERCOLLEGIATE FORENSIC ACTIVITIES (1) I, II. For a student who wishes to compete in intercollegiate debate, discussion, oratory, extemporaneous speaking, or other individual events. May be repeated to 4 hours.

203. PRINCIPLES OF DISCUSSION (4) I, II, III. Principles and methods of group discussion.

211. CONTEMPORARY BLACK ORATORY (4) I, III. A seminar with reports on Black spokesmen covering biographies, speech situations, delivery styles, ideas in the speeches, and analyses of the speakers' supporting materials and appeals. Source materials include films, tapes, records, and printed speeches. Two papers are required: a short essay at the start of the course and a manuscript of an oral report.

303. PERSUASION (4) I, II, III. Theories and concepts of persuasive communication, including attitude change, audience analysis, and strategies of persuasion.

304. LEADERSHIP IN GROUP COMMUNICATION (4) II. Conceptions, methods, and techniques of leadership related to the group communication process. Prerequisite: Speech 203.

310. INTERCOLLEGIATE FORENSIC ACTIVITIES (1) I, II. Similar to Speech 110, but for a junior or senior. May be repeated to 4 hours. Prerequisite: consent of Director of Forensics.

312. BUSINESS AND PROFESSIONAL SPEAKING (4) I, II, III. Principles of conference speaking in business, educational, industrial, and professional situations.

314. PARLIAMENTARY PROCEDURE (2) I, II, III. Proper procedures in the conducting of business meetings, formation of organizations, and writing of constitutions.

402. HISTORY OF PUBLIC ADDRESS (4) III. Biographies, methods of speaking, and noted addresses of the world's great orators, past and present.

405. THE SEMANTICS OF ORAL DISCOURSE (4) I. Patterns of human evaluations and misevaluations as reflected in oral discourse. Includes discussion of fact-inference, allness, projection, signal and symbol reactions, and two-valued orientation.

COURSES IN SPEECH AND HEARING THERAPY

121. SPEECH CLINIC (2) I, II, III. A student having a speech or hearing problem requiring individual remedial treatment is urged to take advantage of the services offered by the Speech Clinic. No credit toward graduation. Fee: \$10.

122. SPEECH IMPROVEMENT (2) I, II, III. A clinical course for a student who has minor speech problems and who is interested in personal speech improvement. No credit toward graduation. Fee: \$10.

223. SPEECH AND HEARING PROBLEMS (4) I, II, III. Language and speech development and various types of speech and hearing abnormalities.

324. INTRODUCTION TO HEARING SCIENCE (4) I, III. Introduction to the physical parameters of hearing. Psychoacoustics, and the anatomy and physiology of the hearing mechanism.

325. SPEECH PATHOLOGY (5) I, II. Advanced study of organic disorders of speech. Prerequisite: Speech 223 or consent of instructor.

328. INTRODUCTION TO AUDIOLOGY (4) I, II. Introduction to clinical audiology. Audiometric pure-tone testing methods, otological pathologies and associated hearing problems, and hearing conservation programs. Prerequisite: Speech 324.

330. VOICE PROBLEMS (4) II. Functional and organic aspects of voice problems in children and adults with emphasis on etiologies, diagnoses, and therapy.

331. DISORDERS OF SPEECH (4) I, II, III. Etiologies, diagnoses, and therapeutic techniques for problems of articulation. Clinical observation required. Prerequisite: Speech 223, 226.

332. STUTTERING (4) I. Theories and therapies of stuttering, discussion of diagnostic procedures, counseling techniques, and research studies. Prerequisite: Speech 223.

422. ANATOMY AND PHYSIOLOGY OF THE SPEECH MECHANISM (4) I, III. Neuromuscular system involved in breathing, phonation, and articulation and the physiological aspects of speech production. Laboratory period.

Prerequisite: Speech 223, Biology 111, or consent of instructor.

423. PRINCIPLES OF SPEECH CORRECTION (4) I, II, III. Lecture-demonstration course dealing with recognition, etiologies, and diagnoses of speech and hearing defects. Discussion of therapeutic techniques in correcting speech defects. Not open to the student with credit for Speech 223.

424. DIAGNOSTIC PROCEDURES IN SPEECH PATHOLOGY (3) III. Study and application of clinical techniques in the diagnostic evaluation of speech-and-language-defective children and adults.

425. CLINICAL PRACTICE IN THE PUBLIC SCHOOL SPEECH CLINIC (4) I, II, III. Participation in various aspects of the school speech and hearing program by administering therapy under the supervision of a qualified therapist. Prerequisite: Speech 324, 325, 331, 332, and 435. Subject to laboratory fee.

426. PRACTICUM IN THE COLLEGE SPEECH AND HEARING CLINIC (1-4) I, II, III. Laboratory experience with children and adults. One lecture and two laboratory periods per week. Prerequisite: Speech 331, 332, or 433. May be repeated to 8 hours.

433. INTRODUCTION TO REHABILITATIVE AUDIOLOGY (4) II, III. Introduction to the rehabilitation of the hearing-impaired. Speech-reading, auditory training, and amplification systems. Prerequisite: Speech 328.

434. TEACHING OF SPEECH TO THE DEAF (4) II. Techniques in habilitating the speech of the deaf and problems in oral communication with the deaf. Staff.

435. PROCEDURES IN THE DEVELOPMENT OF A SPEECH AND HEARING PROGRAM (3) I, III. Organization, operation, and management of a public school speech and hearing therapy program. Prerequisite for student teaching in speech and hearing therapy. Prerequisite: 9 hours of basic speech and hearing courses.

COURSES IN THEATRE

141. INTRODUCTION TO DRAMATIC ART (4) I, II, III. Theatre as an art form, presented from the historical, literary, and production points of view.

146. DRAMATIC PRODUCTION (1-4) IV. A laboratory course. For the student who acts in or stages a play at the Campus Summer Theatre or the Huron Playhouse.

241. PRINCIPLES OF ACTING (3) I. Basic acting techniques with emphasis on stage movement and voice and principles and theories of sensory, imaginative, emotional, and pantomimic responsiveness. Laboratory hours to be arranged.

243 STAGECRAFT (4) I, II, III. Theories and techniques of designing, building and painting stage settings; organization and operation of production crews; methods of costuming. Laboratory hours to be arranged.

341. DIRECTING (4) I, II, III. Theory and technique of play direction. Laboratory hours to be arranged.
342. ADVANCED DIRECTING (4) II. Speech 341 continued. Each student directs at least one short play. Laboratory hours to be arranged. Prerequisite: Speech 341.
343. STAGE LIGHTING (3) III. Theories and techniques of lighting stage productions and examination and operation of lighting instruments and equipment. Laboratory hours to be arranged.
344. THEORIES OF CHARACTERIZATION (3) II. Study and experimentation with various theories concerned with the preparation of roles and the special performance characteristics of tragedy, comedy, melodrama, and farce. Laboratory hours to be arranged. Prerequisite: Speech 241 or consent of instructor.
345. STYLES OF ACTING (3) III. Techniques of historical and modern styles of performance with emphasis on roles from ancient Greek, Elizabethan, and seventeenth and eighteenth century English and continental plays. Laboratory hours to be arranged. Prerequisite: Speech 241 or consent of instructor.
346. DRAMATIC PRODUCTION (1-4) IV. Similar to Speech 146, but for a junior or senior.
347. MAJOR PERIODS OF THEATRICAL HISTORY (3) I. History of theatrical production (stage and auditorium architecture, machinery, scenery, lighting, and costuming) in selected periods from primitive times to the present.
348. LITERATURE OF THE THEATRE (3) II. Surveys major dramas, dramatists, dramatic critics, and dramatic theorists from the Greeks to the present. Emphasis on relationship among theory, criticism, and playwriting.
349. THEATRICAL COSTUMING (4) III. Basic principles of costume design for the stage; use of historic period, silhouette, stylization, color, and cosmetics to create and enhance the theatrical illusion.
350. DRAMA OF RACIAL CONFLICT (3) I, III. A study of plays which project racial conflict as a major theme; their styles, dramatic purposes, and their socio-political implications; through readings and discussion.
443. PLAYWRITING (4). Offered on demand. A writer's workshop involving the creation of an original play for stage or television. Includes discussion of the process of playwriting. Prerequisite: consent of instructor. May be repeated.
444. FUNDAMENTALS OF SCENE DESIGN (3) I. Designing for the stage; dramatic action of the script as an organic element in design; effects of line, color, and mass on setting, decor, lighting, and costumes in enhancing action. Prerequisite: Speech 243 or consent of instructor.
446. ADVANCED DRAMATIC PRODUCTION (3-9) IV. Advanced theory and practice in acting, directing, stagecraft, lighting, and theatre management.
447. THEATRE STYLES (3) III. Selected period and modern theatrical styles. Emphasis on historic, philosophic, and aesthetic bases of each style; relationship of each style to other art forms; and implications of each style for contemporary theatre.
449. CONTEMPORARY ISSUES IN THEATRE (3). Offered on demand. A seminar for advanced students. Specific topics will vary from year to year and will depend on current trends in world theatre as identified by students and faculty members. Prerequisite: consent of instructor.

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- WALTER W. BAKER, 1967. B.M., M.M., Oberlin Conservatory of Music; D.M.A., University of Michigan. *Assistant Professor of Music.*
- FRANK BALDANZA, JR., 1957. B.A., Oberlin College; M.A., University of Chicago; Ph.D., Cornell University. *Professor of English.*
- GIOACCHINO BALDUCCI, 1968. Ph.D., University of Naples. *Assistant Professor of Romance Languages.*
- JOSEPH K. BALOGH, 1949. B.S., Pennsylvania State College; Litt.M., Ph.D., University of Pittsburgh. *Professor of Sociology; Chairman, Department of Sociology.*
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- HERBERT A. HOLLISTER, 1965. B.A., Allegheny College; M.A., Ph.D., University of Michigan. *Associate Professor of Mathematics.*
- JOHN H. HOLMES, 1965. B.S.C., University of Notre Dame; M.B.A., University of Cincinnati; Ph.D., Michigan State University. *Associate Professor of Marketing.*
- STEPHEN B. HOOD, 1969. B.A., Denison University; M.A., Ph.D., University of Wisconsin. *Assistant Professor of Speech.*
- AGNES MARIE HOOLEY, 1954. B.S.P.E., University of Bridgeport; M.A., Teachers College, Columbia University; Ph.D., University of Wisconsin. *Professor of Health and Physical Education.*
- GEORGE R. HORTON, 1966. B.S.Ed., Ohio University; M.A., Ph.D., Ohio State University. *Associate Professor of Industrial Education and Technology.*
- RAYMOND S. HORVATH, 1970. B.A., M.S., Ph.D., Rutgers University. *Assistant Professor of Biology.*
- WILLIAM R. HOSKINS, 1965. B.A., University of Washington; M.B.A., D.B.A., Indiana University; Certified Public Accountant, Indiana. *Associate Professor of Marketing; Director, International Business Programs.*
- ARTHUR HOWARD, 1965. B.M., Oberlin Conservatory of Music; pupil of Pierre Fournier, Andre Navarra, Maurice Gendron. *Associate Professor of Music.*
- JOHN A. HOWE, 1965. B.S., Bowling Green State University; M.S., Ph.D., University of Nebraska. *Associate Professor of Geology.*
- HUGH A. HOYT, 1970. B.S., Eastern Michigan University; M.B.A., Michigan State University; Ph.D., Michigan State University; Certified Public Accountant, Michigan. *Assistant Professor of Quantitative Analysis and Control.*
- ROBERT ROGERS HUBACH, 1947. B.A., University of Missouri; M.A., University of Colorado; Ph.D., Indiana University. *Associate Professor of English.*
- HOWARD B. HUFFMAN, 1948. B.S.Ed., Wilmington College; M.B.A., University of Denver; Ph.D., Ohio State University. *Professor of Quantitative Analysis and Control.*

* On leave 1970-71.

** Not continuous service.

- DANA J. HULL, 1969. B.A., Bowling Green State University; A.M.L.S., University of Michigan. *Instructor; Librarian.*
- RONALD J. HUNADY, 1969. B.S., M.B.A., Bowling Green State University. *Assistant Professor of Management.*
- SYLVIA W. HUNTLEY, 1969. B.S., Bluefield State College; M.Ed., University of Toledo. *Instructor in Education; Assistant Regional Training Officer, Head Start Project.*
- PECCY HURST, 1955. B.A., Wisconsin College; M.A., Ph.D., University of Wisconsin. *Associate Professor of Chemistry.*
- REGINALD HYATTE, 1970. B.A., Indiana University. *Instructor in Romance Languages.*
- EDWARD F. HYLAND, 1970. B.A., Heidelberg College; M.A., Bowling Green State University. *Instructor in Health and Physical Education, Firelands Campus.*
- MELVIN HYMAN, 1952. B.A., Brooklyn College; M.A., Ph.D., Ohio State University. *Professor of Speech; Director, Speech and Hearing Clinic.*
- ROBERT W. INNIS, 1960. B.S., Central Michigan College; M.S., Stout Institute; Ed.D., Michigan State University. *Assistant Professor of Industrial Education and Technology.*
- CARLOS A. JACKSON, 1970. B.S.Ed., M.Ed., Bowling Green State University. *Assistant Professor of Health and Education; Assistant Football Coach.*
- WILLIAM B. JACKSON, 1957. B.A., M.A., University of Wisconsin; Sc.D., Johns Hopkins University. *Professor of Biology; Director, Environmental Studies Center.*
- RONALD J. JACOMINI, 1965. B.Des., University of Florida; M.F.A., Bowling Green State University. *Assistant Professor of Art.*
- GLENN A. JANUS, 1970. B.A., University of Rochester; M.A., Ohio State University. *Instructor in History.*
- THEODORE J. JENSON, 1965. Ph.B., University of Chicago; M.S., Ph.D., University of Wisconsin. *Professor of Education; Dean, College of Education.*
- CARLOS S. JOHNSON, JR., 1970. B.S., California Institute of Technology; M.A., University of Massachusetts. *Assistant Professor of Mathematics.*
- HAROLD J. JOHNSON, 1966. B.A., University of Michigan; Ph.D., University of Illinois. *Professor of Psychology.*
- RALPH H. JOHNSON, 1968.* A.A., Virginia Junior College; B.A., M.A., University of Minnesota. *Assistant Professor of Journalism.*
- WAYNE A. JOHNSON, 1965. B.A., Concordia College; M.S., Ph.D., University of Illinois; Certified Public Accountant, Illinois. *Associate Professor of Quantitative Analysis and Control.*
- RONALD D. JONES, 1962.** B.S., B.Th., Marion College; M.A., Ph.D., University of Wisconsin. *Assistant Professor of Education; Assistant to the Vice-President for Academic Affairs; Project Manager of the Head Start Supplementary Training Program.*
- TERRANCE W. JONES, 1969. B.S., Georgetown University; M.A., Northwestern University. *Instructor in Political Science.*
- WENDELL JONES, 1967. B.S., Ohio State University; M.A., University of Northern Colorado. *Instructor in Music.*
- ROBERT R. JOYNT, 1967. B.S., Central Michigan University; M.Ed., Wayne State University; Ed.D., Colorado State College. *Assistant Professor of Education.*
- CHARLES F. KAHLE, 1965. B.S., St. Joseph's College; M.S., Miami University; Ph.D., University of Kansas. *Associate Professor of Geology.*
- HOWARD H. KANE, 1946. B.S.B.A., University of Dayton; B.S.Ed., M.A., Ohio State University. *Professor of Quantitative Analysis and Control.*
- ALFRED S. KAPPLER, 1970. B.A., University of Connecticut; M.A., University of California. *Instructor in Philosophy.*
- NICHOLAS A. KARAS, 1970. A.B., Lafayette College; M.A., Indiana University. *Instructor in German and Russian.*
- DELBERT D. KARNES, JR., 1970. B.S., Bluffton College; M.Ed., Ed.S., Bowling Green State University. *Instructor in Business Education.*
- LOWRY B. KARNES, 1945. B.A., Muskingum College; M.A., Ph.D., Ohio State University. *Professor of Geography.*
- LOUIS I. KATZNER, 1969. A.B., Brown University; M.A., Ph.D., University of Michigan. *Assistant Professor of Philosophy.*
- DONALD F. KAUSCH, 1968. B.S., University of Wisconsin; M.A., Ph.D., University of Nebraska. *Associate Professor of Psychology; Director, Psychological Services Center.*
- FUJIYA KAWASHIMA, 1970. B.A., International Christian University; M.A., Yonsei University, Korea; A.M., Harvard University. *Instructor in History.*
- ROBERT J. KEEFE, 1955. B.A., Brooklyn College; M.A., Ed.D., Columbia University. *Professor of Health and Physical Education; Assistant to Dean, College of Education.*
- STUART M. KEELEY, 1967. B.A., Coe College; M.A., Ph.D., University of Illinois. *Associate Professor of Psychology.*
- MARK KELLY, 1966. B.A., M.A., University of Iowa. *Associate Professor of Music.*
- JAMES PAUL KENNEDY, 1936. B.A., William Penn College; B.M.Ed., M.M., Northwestern University; Ph.D., University of Iowa; Study at the Matthay Piano School, London, England. *Professor of Music; Director, School of Music.*
- ALLEN N. KEPKE, 1963. B.A., Otterbein College; M.A., Ohio State University; Ph.D., Michigan State University. *Associate Professor of Speech; Assistant Dean, College of Arts and Sciences.*
- G. DAVID KILEY, 1969. B.A., Allegheny College; M.L.S., State University of New York, Albany. *Instructor; Librarian.*
- RUTH K. KILMER, 1947. B.S.Ed., Duquesne University; B.S.L.S., Western Reserve University. *Associate Professor; Librarian.*

* On leave 1970-71.

** Not continuous service.

- YOUNG NAM KIM, 1969. B.M., M.M., Syracuse University. *Instructor in Music.*
- THOMAS L. KINNEY, 1959. B.A., Swarthmore College; M.A., Ph.D., University of Michigan. *Associate Professor of English.*
- KENNETH F. KIPLE, 1970. B.A., University of South Florida; Ph.D., University of Florida. *Assistant Professor of History.*
- WILLIAM A. KIRBY, 1961. B.A., M.A., University of Wyoming; Ph.D., University of Texas. *Associate Professor of Mathematics.*
- C. THOMAS KISSELLE, 1965. B.S.Ed., M.Ed., Bowling Green State University. *Assistant Professor of Health and Physical Education; Assistant Football Coach.*
- JOSEPH E. KIVLIN, 1965. B.S., University of Vermont; M.S., Ph.D., Pennsylvania State University. *Associate Professor of Sociology.*
- LAURA DOUGLAS KIVLIN, 1961. B.S., University of Vermont; M.S., Ed.D., Pennsylvania State University. *Associate Professor of Home Economics.*
- RANDY B. KNAVEL, 1966. B.S., M.A., Bowling Green State University. *Instructor in Geography, Firelands Campus.*
- JULIUS T. KOSAN, 1968. B.F.A., Bowling Green State University; M.A.F.A., Eastern Michigan University. *Instructor in Art, Firelands Campus.*
- CORNELIS W. KOUTSTAAL, 1966. Diploma, Christelyke Kweekschool, Holland; Graduate, Clark School for the Deaf; M.S., Springfield College; Ph.D., Western Reserve University. *Associate Professor of Speech.*
- DAVID M. KRABILL, 1946. B.A., College of Wooster; M.A., Ph.D., Ohio State University. *Professor of Mathematics.*
- LAURA KRATZ, 1965.* B.S., Ohio State University; M.A., Ohio Wesleyan University; Ph.D., Ohio State University. *Associate Professor of Health and Physical Education.*
- JOSEPH F. KRAUTER, 1968. B.A., M.A., University of Missouri; Ph.D., University of Illinois. *Assistant Professor of Political Science, Firelands Campus.*
- V. N. KRISHNAN, 1965. M.A., B.L., Madras University, India; Ph.D., Michigan State University. *Assistant Professor of Economics.*
- RICHARD A. KRUPPA, 1969. B.S., Pennsylvania State University; M.S., State University of New York, Buffalo. *Assistant Professor of Industrial Education and Technology.*
- MARVIN LEE KUMLER, 1968. B.A., Northwestern University; M.A., Ph.D., Kent State University. *Associate Professor of Psychology.*
- JOHN W. KUNSTMANN, 1964. B.A., University of Chicago; B.A., Valparaiso University; M.A., Ph.D., Northwestern University. *Associate Professor of Geography.*
- CHARLES J. LAKOFSKY, 1948. Diploma, Cleveland Institute of Art; B.F.A., State University of New York, College of Ceramics, Alfred University; M.A., Ohio State University. *Professor of Art.*
- RONALD ERROL LAM, 1968. B.S., Muhlenberg College; M.L.S., Western Michigan University. *Instructor; Librarian.*
- LARRY N. LANDRUM, 1970. B.A., M.A., Purdue University. *Instructor in English; Administrative Assistant in Center for the Study of Popular Culture.*
- MARY C. LANE, 1963. B.A., Lake Erie College; M.S., Pennsylvania State University. *Assistant Professor of Home Economics; Instructor, Nursery School.*
- HARRY J. LASHER, 1970. A.A.S., State University of New York, Morrisville; B.S., M.B.A., Ph.D., Syracuse University. *Assistant Professor of Management; Assistant Dean, College of Business Administration.*
- BRIANT HAMOR LEE, 1968. B.A., Adelphi University; M.A., Indiana University; Ph.D., Michigan State University. *Assistant Professor of Speech.*
- VERLIN W. LEE, 1964. B.S., M.S., M.A., Marshall University; Ph.D., Ohio State University. *Professor of Education.*
- J. FREDERICK LEETCH, 1961. B.S., Grove City College; M.A., Ph.D., Ohio State University. *Associate Professor of Mathematics.*
- LOWELL P. LELAND, 1946. B.A., Colby College; M.A., University of Maine; Ph.D., Ohio State University. *Associate Professor of English.*
- VIRGINIA E. LELAND, 1948.** B.A., Carson-Newman College; M.A., Ph.D., University of Chicago. *Associate Professor of English.*
- MAX L. LENDERMAN, 1968. B.S., M.S., Indiana State University; M.F.A., University of Kansas. *Instructor in Art.*
- JOHN R. LENHARDT, 1969. B.S.B.A., M.Acc., Bowling Green State University; Certified Public Accountant, Ohio. *Instructor in Quantitative Analysis and Control, Firelands Campus.*
- CHARLES A. LEONE, 1968. B.S., M.S., Ph.D., Rutgers University. *Professor of Biology; Dean of Graduate School.*
- DONALD B. LEVENTHAL, 1966. B.S., Chattanooga University; M.S., Baylor University; Ph.D., University of Houston. *Professor of Psychology.*
- WILLIAM E. LIEB, 1967.** B.S., St. Joseph's College; M.B.A., Indiana University. *Lecturer in Marketing.*
- BERNARD LINDEN, 1960. B.F.A., University of Pennsylvania; M.M., D.M.A., University of Michigan. *Associate Professor of Music.*
- RICHARD H. LINEBACK, 1965. B.A., University of Cincinnati; M.A., Ph.D., Indiana University. *Associate Professor of Philosophy; Chairman, Department of Philosophy.*
- MILDRED DORIS LIT, 1969. B.S.Ed., M.A., Temple University. *Assistant Professor of Speech.*
- HORACE C. LITTLE, 1967. B.M.E., Wichita State University; M.M., Yale University. *Instructor in Music.*
- LOY D. LITTLEFIELD, 1966. B.A., M.A., University of Oklahoma; Ph.D., Northwestern University. *Assistant Professor of Philosophy.*
- ROBERT LIVENGOOD, 1967. B.S., M.Ed., Bowling Green State University; Registered Physical

* On leave 1970-71.

** Not continuous service.

Therapist, Ohio, Pennsylvania. *Assistant Professor of Health and Physical Education; Athletic Trainer.*

MICHAEL D. LOCEY, 1969. B.A., Wabash College; M.A., M.Ph., Ph.D., University of Kansas. *Assistant Professor of Romance Languages.*

BETTE JEAN LOGSDON, 1970. B.S.Ed., Southern Illinois University; M.S., University of Michigan; Ph.D., Ohio State University. *Professor of Health and Physical Education.*

RONALD L. LOMAS, 1970. B.A., M.A., Western Illinois University. *Instructor in Speech and Ethnic Studies.*

CLIFFORD A. LONG, 1959. B.S., M.S., Ph.D., University of Illinois. *Associate Professor of Mathematics.*

ANTHONY R. LORENZEN, 1969. B.S.Ed., Capital University; M.Ed., Bowling Green State University. *Instructor in Health and Physical Education, Firelands Campus.*

REX L. LOWE, 1970. B.S., Ph.D., Iowa State University. *Assistant Professor of Biology.*

MILFORD S. LOUGHEED, 1955. B.A.Sc., University of British Columbia; M.A., Ph.D., Princeton University. *Professor of Geology.*

KATHLEEN P. LOWRY, 1966. B.S., M.A., Ball State University. *Assistant Professor of Education.*

DOROTHY M. LUEDTKE, 1950. B.S.Ed., M.S.Ed., Bowling Green State University. *Associate Professor of Health and Physical Education.*

JOHN LUNDY, 1970. B.M., Capital University. *Instructor in Music.*

BEVARS D. MABRY, 1959. B.B.A., University of Chattanooga; M.S., University of Tennessee; Ph.D., Tulane University. *Professor of Economics.*

ROBERT A. MACGUFFIE, 1969. B.A., Idaho State University; M.S., Ph.D., University of Utah. *Assistant Professor of Education.*

ELIZABETH MACKEY, 1965. B.A. in Ed., Bowling Green State University; M.S., Ohio State University; Registered, American Dietetics Association. *Assistant Professor of Home Economics.*

JOHN MACPHEDRAN, 1968. B.A., M.A., Bowling Green State University. *Instructor in English, Firelands Campus.*

MARILYN MADDEN, 1968. B.A., University of Oregon; M.A., Middlebury College; Ph.D., Indiana University. *Assistant Professor of Romance Languages.*

STEPHEN MAGADA, 1965. B.S., Kent State University; M.F.A., University of Colorado. *Assistant Professor of Art.*

PAUL MAKARA, 1958. Diploma, Juilliard School of Music; B.M., M.M., Eastman School of Music; D.M.A., University of Michigan. *Professor of Music.*

JOSEPH J. MANCUSO, 1960. B.A., Carleton College; M.S., University of Wisconsin; Ph.D., Michigan State University. *Associate Professor of Geology.*

MAURICE I. MANDELL, 1953. B.S., New York University; M.B.A., Syracuse University; D.B.A., Indiana University. *Professor of Marketing; Chairman, Department of Marketing.*

RICHARD G. MARCIS, 1967. B.A., Wittenberg University; Ph.D., University of Kentucky. *Associate Professor of Economics.*

LOUIS E. MARINI, 1964. B.P.S.M., Mt. Union College; M.A., Vandercook College of Music. *Assistant Professor of Music.*

EDWARD J. MARKS, 1969. B.S., Temple University; M.M., University of Maryland. *Assistant Professor of Music.*

HAROLD MARQUARDT, 1970. B.A., M.A., Ph.D., Michigan State University. *Associate Professor of College Student Personnel.*

RONALD N. MARSO, 1968. B.S., General Beadle State College; M.A., Adams State College; Ed.D., University of Nebraska. *Associate Professor of Education; Assistant Dean of Graduate School for Research and Special Projects.*

CONNIE D. MARTIN, 1970. B.S., M.Ed., Bowling Green State University. *Instructor in Health and Physical Education.*

ELDEN W. MARTIN, 1963. B.S., M.S., Kansas State University; Ph.D., University of Illinois. *Associate Professor of Biology.*

RALPH C. MARTIN, 1970. B.A., M.A., State College of Iowa; Ph.D., University of Kansas. *Assistant Professor of Education.*

JOSEPH J. MASTERS, 1970. B.A., M.A., Ph.D., State University of New York, Buffalo. *Assistant Professor of Speech.*

RICHARD DHU MATHEY, 1968. B.M., Capital University. *Instructor in Music.*

HARRY R. MATHIAS, 1931. B.A., Indiana Central College; M.A., Indiana University. *Professor of Mathematics.*

BORIS L. MATHEWS, 1970. A.B., DePauw University; M.A., Ph.D., University of Southern California. *Assistant Professor of German and Russian.*

ROBERT D. MAZUR, 1965. B.F.A., M.F.A., Bowling Green State University. *Assistant Professor of Art.*

JAMES H. MC BRIDE, 1966. B.S., Muskingum College; M.A., University of Colorado; Ph.D., Western Reserve University. *Assistant Professor of Education; Director, Firelands Campus.*

CHARLES H. MC CAGHY, 1970. B.B.A., M.S., Ph.D., University of Wisconsin. *Associate Professor of Sociology.*

WILLARD C. MC CARTNEY, 1970. B.Ed., University of Toledo; M.A., Bowling Green State University. *Instructor in Biology.*

ALFRED B. MC DOWELL, 1970. B.A., Colgate University; M.A.T., Harvard University; M.A., Bowling Green State University. *Instructor in English.*

KENNETH H. MC FALL, 1943. B.S., Mt. Union College; M.A., Ph.D., Western Reserve University. *Professor of Psychology; Vice-President for Administration (Vice-President and Secretary to the Board of Trustees, effective July 1, 1971).*

EVAN E. MC FEE, 1967. B.S., Purdue University; M.A., Ball State University; Ed.D., Indiana University. *Assistant Professor of Education.*

MARGARET E. MC GEEVER, 1970. B.S., Ohio University; M.S., University of California; Ed.D.,

- Columbia University. *Professor of Home Economics*
- ROBERT E. MC KAY, 1944. B.A., M.S., Ohio State University. *Assistant Professor of Physics; Director, Student Employment.*
- THOMAS R. MC MANUS, 1970. B.S., Kent State; M.A., Northwestern University; Ph.D., Ohio State University. *Associate Professor of Speech.*
- FRED R. MC MORRIS, 1969. B.S., Beloit College; M.A., University of California, Riverside; Ph.D., University of Wisconsin. *Assistant Professor of Mathematics.*
- LOIS MECHLING, 1968. B.S., M.Ed., University of Illinois. *Instructor in Home Economics.*
- DAVID T. MELLE, 1967. B.S., Bowling Green State University; M.F.A., University of Iowa. *Instructor in Music.*
- DAVID MERONK, 1967. B.A., Marquette University; M.S., University of Notre Dame. *Assistant Professor of Mathematics.*
- VIRGINIA MERRELL, 1969. B.A., Bowling Green State University; M.A., University of Michigan. *Assistant Professor; Librarian.*
- PATRICIA MILLS, 1970. B.A., M.Ed., Miami University; Ph.D., Ohio State University. *Assistant Professor of Education.*
- JOHN G. MERRIAM, 1967. B.A., Hamilton College; M.A., Boston University; Ph.D., Indiana University. *Assistant Professor of Political Science.*
- KATHLEEN H. MERRIAM, 1967. B.A., Western College for Women; M.A., Indiana University. *Instructor in Political Science.*
- NORMAN J. MEYER, 1959. B.A., University of South Dakota; Ph.D., University of Kansas. *Associate Professor of Chemistry.*
- ROBERT B. MEYERS, 1969. B.A., St. Vincent College; M.A., Ph.D., University of Pittsburgh. *Assistant Professor of English.*
- F. LEE MIESLE, 1948. B.A., M.A., Bowling Green State University; Ph.D., Ohio State University. *Professor of Speech; Chairman, Department of Speech.*
- DWIGHT R. MILLER, 1965. B.A., M.A., University of Omaha; Ph.D., University of Minnesota. *Associate Professor of Education.*
- HARVEY D. MINER, 1947. B.S.Ed., Bowling Green State University; M.Ed., Ohio University. *Assistant Professor of Industrial Education and Technology.*
- DARREL G. MINIFIE, 1964. B.A., M.A., Montana State University; Ed.D., Colorado State College. *Professor of Education.*
- ELSIE MINIFIE, 1965. B.A., Buena Vista College; M.A., Ph.D., Colorado State College. *Assistant Professor of Education.*
- WILLARD E. MISFELDT, 1967. B.S., M.F.A., University of Minnesota. *Assistant Professor of Art.*
- MARY MOHNACKY, 1969. B.S.Ed., M.Ed., Kent State University. *Instructor in Education.*
- OWEN D. MONTGOMERY, 1946. B.S.Ed., Ohio University; M.Ed., University of Pittsburgh. *Assistant Professor of Business Education.*
- ROBERT C. MOOMAW, 1966. B.S., Ohio State University; M.Ed., Bowling Green State University; Ph.D., Ohio State University. *Associate Professor of Education.*
- ALAN B. MOORE, 1970. A.B.A., Luther Junior College; B.A., Nebraska Wesleyan University; M.A., Bradley University. *Instructor in Speech.*
- JEANNE MOORE, 1970. A.A., Pasadena City College; B.A., University of California at Los Angeles; M.M., Ph.D., University of Southern California. *Assistant Professor of Music.*
- MICHAEL A. MOORE, 1965. B.A., College of Wooster; M.A., Ph.D., Western Reserve University. *Associate Professor of History.*
- ROBERT J. MOORE, 1966. B.M., Oberlin Conservatory; M.M., University of Maryland. *Assistant Professor of Music.*
- BEATRICE K. MORTON, 1969. B.A., M.A., University of Utah. *Instructor in English.*
- STEPHEN C. MORTON, 1967. B.A., Bowling Green State University; M.A., American University. *Instructor; Archivist; Librarian.*
- CHARLES F. MOTT, 1966. B.S., University of Dayton; M.A., Ph.D., Indiana University. *Associate Professor of Quantitative Analysis and Control.*
- KENNETH F. MUCKER, 1970. B.A., Ph.D., Ohio State University. *Assistant Professor of Physics.*
- NORMAN J. MYERS, 1970. A.B., Hiram College; M.A., Ph.D., University of Illinois. *Assistant Professor of Speech.*
- JOYCE PACKER TRACEY MYLES, 1966. B.S., M.Ed., Bowling Green State University. *Instructor in Education.*
- MOSTAFA H. NAGI, 1969. B.S., Cairo University; M.A., Bowling Green State University; Ph.D., University of Connecticut. *Assistant Professor of Sociology.*
- MICHAEL Z. NAGY, 1970. B.A., Bucknell University; M.A., Ph.D., Princeton University. *Associate Professor of Psychology.*
- LEO J. NAVIN, 1965.** B.A., St. Joseph College; M.A., Ph.D., Michigan State University. *Assistant Professor of Economics; Assistant to the Vice-President for Research and Financial Affairs.*
- ARTHUR G. NEAL, 1960. B.A., Concord College; M.A., Ph.D., Ohio State University. *Professor of Sociology.*
- DONALD NEHLEN, 1965. B.S., Bowling Green State University; M.A., Kent State University. *Assistant Professor of Health and Physical Education; Head Football Coach.*
- ELIZABETH A. NEIDECKER, 1962. B.S., Ohio State University; M.A., Western Reserve University. *Associate Professor of Speech.*
- RALPH B. NELSON, 1960. B.S., Northern Michigan College; M.A., Michigan State University. *Assistant Professor of Industrial Education and Technology.*
- JOSEPH S. NEMETH, 1965. B.Ed., Duquesne University; M.Ed., Ed.D., University of Pittsburgh. *Professor of Education; Director, Reading Clinic.*
- DAVID S. NEWMAN, 1965. B.A., Earlham College; M.S., New York University; Ph.D., University of Pennsylvania. *Associate Professor of Chemistry.*

** Not continuous service.

- ANTONIO NG, 1970. B.A., Philippine Union College, Manila; M.A., Andrews University. *Instructor in Mathematics.*
- RELDA E. NIEDERHOFER, 1969. B.S., M.Ed., Bowling Green State University. *Instructor in Biology, Firelands Campus.*
- REGINALD D. NOBLE, 1969. B.A., M.A., Marshall University; Ph.D., Ohio State University. *Assistant Professor of Biology.*
- VICTOR T. NORTON, 1970. B.S., Yale University; M.A., University of Michigan. *Assistant Professor of Mathematics.*
- GEORGE E. NOVAK, 1970. B.M., Oberlin College; M.M., Manhattan School of Music. *Assistant Professor of Music.*
- HAROLD B. OBEE, 1946. B.A., Adrian College; M.A., Ph.D., Ohio State University. *Professor of Speech.*
- NELSON R. OBER, 1966. B.S., M.S., University of Kansas. *Instructor in Speech.*
- THOMAS V. O'BRIEN, 1969. B.S., M.S., Xavier University; Ph.D., Syracuse University. *Assistant Professor of Mathematics.*
- PHILIP F. O'CONNOR, 1967. B.S., University of California, San Francisco; M.A., San Francisco State College; M.F.A., University of Iowa. *Associate Professor of English.*
- OTTO G. OCVIRK, 1950. B.F.A., M.F.A., University of Iowa. *Professor of Art.*
- JOHN F. OGLEVEE, 1949. B.A., M.A., Ph.D., Ohio State University. *Professor of History.*
- MICHAEL O'HARA, 1970. B.A., Pomona College; M.A., University of Washington. *Instructor in Political Science.*
- JAMES O'NEILL, 1970. A.B., Providence College; M.A., University of Rhode Island. *Instructor in English.*
- JAMES S. OLMS, 1968. B.A., Toledo University; M.D., Western Reserve Medical School. *Associate Professor; Director, Health Center.*
- LORRENE L. ORT, 1956. B.M., Oberlin College; M.A., Ph.D., Ohio State University. *Professor of Education.*
- VERGIL K. ORT, 1956. B.A., Defiance College; M.A., University of Michigan; Ph.D., Ohio State University. *Professor of Education; Assistant Dean, College of Education.*
- JAMES R. OSTAS, 1969. B.A., Western Reserve University; M.A., Indiana University. *Assistant Professor of Economics.*
- IRWIN OSTER, 1966. B.S., Long Island University; Ph.D., Indiana University. *Professor of Biology.*
- DONALD E. OWEN, 1964.* B.S., Lamar State College of Technology; M.S., Ph.D., University of Kansas. *Associate Professor of Geology.*
- B. D. OWENS, 1962. B.S., Northwest Missouri State College; Ph.D., University of Pennsylvania. *Professor of Finance and Insurance; Vice-President for Research and Financial Affairs.*
- JANIS LOUISE PALLISTER, 1961. B.A., M.A., Ph.D., University of Minnesota; Certificate, University of Sorbonne, Paris. *Associate Professor of Romance Languages.*
- ANTHONY J. PALUMBO, 1968. B.S., M.Ed., Bowling Green State University. *Instructor in Industrial Education and Technology.*
- SALLY PARENT, 1968. B.S., M.A., Michigan State University. *Instructor in Health and Physical Education.*
- JANET B. PARKS, 1965. B.S., University of Chattanooga; M.S., Illinois State University. *Instructor in Health and Physical Education.*
- PAUL E. PARNELL, 1960. B.Ed., State University College of Education, Brockport; M.A., Ph.D., New York University. *Professor of English.*
- BERYL MARGARET PARRISH, 1946. B.S.Ed., M.A., Ohio State University. *Associate Professor of English.*
- TERRY W. PARSONS, 1970. B.A., Denison University; M.Ed., Bowling Green State University; Ph.D., Ohio State University. *Assistant Professor of Health and Physical Education.*
- JAMES E. PASUT, 1970. B.A., M.A., University of Northern Iowa; M.Ed., Bowling Green State University. *Instructor in Business Education.*
- ROBERT A. PATTON, 1967. B.A., Tarkio College; M.A., Ph.D., University of Missouri. *Assistant Professor of Quantitative Analysis and Control.*
- FAYETTA M. PAULSEN, 1963. B.S., Western Michigan University; M.S., MacMurray College. *Associate Professor; Associate Dean of Students.*
- EDMUND F. PAWLOWICZ, 1970. B.E.E., M.Sc., Ph.D., Ohio State University. *Assistant Professor of Geology.*
- DAVID A. PAXTON, 1970. B.S., University of Colorado; M.B.A., Bowling Green State University. *Instructor in Management.*
- ALMA J. PAYNE, 1946. B.A., College of Wooster; M.A., Ph.D., Western Reserve University. *Professor of English.*
- JOHN T. PENDLETON, 1965. B.S.Ed., M.Ed., Bowling Green State University. *Instructor in Industrial Education and Technology.*
- WILLIAM B. PEPPER, II, 1969. B.A., Rutgers University; M.A., University of Iowa. *Instructor in Music.*
- DAN N. PERKUCHIN, 1969. B.A., Michigan State University; M.A., Ph.D., University of Michigan. *Assistant Professor of Sociology.*
- JOSEPH B. PERRY, JR., 1959. B.S., North Texas State University; M.A., University of Texas; Ph.D., Washington State University. *Associate Professor of Sociology.*
- ROBERT L. PERRY, 1970. B.A., M.A., Bowling Green State University. *Instructor in Sociology and Ethnic Studies.*
- ADELIA M. PETERS, 1968. B.A., Valparaiso University; M.A., Ed.D., University of Rochester. *Assistant Professor of Education.*
- PATRICIA L. PETERSON, 1963. B.S.Ed., Wittenberg College; M.P.E., Indiana University. *Assistant Professor of Health and Physical Education.*
- JOHN F. PETTIBONE, 1970. B.A., Ball State University; M.A., Ph.D., Ohio State University. *Associate Professor of Journalism.*

* On leave 1970-71.

- TREVOR J. PHILLIPS, 1963. B.A., Sir George Williams University; Diploma, McGill University Institute of Education; M.A., Ph.D., University of Connecticut. *Associate Professor of Education; Director, Honors Program.*
- FRED PIGGE, 1964. B.S., Rio Grande College; M.Ed., Ph.D., Ohio University. *Associate Professor of Education.*
- JOHN PIPER, 1967. B.A., Mt. Union College; M.Ed., Bowling Green State University; Ph.D., Ohio State University. *Assistant Professor of Health and Physical Education; Golf Coach.*
- DONALD C. PLASTERER, 1969. B.S., M.B.A., Bowling Green State University. *Instructor in Finance and Insurance.*
- GROVER C. PLATT, 1946. B.A., University of Iowa; M.A., Tufts University; Ph.D., University of Iowa. *Professor of History.*
- VIRGINIA BEVER PLATT, 1947. B.A.Ed., University of Washington; M.A., University of California, Berkeley; Ph.D., University of Iowa. *Professor of History.*
- JAMES B. PLAUNT, 1968. B.S., M.Ed., Bowling Green State University. *Instructor in Health and Physical Education; Director of Curling.*
- NEIL A. POHLMANN, 1962.** B.S., M.Ed., Ed.S., Bowling Green State University; D.Ed., Wayne State University. *Assistant Professor of Education.*
- DAVID J. POPE, 1963. B.M., M.M., Florida State University. *Assistant Professor of Music.*
- ANGELA POULOS, 1968. A.B., M.A., Indiana University. *Instructor; Librarian.*
- GEORGE J. POULOS, 1968. A.B., M.A., Indiana University. *Assistant Professor; Librarian.*
- BOLESLAV S. POVSIC, 1963. Maturita Classica, Ginnasio-Liceo Massimo D'Azeglio, Torino, Italy; Laurea di Dottore in Lettere, University of Rome, Italy. *Professor of Romance Languages.*
- DIANE GOODRICH PRETZER, 1962. B.A., Knox College; M.A., University of Iowa; Ph.D., Indiana University. *Associate Professor of Romance Languages.*
- WALLACE L. PRETZER, 1963. B.A., Valparaiso University; M.A., Ed.D., University of Michigan. *Associate Professor of English.*
- ROGER L. PTAK, 1968. B.S., University of Detroit; M.S., Ph.D., Cornell University. *Assistant Professor of Physics.*
- MEREDITH D. PUGH, 1969. B.A., Macalester College; M.A., University of Connecticut. *Instructor in Sociology.*
- EMIL RAAB, 1969. B.M., M.M., University of Michigan. *Professor of Music.*
- FRANCIS C. RABALAIS, 1968. B.S., University of Southwestern Louisiana; M.S., Ph.D., Louisiana State University. *Assistant Professor of Biology.*
- BERNARD RABIN, 1955. B.Ed., State University College of Education, Plattsburg; M.A.Ed., Syracuse University; Ed.D., Columbia University. *Professor of Education.*
- SUSAN J. RAGAN, 1970. B.S., M.A., Bowling Green State University. *Instructor in Mathematics.*
- DONALD M. RAGUSA, 1965. B.A., M.A., Ph.D., State University of New York, Buffalo. *Associate Professor of Psychology; Assistant Dean, College of Arts and Sciences.*
- KARL G. RAHDERT, 1960. B.S., M.B.A., D.B.A., Indiana University. *Professor of Management.*
- ELGIE V. RAYMOND, 1966.* B.A., M.S.W., University of Kansas. *Instructor in Sociology.*
- RANDALL F. REDINGTON, 1970. B.A., Baldwin-Wallace College; M.Ed., Bowling Green State University. *Instructor in Business Education, Firelands Campus.*
- JAMES DAVID REED, 1968. B.B.A., Washburn University of Topeka; Ph.D., Kansas State University. *Assistant Professor of Economics.*
- ROBERT L. REED, 1969. B.S., M.S., Ed.D., University of Kansas. *Assistant Professor of Education.*
- LOUISE F. REES, 1964. Ph.B., Shurtleff College; B.S.L.S., University of Illinois; M.A., University of Chicago. *Associate Professor; Chairman, Department of Library Science.*
- MEIR REICHAW, 1970. M.Sc., D.Sc., University of Wroclaw, Poland. *Visiting Professor of Mathematics.*
- EVELYN J. REISER, 1962. B.S.Ed., M.A., Bowling Green State University. *Assistant Professor of English.*
- GEORGE RENDINA, 1967. B.A., Washington Square College of New York University; M.A., Ph.D., University of Kansas. *Associate Professor of Chemistry.*
- VICTOR E. REPP, 1960. B.S.Ed., New York State Teachers College, Oswego; M.Ed., University of Maryland. *Assistant Professor of Industrial Education and Technology.*
- JOHN P. RESCH, 1969. B.A., Denison University; M.A., Ph.D., Ohio State University. *Assistant Professor of History.*
- PAUL REUBEN, 1970. B.A., M.A., Patna University, India; Ph.D., Bowling Green State University. *Instructor in English.*
- BILL J. REYNOLDS, 1967. B.S., Kansas State University; M.S., Ed.D., University of Kansas. *Assistant Professor of Education.*
- CHARLES C. RICH, 1958. B.A., Wittenberg University; M.A., Ph.D., Harvard University. *Professor of Geology.*
- JAMES R. RICHARDSON, 1965. B.S., Miami University; M.S., University of Toledo. *Assistant Professor of Health and Physical Education; Supervisor, University Golf Course.*
- JOHN T. RICKEY, 1967. B.S., M.A., Kent State University; Ph.D., Ohio State University. *Professor of Speech.*
- V. FREDERICK RICKEY, 1968. B.S., M.S., Ph.D., University of Notre Dame. *Assistant Professor of Mathematics.*
- ROBERT G. RIEGLE, 1947. B.S.Ed., Bowling Green State University; J.D., Ohio State University. *Licensed attorney in Ohio, federal courts, and I.C.C. Associate Professor of Business Law; Chairman, Department of Business Law.*

* On leave 1970-71.

** Not continuous service.

- ELTON C. RINGER, 1946. B.S.Ed., M.S.Ed., Ed.S., Ph.D., Bowling Green State University. *Associate Professor; Business Manager; Controller.*
- KENNETH A. ROBB, 1970. B.A., Colgate University; M.A., University of Rochester; Ph.D., University of Wisconsin. *Assistant Professor of English.*
- JAMES G. ROBERTSON, 1970. B.S., M.S., Pennsylvania State University. *Assistant Professor of Economics.*
- MICHAEL H. ROBINS, 1969. B.A., University of Illinois; M.A., Roosevelt University; Ph.D., Northwestern University. *Assistant Professor of Philosophy.*
- WILLIAM R. ROCK, 1958. B.A., Gettysburg College; M.A., Ph.D., Duke University. *Professor of History; Chairman, Department of History.*
- DAVID C. ROGERS, 1965. B.M., M.M., University of Michigan. *Assistant Professor of Music.*
- DAVID C. ROLLER, 1964. B.A., College of William and Mary; M.A., Ph.D., Duke University. *Associate Professor of History.*
- ROBERT C. ROMANS, 1969. B.S., M.S.T., Wisconsin State University; Ph.D., Arizona State University. *Assistant Professor of Biology.*
- JEROME H. ROSE, 1963. B.S., Mannes School of Music; M.S., Juilliard School of Music. *Associate Professor of Music; Artist-in-Residence.*
- BENJAMIN G. ROSENBERG, 1955. B.A., M.A., Ph.D., University of California, Berkeley. *Professor of Psychology.*
- ROBERT H. ROSS, JR., 1970. A.B., Dartmouth College; M.A., Columbia University; Ph.D., Ohio State University. *Professor of English; Chairman, Department of English.*
- TIMOTHY L. ROSS, 1965. B.S., M.B.A., Bowling Green State University; Certified Public Accountant, Ohio. *Assistant Professor of Quantitative Analysis and Control.*
- KENNETH ROTHROCK, 1968. B.S., Ph.D., University of Kansas. *Assistant Professor of Sociology.*
- DONALD K. ROUTH, 1970. B.A., University of Oklahoma; M.S., Ph.D., University of Pittsburgh. *Associate Professor of Psychology.*
- ROSS L. ROWE, 1965. B.S., University of Idaho; M.S., Ed.D., University of Oregon. *Associate Professor of Education.*
- DON K. ROWNEY, 1963. B.A., St. Meinrad Seminary; M.A., Area Certificate—Russian Institute; Ph.D., Indiana University. *Associate Professor of History; Director, International Education, College of Arts and Sciences.*
- RONALD M. RUBLE, 1970. B.A., Otterbein College; M.A., Bowling Green State University. *Instructor in Speech, Firelands Campus.*
- JOEL RUDINGER, 1967. B.S., Bowling Green State University; M.A., University of Alaska; M.F.A., University of Iowa. *Instructor in English, Firelands Campus.*
- JAMES J. RUEHL, 1956. B.S., Ohio State University; M.S., Bowling Green State University. *Assistant Professor of Health and Physical Education; Assistant Football Coach.*
- RENE RUIZ, 1967. Bachiller, Institute of Santa Clara, Cuba; M.A., Doctor in Law, University of Havana. *Assistant Professor of Romance Languages.*
- PAUL D. RUNNING, 1956. B.A., St. Olaf College; M.F.A., Ph.D., University of Iowa. *Professor of Art.*
- ELFREDA M. RUSHER, 1950. B.S.Ed., Ohio Northern University; M.A., Ph.D., Ohio State University. *Professor of Business Education.*
- L. DAVID SABBAGH, 1967. B.S., M.S., Ph.D., Purdue University. *Assistant Professor of Mathematics.*
- GERALD L. SADDLEMIRE, 1969. B.A., State University of New York; M.A., D.Ed., Teachers College, Columbia University. *Professor of Education; Chairman, Department of College Student Personnel.*
- BROWNELL SALOMON, 1966. B.A., M.A., University of Florida; Ph.D., Tulane University. *Assistant Professor of English.*
- FUMIKO SAMEJIMA, 1970. B.A., M.A., Ph.D., Keio University, Tokyo. *Associate Professor of Psychology.*
- MAURICE O. SANDY, 1962. B.S.Ed., Bowling Green State University; M.S., University of California, Los Angeles. *Assistant Professor of Health and Physical Education; Director, Men's Intramural Sports.*
- DONALD F. SATTLER, 1969. B.A., Kenyon College; M.A., Ohio State University. *Instructor in English.*
- MOTUPALLI SATYANARAYANA, 1966. B.S., Hindu College, India; M.A., Andhra University, India; Ph.D., University of Wisconsin. *Associate Professor of Mathematics.*
- EMILY JEAN SCHALLER, 1964. B.S.Ed., M.S.Ed., Bowling Green State University. *Instructor in Education.*
- RONALD L. SCHENK, 1969. B.S., Northwest Missouri State College; M.A., University of Iowa; Ph.D., University of Nebraska. *Assistant Professor of Business Education.*
- DONALD W. SCHERER, 1967. B.A., Wayne State University; Ph.D., Cornell University. *Associate Professor of Philosophy.*
- GEORGE E. SCHERFF, 1969. B.S. in Mech. Eng., Ohio State University; M.S. in Mech. Eng., University of Toledo. Certified Professional Engineer. *Assistant Professor of Industrial Education and Technology.*
- WILLIAM F. SCHMELTZ, 1947.† B.B.A., University of Toledo; M.B.A., Harvard Graduate School of Business Administration; Ph.D., Western Reserve University; Certified Public Accountant, Ohio. *Professor of Quantitative Analysis and Control.*
- KLAUS M. SCHMIDT, 1969. Staatsexamen I, Eberhard Karls University, Tübingen; Staatsexamen II, Teachers Training College, Stuttgart. *Instructor in German and Russian.*
- O. DALE SCHNETZER, 1970. A.B., Franklin and Marshall College; M.A., University of Illinois. *Instructor in Philosophy, Firelands Campus.*

† On leave fall quarter, 1970-71.

- JANET A. SCHNUPP, 1970. B.S., M.A., Bowling Green State University. *Instructor in Education.*
- WARREN J. SCHOLLER, 1958. B.S.Ed., Ohio State University; M.Ed., Xavier University. *Assistant Professor of Health and Physical Education.*
- GREGORY SCHUBERT, 1964.** A.B., M.A., Miami University. *Assistant Professor of Speech; Station Manager, WBGU-TV.*
- JOHN R. SCHUCK, 1960.** B.A., Ohio State University; M.A., Bowling Green State University; Ph.D., Ohio State University. *Professor of Psychology.*
- WILLIAM L. SCHURK, 1967. B.A., Bowling Green State University; M.S.L.S., Western Reserve University. *Instructor; Librarian.*
- KARL M. SCHURR, 1962. B.A., M.A., Bowling Green State University; Ph.D., University of Minnesota. *Associate Professor of Biology.*
- TOMA SCHWARTZ, 1966. Diploma in Arts, Institute Gh. Dima, Cluj, Roumania; Diploma in Performance, Geneva, Switzerland; Master Class with Guido Agosti, Siena, Italy. *Instructor in Music.*
- JACK M. SCHWEIBOLD, 1970. A.B., M.A., Miami University. *Assistant Professor of Journalism.*
- JOHN PAUL SCOTT, 1965. B.A., University of Wyoming; M.A., Oxford University; Ph.D., University of Chicago. *Research Professor of Psychology; Director, Center for Research on Social Behavior.*
- JOHN SHERMAN SCOTT, 1969. B.A., South Carolina State College; M.A., Bowling Green State University. *Instructor in Speech.*
- SANDRA SCOTT, 1970. B.S., Bowling Green State University; M.A., Ohio State University. *Instructor in Health and Physical Education.*
- RONALD E. SEAVOY, 1965.* B.A., M.A., Ph.D., University of Michigan. *Assistant Professor of History.*
- GEORGE G. SEIFERT, 1967. B.A., Antioch College; M.A., Ph.D., Western Reserve University. *Assistant Professor of Education.*
- KENNETH M. SEMBERG, 1966. B.A., University of Denver; Ph.D., University of Nebraska. *Associate Professor of Psychology.*
- HOWARD L. SHINE, 1960. B.A., M.A., Bowling Green State University; L.L.B., George Washington University. *Licensed attorney in District of Columbia and federal courts. Associate Professor of Speech; Assistant Dean, College of Arts and Sciences.*
- CHARLES T. SHIRKEY, 1969. B.S., Ph.D., Ohio State University. *Assistant Professor of Physics.*
- DZIDRA SHLLAKU, 1959. Graduate (Abitur), Classical Gymnasium, Jelgava, Latvia; Ph.D., University of Bologna, Italy. *Associate Professor of German and Russian.*
- PAUL A. SHOEMAKER, B.S.E.D., Ohio University; M.A., Ohio State University. *Northwest Regional Supervisor of Distributive Education.*
- MOHAN N. SHRESTHA, 1967.* B.A., Tri-Chandra College, Nepal; B.Ed., College of Education, Nepal; M.A., Tribuhan University, Nepal; Ph.D., University of Iowa. *Assistant Professor of Geography.*
- L. EDWARD SHUCK, JR., 1964. B.A., Stanford University; M.A., Ph.D., University of Southern California. *Associate Professor; Director, International Programs.*
- ALEXANDER SHUFRAN, 1968. B.S., California State College; M.A., Bowling Green State University. *Instructor in Geography, Firelands Campus.*
- DAVID G. SHUMWAY, 1968. B.A., Marietta College; M.S., Case Institute of Technology. *Instructor in Mathematics, Firelands Campus.*
- M. JOY SIDWELL, 1964. B.S., M.A., Michigan State University. *Assistant Professor of Health and Physical Education.*
- IRWIN W. SILVERMAN, 1968. B.A., Brooklyn College; M.S., Ph.D., Purdue University. *Associate Professor of Psychology.*
- DONALD D. SIMMONS, 1967.** B.A., Bowling Green State University; J.D., Ohio State University. *Licensed attorney in Ohio and federal courts; member of the Bar of the United States Supreme Court. Assistant Professor of Business Law.*
- EDGAR B. SINGLETON, 1959. B.S., M.S., Ohio University; Ph.D., Ohio State University. *Associate Professor of Physics.*
- DAVID C. SKAGGS, 1965. B.S., M.A., University of Kansas; Ph.D., Georgetown University. *Associate Professor of History.*
- HAROLD SKINNER, 1965. B.S., Houghton College; M.M., Eastman School of Music. *Associate Professor of Music.*
- IRENE SKINNER, 1966. B.S., M.S., Cornell University. *Instructor in Home Economics.*
- RICHARD J. SLECKITIS, 1969. B.A., Westminster College; M.B.A., Ohio University. *Assistant Professor of Finance and Insurance.*
- BRUCE W. SMITH, 1970. B.A., State University College at Potsdam, N.Y.; M.A., Ph.D., University of Illinois. *Assistant Professor of Geography.*
- LARRY R. SMITH, 1970. B.A., Muskingum College; M.A., Kent State University. *Instructor in English, Firelands Campus.*
- OLIN W. SMITH, 1966. A.B., Ph.D., Cornell University. *Research Professor of Psychology.*
- PATRICIA C. SMITH, 1966. B.A., University of Nebraska; Ph.D., Cornell University. *Professor of Psychology.*
- RONALD D. SMITH, 1966. B.S., Oregon College of Education; M.Ed., D.Ed., University of Oregon. *Assistant Professor of Education.*
- VINCENT K. SMITH, 1969. A.B., Ph.D., Rutgers University. *Assistant Professor of Quantitative Analysis and Control.*
- RAYMOND F. SNIPES, 1967. B.S., University of North Carolina; M.S., Ph.D., Yale University. *Assistant Professor of Mathematics.*
- ELDON E. SNYDER, 1964. B.A., Southwestern College; M.S.Ed., Ed.D., University of Kansas. *Associate Professor of Sociology.*

* On leave 1970-71.

** Not continuous service.

- MARILYN J. SOLT, 1970. B.S., Wayne State University; M.A., Bowling Green State University. *Instructor in English.*
- PETER H. SPADER, 1967. B.A., Alfred University; Ph.D., Columbia University. *Assistant Professor of Philosophy.*
- JONNIE B. SPAULDING, 1968. B.S., University of North Carolina; M.Ed., East Carolina University. *Instructor in Education.*
- LLOYD F. SPAULDING, 1968. B.S., M.Ed., Massachusetts State College. *Associate Professor of Industrial Education and Technology; Liaison Coordinator for Occupational, Vocational, and Technical Education Programs.*
- MELVILLE R. SPENCE, 1970. B.A., Beloit College; M.A.L.S., Western Reserve University. *Professor; Director, University Libraries.*
- JOSEPH G. SPINELLI, 1969. B.S., M.A., Ohio State University. *Instructor in Geography.*
- WILLIAM C. SPRAGENS, 1969. A.B., M.A., University of Kentucky; Ph.D., Michigan State University. *Associate Professor of Political Science*
- ELMER A. SPREITZER, 1969. B.S., John Carroll University; M.A., Western Reserve University; Ph.D., Ohio State University. *Assistant Professor of Sociology.*
- BEATRICE SPRIGGS, 1965. B.A., Mary Hardin-Baylor College; M.A.L.S., University of Denver. *Instructor; Librarian.*
- GENEVIEVE E. STANG, 1967. B.S., M.S., Illinois State University; Ph.D., University of Minnesota. *Assistant Professor of Education.*
- VIRGINIA STARR, 1968. B.M., Denver University; M.M., University of Illinois. *Assistant Professor of Music.*
- HAROLD GLENDON STEELE, 1946. B.A., Northwestern University; M.A., Ohio State University. *Associate Professor of English.*
- NANCY G. STEEN, 1966. B.A., M.A., Bowling Green State University; A.M.L.S., University of Michigan. *Instructor; Librarian.*
- DON C. STEINKER, 1967. B.S., Indiana University; M.S., University of Kansas; Ph.D., University of California, Berkeley. *Assistant Professor of Geology; Chairman, Department of Geology.*
- JOAN K. STEPENSKI, 1970. B.S., Michigan State University. *Instructor in Computer Science.*
- JERONE V. STEPHENS, 1970. B.A., Georgia State College; M.A., Ph.D., Indiana University. *Assistant Professor of Political Science.*
- NANCY STEPP, 1965. B.S., Memphis State University; M.A., University of Virginia. *Instructor in English.*
- DONALD L. STERNITZKE, 1967. B.S.C., M.A., Ph.D., University of Iowa. *Associate Professor of Economics; Chairman, Department of Economics.*
- BERNARD STERNISHER, 1969. B.A., University of Alabama; A.M., Ph.D., Boston University. *Professor of History.*
- JOHN T. STICKLER, 1970. B.A., Western Michigan University; M.A., Michigan State University. *Instructor in German and Russian.*
- ROBERT E. STINSON, 1949. B.F.A., University of Illinois; M.A., M.F.A., University of Iowa. *Professor of Art.*
- SIDNEY C. STONE, 1944. B.A., M.A., Ohio Wesleyan University. *Associate Professor of Speech.*
- RONALD E. STONER, 1965. B.S., Wabash College; M.S., Ph.D., Purdue University. *Associate Professor of Physics.*
- ROBERT J. STOUT, 1969. B.D., Wittenberg University; B.S., M.Ed., Ph.D., Bowling Green State University. *Instructor in Home Economics.*
- JERRY STREICHLER, 1967. B.S., Newark State College; M.A., Montclair State College; Ph.D., New York University. *Professor of Industrial Education and Technology; Chairman, Department of Industrial Education and Technology.*
- JAMES D. STUART, 1968. B.S.L., Th.B., Cincinnati Bible Seminary; M.A., Ph.D., University of Cincinnati. *Assistant Professor of Philosophy.*
- THOMAS G. STUBBS, 1963. B.S.Ed., Bowling Green State University; M.A., Kent State University. *Assistant Professor of Health and Physical Education; Varsity Swimming Coach.*
- GALEN STUTSMAN, 1950. B.S.Ed., M.A., Ph.D., Ohio State University. *Professor of Business Education.*
- RICHARD A. SWANSON, 1968. B.A., M.A., Trenton State College; Ed.D., University of Illinois. *Associate Professor of Industrial Education and Technology.*
- KALMAN S. SZEKELY, 1968. B.A., Bowling Green State University; M.A., Western Michigan University. *Instructor; Librarian.*
- RUSSELL D. TABBERT, 1967. B.A., Ph.D., University of Iowa. *Assistant Professor of English.*
- INA G. TEMPLE, 1966. B.S., M.S., University of Wisconsin. *Assistant Professor of Health and Physical Education.*
- WALLACE L. TERWILLIGER, 1965. B.S., State Teachers College, Clarion, Pennsylvania; M.A., Ph.D., Washington State University. *Associate Professor of Mathematics.*
- JACK RAY THOMAS, 1965. B.A., Youngstown University; M.A., Kent State University; Ph.D., Ohio State University. *Associate Professor of History.*
- STEPHEN G. THOMAS, 1964. B.S., M.Ed., Bowling Green State University. *Instructor in Health and Physical Education; Assistant Trainer.*
- TERRY LEE TILTON, 1969. B.A., Earlham College; M.A., Bowling Green State University. *Instructor in Geology.*
- JACQUELINE E. TIMM, 1946. B.A., M.A., Ph.D., University of Texas. *Professor of Political Science.*
- AIDA K. TOMEH, 1962.** B.A., American University of Beirut, Lebanon; M.A., Ph.D., University of Michigan. *Associate Professor of Sociology.*
- MALACHI C. TOPPING, 1970. A.B., Washington University; M.A., Ph.D., Ohio State University. *Associate Professor of Speech.*
- AMY TORGERSON, 1948. B.S.Ed., Central Missouri State College; M.A., New York University.

** Not continuous service.

Associate Professor of Health and Physical Education.

JOHN R. TOSCANO, 1963. B.A., M.A., University of Wyoming; Ed.D., Stanford University. *Associate Professor of Education.*

CHARLES S. TOWNSEND, 1970. B.B.A., University of Michigan. *Instructor in Quantitative Analysis and Control.*

RALPH N. TOWNSEND, 1960. B.S., Illinois Wesleyan University; M.S., Ph.D., University of Illinois. *Associate Professor of Mathematics; Assistant Dean, College of Arts and Sciences.*

IVAN TRUSLER, 1966. B.S., M.S., Kansas State Teachers College; Ed.D., Columbia University. *Professor of Music.*

DUANE E. TUCKER, 1959. B.A., Kansas State Teachers College, Emporia; M.A., Ph.D., University of Wisconsin. *Professor of Speech; Director of Broadcasting.*

RAYMOND K. TUCKER, 1968. B.A., University of Denver; M.A., Ph.D., Northwestern University. *Professor of Speech.*

MARTHA A. TURNBERG, 1970. B.A., Sacred Heart Academy; B.A., St. Bernard College; M.A., Bowling Green State University. *Instructor in Chemistry.*

RYAN D. TWENEY, 1970. B.A., University of Chicago; M.A., Ph.D., Wayne State University. *Assistant Professor of Psychology.*

ROBERT W. TWYMAN, 1948. B.A., Indiana University; M.A., Ph.D., University of Chicago. *Professor of History.*

HARRY L. TYSON, JR., 1967. B.S., New Mexico State University; M.A., Northeast Missouri State Teachers College. *Instructor in Health and Physical Education.*

ELLIOT UZELAC, 1968. B.S., Western Michigan University; M.E., Bowling Green State University. *Instructor in Health and Physical Education.*

ANTHONY VAN BEYSTERVELDT, 1969. Master's, Tilburg University; D.Sp., University of Utrecht; D.L., University of Amsterdam. *Associate Professor of Romance Languages.*

STEPHEN A. VAN DYKE, 1969. B.S., M.A., Brigham Young University. *Instructor in Speech, Firelands Campus.*

LELAND S. VAN SCOYOC, 1946. B.S., M.S., Kansas State University; D.B.A., Indiana University. *Professor of Economics.*

GLENN I. VAN WORMER, 1947. B.S.Ed., M.Ed., Bowling Green State University. *Associate Professor; Registrar; Associate Dean of Faculties.*

GLENN H. VARNEY, 1970. B.A., M.B.A., Ohio State University. *Assistant Professor of Management; Director, Management Center.*

DONNA IRENE VATAN, 1969. B.S., Texas Technological College. *Instructor in Home Economics.*

STEPHEN H. VESSEY, 1969. B.A., Swarthmore College; M.S., Ph.D., Pennsylvania State University. *Assistant Professor of Biology.*

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UNIVERSITY CALENDAR 1971-72

FALL QUARTER

September 20, Monday	Deadline for fee payment: fall quarter
September 23, Thursday	Residence halls open for freshman and transfer students: noon
September 24, Friday	Residence halls open for upperclass students: noon
September 25, Saturday	Band Day: East Carolina football
September 26, Sunday	Fall quarter orientation
September 27, Monday	Classes begin—8:00 a.m.
October 23, Saturday	Homecoming: Miami football
November 13, Saturday	Dad's Day: Xavier football
November 24, Wednesday	Beginning of Thanksgiving recess—8:00 a.m.
November 29, Monday	Resumption of classes—8:00 a.m.
December 8, Wednesday	Classes end
December 10, Friday	Fall quarter examinations begin
December 15, Wednesday	Fall quarter examinations end
December 16, Thursday	Fall Commencement

WINTER QUARTER

December 31, Friday	Deadline for fee payment: winter quarter
January 3, Monday	Classes begin—8:00 a.m.
February 21, Monday	Washington-Lincoln Day—classes begin at 5:00 p.m.
March 13, Monday	Winter quarter examinations begin
March 16, Thursday	Winter quarter examinations end
March 18, Saturday	Winter Commencement

SPRING QUARTER

March 25, Saturday	Deadline for fee payment: spring quarter
March 27, Monday	Classes begin—8:00 a.m.
May 29, Monday	Memorial Day—classes begin at 5:00 p.m.
June 5, Monday	Spring quarter examinations begin
June 8, Thursday	Spring quarter examinations end
June 10, Saturday	Spring Commencement

SUMMER QUARTER

June 19, Monday	Quarter classes begin; first term classes begin
July 4, Tuesday	Independence Day—no classes
July 25, Tuesday	First term ends
July 26, Wednesday	Second term begins
August 30, Wednesday	Quarter ends; second term ends
August 31, Thursday	Summer Commencement