# BGSU 1985-1986-1987 Undergraduate Catalog 

Bowling Green State University

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Undergraduate Catalog 1985-87 Includes course descriptions and information about Firelands College

## 1985-97 Academic Calendar


June 10,1925 - Monday
July 4 - Thursday
July 12 - Fitday
July 15 - Monday
August 2 - Friday
August 16 - Friday
August 17 -Saturday
Feti somevier
August 29, 1985 - Wednesday
September 2 - Monday
November 7. Wednesday
December 2 - Monday
December 93 - Filday
December 10 - Monday
Drember 20 - Friday
Dacember 21 - Saturday
Sping Sernesfor
Jenuary 13, 1086 - Monday
Januery 20 - Monday
March 22 - Saturday
March 31 - Monday
Amy 2-Friday
May 5 - Monday
May 0 - Friday
May to. Saiurday
©unmor Scsaion
June 9,1986 - Mondsy
July 4 . Friday
suly 11-Friday
July 14 - Monday
August 1 - Firlday
August 15 - Friday
August 18. Eaturday
Fun Smmeitir
August 27, 1086 - Wednesday
September i- Monday
November 26 - Wednesday
December 1 - Monday
December 12 - Friday
Dacember 15 - Monday
December 19 - Filday
Docember 20 - Saturday
Sprine Someatar
Jenuery 12, 1887 - Monday
January 10 - Monday
harach 24-Saturday
Aarch 30 - Monday
May 1 - Fiday
May A- Monday
May 8 - Friday
may 9. Gaturday

Classes begin 7:30 a.m.
Independence Day - No Classes
First 5 -week term ends
Second 5 -weak term begins 7:30

## a.m.

End of 8 -week term
Second 5 -week term ends
Commencement

Classes begin 7:30 a.m.
Labor Day - No Classes
Thanksgiving recess begins 7:30
a.m.

Classes resume 7:30 a.m.
Classes ond 10 p.m.
Examinatlons begin 7:30 a.m.
Fall Semester ends
Commencemens
Classes being 7;30 am.
Martin Luther King Day- No Classes
Spring recess begins 12 noon
Classes resume 7:30 a.m.
Classes end 5:30 p.m.
Examinations begin 7:30 a.m.
Spring Semester ands
Commencement
Classes begin 7:30 a.m.
Indspendence Day - No Classes
First 5 -week term ends
Second 5-week term begins 7:30
a.m.

8-week term ends
Second 5 -week torm ends
Commencement
Classes begin 7:30 a.m.
Labor Day- No Classes
Thanksglving recess begins 7:30
a.m.

Classes resume 7:30 a.m.
Classes end 10 p.m.
Examinations begin 7:30 a.m.
Fall Semester ends
Commencement
Classes begin 7:30 a.m.
MartIn Luther KIng Day - No Classes
Spring racess begins 12 noon
Classes resume 7:30 a.m.
Classes and 5:30 p.m.
Classes and 5:30 p.m.
Examinatlons begin 7:30 a.m.
Spring Semester ends
Commencement

## Where to go

| Admlssions information | 110 McFall | 372-2086 |
| :---: | :---: | :---: |
| Advising, academic |  |  |
| Coltege offlces |  |  |
| Arts and Sclonces | 215 Admin. Bidg. | 372-2015 |
| Bushess Administration | 371 Bus. Admin. Bldg. | 372-2747 |
| Education | 444 Educ. Bldg. | $372-0151$ |
| Health and Communlty Services | 100 Health Center | 372-0242 |
| Musical Arts | Musical Arts Bldg. | 372-2181 |
| Technology | Technology Bidg. | 372-2436 |
| Pre-Major Advising | 231 Admin. Bidg. | 372-0202 |
| Department offlces |  |  |
| Campus Saiety and Securlty | Commons Bldg. | 372-2346 |
| Counssiling |  |  |
| Counselling and Caveer Development |  |  |
| Center | 320 Student Services Bidg. | 372-2081 |
| Placoment Service | 360 Student Services Bidg. | 372-2356 |
| Psychological Services Center | 308 Psychology Bldg. | 372.2301 |
| Conter for Academic Options | 231 Admin. Bldg. | 372-0202 |
| Chenging majors | College offlces |  |
| Drop/add | Registrar, 110 Admin . Bidg. | 372-0441 |
| Employment, student | 460 Student Services Bldg. | $372-0252$ |
| Financial ald | 450 Student Services Bidg. | 372-2651 |
| Housing | 480 Student Services Bldg | 372-2011 |
| 10 cards | Registrar, 110 Admin. Bidg. | 372.0441 |
| Fegistering for classes | Registrar, 110 Admin . Bldg. | 372.0441 |
| Transcripts | Registrar, 110 Admin . Bidg. | 372-0441 |



Undergraduate Catalog 1985-87 Includes course descriptions and information about Firelands College

1. Students are responsible for knowing all requirements and policies in this catalog, particularly those academic policies on pages 8-13.
2. All information in this catalog was correct as of May 15, 1985, and is subject to change. Except as specifically stated herein, Bowling Green State University makes no representation or contract that following a particular course or curriculum will result in specific achievement, employment, or qualification for employment, admission to degree programs, or licensing for particular professions or occupations.
3. Programs are listed in this catalog under colleges in alphabetical order; under each program, courses are identified by a threeor four-letter abbreviation and a number. Course descriptions are listed in the back of this catalog in alphabetical order by department.
4. The semester schedule of classes should be used in conjunction with this catalog to determine course availability since all courses are not offered every semester.
5. The University reserves the right to change its course offerings and academic requirements for the baccalaureate and associate degrees. To protect students from unnecessary penalty where these changes occur, the following policies in regard to the Undergraduate Catalog are in effect.
a. Students' graduation requirements are based upon the Undergraduate Catalog in use during their first academic term at BGSU.
b. Students may elect to complete a program under the most recent Undergraduate Catalog. If this choice is made, then the student must complete all additional requirements for the program selected.
c. Students who transfer from one BGSU college to another follow the Undergraduate Catalog in effect at the time of the transfer.
d. Students who transfer from other institutions follow the Undergraduate Catalog in effect at the time of their initial registration for courses at BGSU.
e. Students who initiate but do not complete a program and return to the University follow the Undergraduate Catalog in effect at the time of return.
f. Questions concerning catalog policy should be directed to the appropriate academic dean.
6. The social security number is used as an identifying account number throughout a student's attendance at the University. Students are required to disclose their social security numbers as a condition for enrollment at the University.
7. Bowling Green State University provides equal educational and employment opportunity regardless of race, sex, color, national origin, geographical area, religion, creed, age, marital status, mental or physical handicaps or veteran status. The University will not knowingly cooperate with, support, or employ the services of other organizations that discriminate against persons on such grounds. However, if any student with a physical disability requires special individual services or equipment, the student will be responsible for the expenses thereof. This policy includes the expense of providing personal tutors, personal attendants, medical technicians and so forth. The University will assist such students in communicating with proper community or government agencies to secure any available financial assistance to meet their needs.

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 1

Bowling Green State University is situated. on a- 1250 -acre campus, which includes more than 100 buildings. The University offers more than 150 undergraduate degree programs, as wellas 60 master's programs, 9 doctoral programs four specialist's pro-
"rams and 1.7 associate degree programs More than 16,000 students, including about 2000 graduate students; attend classes on the main campus The University enrolls an additionial. 3,000 students at the Firelands College, and various off-campus centers. At $\therefore$ the center of the University's academic community are the 725 faculty members, who are engaged in teaching, research, and scholarship activities:

Establishedin 1910 as a teacher-training institution" Bowling Green held ts first clâsses in 1914 ; but it was not until the following year that the first two buildings--now University Hall and Williams Hall-were ready for use Student enróllment for that
$\%$ yal year totaled 304 with a faculty of 21 tirst bachelor"s degrees were awarded 1917.

In'1929 the functions of Bowling Green were expanded to provide four-year degree
programs in the College of Education and
\& , the College of tiberal Ars: The College of Business'Administration and graduate programs were added in 1935, the year in
. which Bowling Green attained full university
status In 947: the Graduate School was.

- formed and BGSU awarded its first doctoral - degrees (in English) in 1963.
- Beginning in 1946; extension programs of E the University were offered in Sandusky, Ohio During the next two decades, course offerings the were expänded and in 1965 . a branch campus of the University was S estabilished to serve Erie Huron, and Ottawa counties That branch campus is Firelands Cóliege located in Huron Ohio Firelands. Gollege offers career anditechnical education leading to associate degrees in $15^{\circ}$ areas as well as the first two years of bac-- calaureate degree programs.

In the 1970 s, three new colleges were added to the University scurricular offerings In 1973 the College of Health and Human Services was established to provide degree programs in specialized areas in var- ${ }^{2}$ tous health and community service fields. In 1975 the Schoo of Music was expanded To the College of:Musical Arts, and in the a year the Graduate School became the s uaduate Colliege.-
2

In addition to its degree programs, the University offers diverse opportunities for educational and. cultural enrichment tö the people of the area through its regional and continuing education programs, as well as. through the intellectual andocultural activities that arè an integral part of campus life.

## The Campus

Included among the more than 100 buildings on the Bowling Green campus are some that were completed as early as 1915 ; more than half, however, have been constructed since 1960 .. Many are equipped with ramps and ground-level" entryways for the handicapped.

The nine-story Jerome Library is the focal point of the academic community. The design, open stacks, reading lounges, study carrels and seminar rooms have been planined to create an atmosphere conducive to independent study. Jerome Library houses a collection of more than 756,000 volumes, 392,000 government documents; $: 1.31$ million microforms and 8,500 periodi"cals. Of special note is the Sound Recordings Archives which, with almost 175,000 . recordings and audiotapes, is one of the largest of any academic institution in the - nation. In addition, the library contains a curriculum resource center and a special collections, including maps, populà culture and rare books.

- Among the facilities in the science-: research complex are the P. sychology Build.:ing, the Mathematical Sciences Building, the Life Sciences Building, and Overman Hall, the Biological Sciences Laboratory Annex and". the Physical Sciences Building. These pro-: vide specialized research equipment and:laboratories to serve the needs of students in a variety of disciplines.

The Technology Building contains a computer graphics center and specialized laboratories in design, electronics, manufacturing, visual communications and other technologies.

Art facilities are located throughoutithe campus and include individual studiós for: design and workstiops for such art areas as - jewelry making, wood working, painting. drawing, enameling, weaving, print making; sculpture, ceramics and glass blowing. Photography laboratories are also available at. several campus locations. An art galleny. located in the Fine Arts Building annually features exhibits of works by faculty: and students.

The campus radio stations, WFAL-AM and WBGU-FM provide students with practical experience in daily station operations: Students also support the profesional staff. in the programming and activities of WBGUTV, a public television station located on campus serving northwest Ohio.

Theater students at the University have many oppertunities to participate in all. phases of the theater experience through annual productions held in University Hall's ${ }^{\ddagger}$ Main Auditorium as well as the Joe E. Brown Theatre.

The Móre Musical Arts Center, completed in 1979, provides extensive and modern facilities for the University's music programs and activities. Constructed around an open courtyard, the music center includes an 850-seat concert hall, a 250-seat recital hall, as well as practice rooms, rehearsal. halls, classrooms, studios and a variety of special facilities designed for specific areas of performance and instruction:

The focal point of campus recreational activity is the Student Recreation Center, also completed in 1979. Among the facilities contained in the recreation center are two swimming pools, 14 handball/racquetball courts, a running track and bàsketball/volleyball/tennis courts, as well as areas. designed for games and table sports Other campus athletic and recreational facilities include a 30,000-seat football stadium, an ice arena, a 5,200-seat basketball aréna, ań , 18-hole golf course and 25 tennis courts:

The University Union is a center for social and cultural activities on campus. There are three food service facilities and 26 guest rooms in the Union and a wide range of lec tures, concerts and other activities are presented in the Lenhart Grand Ballroom, located on the second floor.

Completed in 1976, the Mileti Alumni Center is the hub for the many activities of the University's alumni. It contains meeting. rooms, a library and an art"gallery which features works by alumni, faculty añd students.:
$\because$ The University art gallery is located in McFall Center; which also houses adminis: trative offices:

Other campus buildings house classrooms and facilities for programs in: business administration, education and the humanities:

## Academic goals of The University

Bowing Green State University is dedicated to providing quality academic programs in a teaming enviromment that promotes academic and personal excellence in students, as well as appreciation of intellectual, ethical and aesthotic valuos. Wisdom, sound judgment, tolerance and respect for other persons, cullures and ideas are the hallmarks of an educated person and the characteristics that the University hopes to develop in its students.
The extent to which these goals are met depends on the intellectual and cultural environment of the University, the wisdom and dedication of its faculty and the intellectual curiosity, ability and energy of its students. To achieve this end the University strives to attract the most qualified students and facully committed to the goals of quality education, productive research and scholarly achievement.

Through a vigorous program of curricular ovaluation and development, Bowling Green State University seeks to ensure that those who earn a baccalaureate degree from any of the colleges of the University will have acquired practical and theoretical understanding in a specific area of specialization; demonstrated competency in critical thinking, problem solving, reading, writing, speaking, computation and mathematics; acquired a fundamental breadth of knowledge in literature, the fine arts and the other humanities, as well as in the natural, social and behavioral sciences; experieniced personal growth through interaction with all elements of the University community and through exposure to other cultures; and enjoyed the opportunity to explore diverse individual academic interests through the variety of courses and programs available at the University.

## Accreditation and recognition

The University is fully accredited at the bachelor's, master's, and doctoral levels by the North Central Association of Colleges and Secondary Schools. in addition, the College of Business Administration is accredlied by the American Assembly of Collegiate Schools of Business (AACSB); teacher education, by the National Council for Accreditation of Teacher Education (NCATE) and the Ohio Staie Department of Education; the College of Musical Arts, by the National Association of Schools of Music (NASM); chemistry, by the American Chemical Society; psychology, by the American Psychological Association; nursing, by the National League for Nursing; rehabilitation counseling, by the Council on Rehabilitation Education; joumalism, by the American Council on Education for Journalism; social work, by the Council for Social Work Educationt, communication disorders, by the Education and Training Board of the American Speech-Language-Hearing Association; theatre, by the National Association of Schools of Theatre; technology, by the Nationa: Association of Industrial Technol-
ogy; medical record technology (Firelands College), by the American Medical Record Association; and physical therapy by the American Physical Therapy Association.

## Academic organization

Courses of instruction leading to baccalaureate degrees are provided through: the College of Arts and Sciences, which includes the School of Art and the School of Mass Communication; the College of Business Administration; the College of Education, which includes the School of Health, Physical Education, and Recreation; the College of Technology; the College of Health and Human Services, which includes the School of Nursing; and the College of Musical Arts. Associate degrees are available through Firelands College and the College of Business Administration. Graduate degrees are offered through the Graduate College.
An undergraduate student enrolls in one of the seven colleges-Arts and Sciences, Business Administration, Education, Firelands, Health and Human Services, Musical Arts or Technology, An undergraduate student who is undecided as to college enrolls in the Pre-Major Advising program.
The University emphasizes a liberal education of freshmen and provides advising services for them, especially for those undecided about their major. The Office of PreMajor Advising assists students in meeting the requirements of the specific degreegranting undergraduate colleges.

## Degrees offered

Four-year undergraduate programs are available leading to the following degrees:
Bachelor of Arts
Bachelor of Arts in Communication Bachelor of Fine Arts
Bachelor of Liberal Studies
Bachelor of Music
Bachelor of Science
Bachelor of Science in Applied Microbiology
Bachelor of Science in Art Therapy
Bachelor of Science in Business Administration
Bachelor of Science in Child and Family Services
Bachelor of Science in Criminal Justice
Bachelor of Science in Dietetics
Bachelor of Science in Economics
Bachelor of Science in Education
Bachelor of Science in Environmental Health
Bachelor of Science in Gerontology
Bachelor of Science in Journalism
Bachelor of Science in Medical Record Administration
Bachelor of Science in Medical Techology
Bachelor of Science in Nursing
Bachelor of Science in Parasitology and Medical Entomology
Bachelor of Science in Physical Therapy
Bachelor of Science in Social Work
Bachelor of Science in Speech Pathology and Audiology

Bachelor of Science in Technology
Two-year programs are available leading to the following associate degrees:
Associate in Applied Business (Business Administration)
Associate of Applied Business (Firelands) Associate of Applied Science (Firelands) Associate of Arts (Firelands)
Associate of Science (Firelands)
See the Graduate Catalog for a list of graduate degrees offered by the University. .

## Academic Suppont Centers

## Center for the Study of Popular Culture

The Center for the Study of Popular Culture is the national headquarters of the Popular Culture Association and the American Culture Association. The Center houses the Popular Press which publishes, among other works, The Journal of Popular Cutture; The Journal of American Culture, The Journal of Canadian Culture, the Journal of Regional Cultures, the Journal of Cultural Geography, Clues: A Journal of Detection and houses the editorial office of the Journal of Popular Film and Television. The Popular Culture Library has extensive collections of popular literature, both fiction and nonfiction. These include a variety of comics, serials, paperbacks and magazines. The Sound Recordings archives section of the Music Library houses 75,000 LP records, 75,000 $45-\mathrm{rpm}$ discs, $35,00078-\mathrm{rpm}$ reçords, and 800 cylinder recordings. Among its collections are more than 2,000 hours of old radio shows, all inclusive discography holdings, and subscriptions to more than 80 popular music and recording industry periodicals.

## Management Center

A division of the College of Business Administration since 1969, the center offers educational, training, management development, consulting and research assistance to business, industry and other public and private institutions. No geographical limitation is placed upon the clientele for these services, althougn the Management Center emphasizes assistance to clients located in northwest Ohio. The Center has assisted many clients in such areas as strategic planning, market analysis, feasibility studies, acquisition analysis, regional economic development, profit improvement, management development, sales forecasting, inventory management and other areas.

In addition to seminars and workshops, the center offers in-house training services, technical advice and research services.

Using faculty resources of the University, the Management Center, located in 369 Business Administration Building ( $372-$ 2807), also provides assistance in specific problem solving for business, industry and public institutions.

## Social Philosophy and Policy Center

Established in 1982, the Center is devoted to research on such subjects as the nature d justification of human rights and social ice and to an analysis of public policy ues; e.g., land use legislation, the regulation of multinational corporations and the ownership of the ocean. The center, which is maintained by foundation funds, sponsors national conferences and publishes a journal and other topical literature.

## National Drosophila Species Resource Center

The Center contains 400 species of fruit flies in 4,000 strains and is the largest scientific facility of its kind in the world. Flies are bred and supplied for international research in basic genetics, genetic engineering, evolution and cancer. The Center was.transferred to Bowling Green in 1982 from the University of Texas in Austin upon the recommendation of the National Science Foundation, the American Society of Naturalists and the National Policy Guidance Council. It is located in the Life Sciences Building.

## Mid America Stock Center

Since 1966, Bowling Green has operated the Center which is a repository for the world's largest collection of a specific research/fruit fly species, the Drosophila melanogaster. Each year the Center, which is funded by the National Science Foundation, supplies quantities of the species to accommodate nearly 1,000 requests from scientists in this country and around the

## Opulation and Society Research Center

The Center, which is engaged in interdisciplinary studies in sociology, psychology and insitutional research, also conducts surveys for external clients on questions of social concern and the quality of. life in northwest Ohio, e.g:, attitudes on the use of nuclear power, energy conservation, motor vehicle fuel usage and vehicle purchase plans.

## Productivity and Gainsharing Institute

Formed in 1980, the Institute assists organizations in the study, evaluation, installation and maintenance of productivity, gainsharing and measurement systems. Offered through the College of Business Administration, the Institute provides formalized education programs for managers and employees during the installation and first and subsequent years of operation.

## National Institute of Physical Education for Children

Dedicated to improving physical education experiences for all children, including the pre-school child, the Institute encourages research on such topics-as movement and motor learning and ways in which attitudes. and values are affected by physical education. The Institute has worked to improve curflum development and instruction in preiớol and elementary school settings and - sponsors periodic in-service opportunities
and regular summer graduate seminars for teachers and others who work with children in movement'settings.

## Clinical Laboratory

Located in the College of Education, the laboratory permits students to experience the newest technological developments in teacher-education. Thirty electronically equipped study carrels provide students the opportunity to learn teaching techniques through slide-tape, video-tape and other media presentations, many of which have been designed and prepared by Bowling Green's own faculty and staff. Four mainframe computer terminals are. programmed so that students may test themselves on various teaching skills. In addition, the laboratory houses 14 microcomputers which complement course work on the applications of computers for classroom teaching and are also used for word processing of students' written assignments.

## Philosophy Documentation Center

The Philosophy Documentation Center collects, stores, and disseminates bibliographic and other types of information in philosophy. The Center's major publication is The Philos-
opher's Index, a subject and author index with abstracts of all major philosophy journals in English, French, German, Spanish, Italian and other selected languages, and other related interdisciplinary publications.

## Center for Archival Collections

The Center for Archival Collections, located on the fifth floor of the University Library, is responsible for preserving and making available to researchers archival and manuscript material relative to northwest Ohio and the University. Much of this is maintained through an extensive microfilm program.

Among the materials available are local government records, newspapers, census records, photographs, and rare works concerning the 19 counties served by the Center, as well as photographs, books, and pamphlets. University Archives is responsible for the preservation and care of all BGSU institutional records deemed of historical value, including the BG News, yearbooks, and other University publications, as well as the records and correspondence of campus organizations and offices.

The Center also houses rare books and special collections which support numerous academic programs of the University.

## Baccalaureate degree

The baccalaureate degree program should enable all students to achieve the intellectual, ethical and cultural maturity that will allow them to become responsible participants in our society. The University curriculum for the degree has three components: general education, which focuses on basic skills and understandings; the major, which may include a minor area of concentration; and the elective courses, which enable students to explore fields outside the above components.

General education addresses the acquisition of basic skills in reading and writing, computation and mathematics, problemsolving and critical thinking, and integrating values in decision-making, and the acquisition of functional understandings in literature, the fine arts, and other humanities; the natural sciences; the social and behavioral sciences; and an understanding of at least one culture other than one's own.

The major provides the student with in depth practical and theoretical knowledge in one particular area of study. Electives allow the student to explore diverse individual academic interests or interests that relate to the major.

## Dual degree programs

A candidate for an undergraduate degree from a college who desires to take a second degree from another college within the University may:

1. take work in the second college after graduating from the University; or
2. qualify for the dual degree program by meeting the requirements listed below.

A student desiring a dual degree must:

1. secure permission of the deans of both colleges before the end of the junior year;
2. complete the requirements of both colleges for the degrees sought; and
3. complete at least 20 hours of credit beyond the hours required for a single degree.

On the basis of the accumulative grade point average (GPA), a student may register in both colleges for the dual degree as soon as eligible.

## General requirements for the baccalaureate degree

A candidate for a baccalaureate degree must complete the requirements listed below and any additional requirements set by the colleges for the specific degree sought. Check the appropriate sections of this catalog for additional degree requirements. The general requirements are:

1. Satisfy all University entrance requirements.
2. Earn a minimum of 122 semester hours of credit, at least 30 of which must be completed at Bowling Green immediately before graduation (some degrees require more than 122 hours of credit).
3. Earn an accumulative grade point average of ai least 2.0 (" C ") for all course work attempted.
4. Complete two semester hours of general physical education activities courses (PEG 100) preferably in the freshman year unless complete credit is granted for experiences in the U.S. Armed Forces or waived for a physical handicap. In the case of the latter
exception, a student must obtain a certificate from a University physician and the approval of the dean of the college in which the student is enrolled. One-hundred-level PEG activities courses must be completed before the student enrolls in PEG courses at the 200 level.
5. Complete the freshman English composition sequence, preferably in the freshman year.
6. Complete at least 40 hours of credit in courses numbered 300 and above. If a senior takes a course numbered 100-199 (except foreign language or computer science), an additional hour must be taken as a graduation requirement.
7. Satisfy all course requirements for the degree as listed in the appropriate sections of this catalog.
8. File an application for graduation according to the following schedule.
a. For graduation in December, an application must be filed by the end of the second week of the fall semester.
b. For graduation in May, the deadline for filing an application is the end of the second week of the spring semester.
c. For graduation in August, the filing date deadline is the end of the first week of the summer session.


An application form and information may be obtained at the Office of Registration and Records, 110 Administration Building. Completed applications are to be turned in at the student's college dean's office with the exception of those students in the College of Education who turn the applications in at the office of Registration and Records. A student not accepted as a candidate under the above procedure or who does not fulfill requirements toward a degree within fouir weeks after commencement must apply. again for graduation at the next commencement.

## General Education Core Curriculum

The general education core curriculum is the foundation of Bowling Green State University's emphasis on a practical liberal education for all undergraduate students. The core is a body of learnings designed to give students an understanding of the multiple realities of a complex and culturally diverse world. Transferable skills essential for continued learning throughout life, flexibility in the vocational sphere, enlightened and active participation in civic life, and the intelligent and creative use of leisure time are the aims of general education.

Courses in the core are broad and foundational in character and are organized to provide a basic framework of the modes of inquiry common to each of four areas of functional understanding: natural sciences, social sciences, foreign languages and multicultural stüdies, and humanities and arts. Each course in the core provides primary development of; at least, one of the following five skills: written:communication, oral communication, computation and mathematics, critical thinking and problem solving, and decision making and value analysis.

All candidates for the baccalaureate degree at Bowling Green State University must take, at least, eight courses from the University. general education core curriculum. At least one of these eight courses must be taken in each of;the four functional areas.

## Humanities and Arts

General education courses in the humanities address universal aspects of human experience and further an understanding of humanistić approaches to knowledge: Courses in the arts develop a critical understanding of artistic expression; the creative process, the formation of aesthetic values and the complex interdependence of art and society Courses in the humanities develop skills in analysis and interpretation of major works of philosophy, literature, music and visual arts, as well as an understanding of the social context in which philosophical and cultural works arise.

## Natural Sciences

Core courses in the natural sciences make clear the important role of experimentation and observation in the sciences, and the way in which these observations of the physical and biological wórld leads scientists to formu-
late principles that provide universal explanations of diverse phenomena. These courses have as a goal the development of an understanding of how scientific principles are utilized in the modern world and of the impact of science on society and the human health and well being of individuals.

## Social and Behavioral Sciences

The principal objective of general education courses in the social and behavioral sciences is to explain through empirical investigation and theoretical interpretation the behavior of individuals and various groups including societies, economics, governments, and subcul-" tures. Courses in these sciences will identify significant patterns of human behavior which occur in and through time and provide means of inquiry by which these patterns may beexplored:

## Foreign Languages and Multicultural Studies

Multicultural courses promote the student's recognition and understanding of foreign cultures and the multicultural nature of American society. Knowledge of at least one foreign language is an essential tool for the understanding and appreciation of other cultures and a practical skill enabling cross-cultural communication. Courses examine both the pluralistic nature of American society and foreign cultures and societies. All courses, whether they are multicultural or crosscultural, examine some of the methods of cross-cultural analysis and investigation and study such concepts as culture shock, stereotyping and culture mapping.

## Functional Understandings in the Natural Sciences

## Geography

GEOG 125
Geology
GEOL 100, 104, 105, 205

## Biology

BIOL 101, 104, 204, 205
Physics and Astronomy
PHYS 101, 201, 202, 211, 212
ASTR 201, 212

## Chemistry

CHEM $-100,115,116,125,126,135,136$

## Functional Understandings in <br> Foreign Languages and Multicultural Studies

## Romance Languages

Beginining and Intermediate French, Italian, Latin and Spanish 101, 102, 201, 202 FREN 284

## German and Russian

Beginning and Intermediate German, Russian, Japanese and Chinese 101, 102; 202
GERM $117,131,260$

## Multicultural Studies

SOC 231
GEOG $121,122,230$,
HIST 151, 152, 280 .
MUCH 1.25
ETHN 101, 220
POLS 271

## Functional Understandings in the Social Sciences

## Economics

ECON•100, 200, 202, 203
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## History

HIST 151, 152; 205, 206; 280.
Psychology
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Political Science
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## Sociology

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## Functional Understandings in Humanities and Arts

## Music

MUCH 101, 125, 221

## Art

ART 101, 102, 145, 146
American Studies
AMST 200, 230
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WS 200
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## Philosophy

PHIL 101, 102, 103, 204, 207, 211, 212, 230
Popular Culture.
POPC 160, 165, 220
Arts and Sciences
A\&S 100
Theater
THEA 141, 202
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RTVF 261

## English

ENG 150, 200, 261 \& 262, 264 \& 265, 266 \& 267

## Romance Languages

LAT 141; 1.42
Skill: Computation and Mathematics
Computer Science
CS 100, 101

## Mathematics

MATH 115, 116, 124, 125, 127, 128, 130, 131, 232, 247
Applied Statistics
STAT 200

## Skill: Oral Communication

Speech
SPCH 102
Theater
THEA 141, 202


## Recuurements for advancement to sophomore and junior standing

English/Writing: Students must take a placement test administered by the Department of English prior to initial registration. Those students who piace in English 110 or 111 must complete either Engish 110 or 111 before advancement to sophomore standing (i.e., 30 semester hours). Students who do not complete English 110 or 111 or its test equivalent prior to advancement to sophomore standing will be subject to dismissal from the Universily. Foreign students who place in English 100 will have one addilional semesier to compiete these requirements. (also see statement on writing proficiency, p.10).
Mathematics: Prior to advancement to junior standing (i.e., 80 semester hours) all students must demonstrate competency in mathematics, either by completion of two years of aigebra (aigebra I and II) and one year of geometry in high school or by successful completion of a mathematics proficiency examination administered by the Department of Mathematics and Statistics. Students who do not demonstrate proficiency on this examination will be subject to dismissal from the University.

Reading: Students are required to take a reading test prior to initial registration. Students must demonstrate competency on this reading test in order to be advanced to sophomore standing (i.e., 30 semester hours) Students who do not demonstrate competency via successful completion of a reading test or successful completion of EDCI 100 will be subject to dismissal from the University, Foreign students will be given one additional semester to complete this requirement, if needed.

## Requirement of writing proficiency

Recognizing that the ability to communicate in writing is a valuable skill and a hallmark of an educated person, the University requires that each student enrolled in a baccalaureate or associate degree program complete satisfactorily ENG 112 or give evidence of proficiency in written expression equivalent to that attained by the student who completes this course. No student can be excused from meeting this requirement, nor can the requirement be postponed.

The courses and services designed to aid students in meeting the writing requirement are coordinated through the General Studies Writing program. The English Placement Test, administered through this program, assesses the writing skills of entering students. On the basis of this test, students are
placed in ENG 110 (Developmental Writing), ENG 111, ENG 110S (Introductory Writing) or ENG 112 (Varieties of Writing). A student may be required to take two or three of these courses, but no more than six hours of credit earned in these courses may be applied toward graduation. The witing proficiency of students is evaluated at the end of each course until students have reached the University proficiency requirement expected at the end of ENG 112. Students who wish to receive Iransfer credil for English composition and communication courses may be tested for writing proficiency to determine whether credit will be awarded. Students who wish to be exempted altogether from English composition are also tested for writing proficiency.
Special courses and services designed to aid international students (i.e., non-native speakers of English) in improving their English proficiency are coordinated through the Program in English as a Foreign Language. Upon reporting to the University and before registering for classes, all entering international sludents admitted through the Office of International Programs and the Office of Admissions, except those whose native language is English, are required to take oncampus proficiency tests; international students transferring from other colleges and universities in the United States às well as students from Puerto Rico are also required to take these tests. On the basis of these tests, the University reserves the right to require enrollment in ENG 100 (English as a Foreign Language) and to limit courses taken for credit. Although it may be necessary for students to repeat ENG 100 , only four semester hours of credit can be counted toward graduation. The University also reserves the right to require enrollment in the special section for international students of ENG 110 if the student has no transfer credit for the course.
To encourage all students to pass ENG 112 prior to the beginning of the junior year, 3 credit hours are added to the graduation requirements of students who pass ENG 112 after accumulating 60 credit hours; four hours, to the graduation requirements of those with 90 or more credit hours. This requirement applies only to new students who enter the University on or after September 1, 1981.

The following are exempt from this penalty:

1. students transferring to BGSU with 31 or more credit hours, provided that ENG 112 is passed within the first 30 credit hours earned at BGSU after the transfer; and 2. international students who transter to BGSU with 21 or more credit hours and for
whom English is a second language Exemption from the penalty must be recommended by the director of international programs and ENG 112 must be passed within the first 40 credit hours arned at BGSUU.

## General <br> requirements for the associate degree

A candidate for an associate degree must complete the requirements listed below and any additional requirements set by the colleges offering this degree. The requirements are:

1. Satisty all University entrance requirements.
2. Earn a minimum of 62 semester hours (some degrees require more than 62 hours of credit):
3. Earn an accumulative grade point average of at least 20 ("C") for all course work attempted.
4. Complete two semesters of general physical education activities courses (PEG 100), preferably in the freshman year. P.EG 1,00 courses are not required for the Associate of Applied Science or for the Associate of Applied Business (Firelarids only) and. may be waived for the: Associate of Arts and Associate of Science if a student is over age 25.
5. Complete the freshman English composition sequence, preferably in the fresh-
nan year.
6. Complete all course requirements for a degree program as listed in the appropriate. section of this catalog.
7. File an application for graduation according to the following schedule.
a. For graduation in December, an application must be filed by the end of the second week of the fall semester.
b. For graduation in May, the deadline for filing an application-is the end of the second week of the spring semester.
c. For graduation in August, the filing date deadline is the end of the first week of the summer session.
'An application form and information may be obtained at the Office of Registration and Records, 110 Administration Building, or the Registration Office in the East Building at Firelands. The completed applications are to be turned in at the college deans' offices.

A student not accepted as a candidateunder the above procedure or who does not fulfill requirements toward'a degree within four weeks after commencement must apply again for graduation at the next commencernent

## Other policies

## Classification of students

lassification of a student as a freshman, phomore; junior, or senior is determined on e basis of credit hours earned.

In a baccalaureate degree program a student is classified according to hours earned as tollows: freshman, 0-29 hours; sophomore, 30-59 hours; junior, 60-89 hours; senior, 90 hours to hours required for graduation.

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

## Status change to part-time

For registration purposes, a full-time undergraduate student is one registered for 12 or more hours. During the eight-week summer session, a full-time student is one enrolled for eight or more hours (four or more hours for a five-week summer term). A part-time student is one enrolled for fewer than the minimum numbers of hours outlined above.

A full-time stüdent who drops sufficient hours during a semester to become a parttime student is subject to the following restrictions:

1) Ineligibility for intercollegiate athletics.
2) Possible reduction of financial aid awards. Check with the Office of Financial Aid for details on this policy:

Such students are still eligible to remain in University-owned housing and to retain membership in University organizations. Further questions on this policy should be addressed to the Office of the Vice President for Academic Affairs. ,

## Change of college or major

A student whose goals have changed may wish to change to another college or major. Before changing a student should explore the requirements of the desired college. To change to another college, a student must have al least a 2.0'accumulative grade point average and obtain the approval of the college to which the student is transferring. The transfer also must be officially recorded by the dean's office of the college from which the student is transferring.

A student who wishes to change a major within a college should notify the college office. At that time an appropriate adviser is assigned.

Academic advisers are available in the college offices as well as in the Academic Enhancement Office to help students select the degree program that best meets individual needs and interests.

## 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 the student is enrolled. If a student
leaves the University without proper notice and permission, a mark of "WF" is recorded in all courses for which the student is currently enrolled. The student is not entitled to any refund of fees nor to a certificate of honorable dismissal.

A student who withdraws with permission from the University will have all courses from the semester dropped and no grades. recorded unless the student has previously withdrawn from a course with a "WF." A student who withdraws from the University within five weeks of the end of the semester is not permitted to enroll for the next semester except by special permission of the dean of the college.
When, in the judgment of the medical staff of the Student Health Service, the physical or mental condition of a student might be disadvantageous to the health or welfare of that student or others on the campus, the University may require the withdrawal of the student from the University.
See Refund of Fees under Fees and Charges, page 24:

## Grading policies

Courses are graded as follows: A-excellent; B-good; C-acceptable; Dpoor but pasising; F-failure;,WF-withdrawn failing and !-incomplete.

Certain courses (including student teaching, some internships; remedial courses, and required physical education courses) are graded $S / \cup$ only and are so.indicated in the course descriptions. S means satisfactory and indicates course credit was earned. $U$ means unsatisfactory and indicates no credit: A sfudent may also elect the $\mathrm{S} / \mathrm{U}$. grading option in no more than 16 credit: hours in a baccalaureate degree program (beyond those hours graded S/U only). The grading option must be deciared at the Office of Registration añd Records no later than seven calendar days after the beginning of classes for a semester: Many departments do not accept courses taken under the S/U option for credit in major or minor requirements; students should consult departmental officials. More than 12 semester hours.of S/U grades may increase the grade point average needed for graduation with honors. See Graduation with Honors, page 12.

- The 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. S and $U$ grades do not affect the accumulative grade point average.
A student who withdraws from. a course may receive a grade of WP (withdrawn passing) or WF (withdrawn failing). WP is assigned when a student withdraws in good standing during the fouth through ninth week of a course. WF is assigned it: the student is failing at the time of withdrawal from the course during the fourth through the ninth week of a semester; the student withdraws after the ninth week of a semester; or if the student stops attending but does not process an official withdrawal in the Office


## 12 Academic Policies

of Registration and Records. This provision appies to all grading options, including S/U The grade of WF is used in computing the grade point average. A student who officially withdraws from the Universily receives a W in all courses, unless the student has previously withdrawn from a course with a WF. WP and Wi grades are not recorded on a student's permanent record.

See Incomplete Marks, page 12.
See Withdrawal from University, page 11.

## Grade point average

For averaging grades, the following quality points are assigned to each letter grade:

For each hour of $A-4$ points;
For each hour of $\mathrm{B}-3$ points;
For each hour of $\mathrm{C}-2$ points;
For each hour of D-1 point;
For each hour of $F$ or WF-0 points;
For each hour of $1-0$ points after the deadine for removal.
A sludent's grade point average is
obtained by dividing the total number of quality points earned by the total number of hours taken, excluding courses in which the marks S, U, P, W, or WP are recorded. The hours for which a mark of 1 is recorded are excluded from grade point average computation until the deadline for removal.
As an example, suppose a student receives
the following grades for a quarter:
Biology (a 4 -hour course) B
English (a 3 -hour course)
French (a 4-hour course)
Healih (a 3-hour course) A
First, determine the number of quality points eamed for each course. For example, each hour of $B$ is worth 3 points and a 4 -hour $B$ is worth 12 points $(3 \times 4)$. Therofore, the above grades translate into quality points as follows:
4 times $3(B)=12$
3 times $3(\mathrm{~B})=9$
4 times $2(C)=8$
+3 times $4(A)=12$
14 iours 41 quality points
Now, divide the number of quality poinis by the number of hours taken for a letter grade. The grade point average for this sample scheduie is 2.9285 or 2.92 . Grade point averages are not rounded up to the nearest hundrexth of a point.

## Incomplele marks

The mark of 1 (incomplete) is given when, for some acceplable reason, a student fails to meet a definite requirement in a course as established by the instructor. In courses graded only on an S/U basis and in courses elected to be taken on an S/U basis, a grade of $U$ is recorded until the work is satisfactorily compieled. The mark of I or U may beremoved and a grade (if taken for a grade) or the letter $S$ (if taken $S / U$ ) may be substituted for it by a student making up the deficiencies to the satisfaction of the instructor.
Untess an extension of time is granted by the academic dean, a mark of $I$ or $U$ must be removed by March 1, August 1 and November 1 for the fall and spring semes-
ters and summer session, respectively. Incompletes not removed by these deadlines will be computed as $F$ in the accumulative grade point averages of all undergraduate students with or without an extension of time. The student who has been granted an extension, however, will have the opportunity to have his or her grade point average recalculated and the incomplete changed to the grade assigned.

## Grade and other appeals

Students have a right to appeal decisions on grades. The student should first contact the department from which the grade was received. A member of each department, who is not a major departmental administrator, is designated to hear complaints, gather information, talk with both students and faculty, mediate disputes or identify appropriate channels for solving problems. If the dispute cannot be resolved at this level then the student should state the full particulars of the appeal in writing and submit them to the department chair or policy committee. If the matter is not resolved at the department level, the student may request a hearing before the academic arbitration board of the appropriate school or college. However, the sole responsibility and authority for determining grades rests with the faculty member who assigned the grade. This appeals procedure also may be used if a student believes an opportunity should be provided to make up work missed during absence from classes.

The grade appeals procedure must be started by the end of the fifth week of the spring semester for grades received during fall semester, and by the end of the fifth week of fall semester for grades received during the spring semester or during the summer session. All actions for grade changes must be completed during the semester in which the grade is appealed. Grade and absence grievances may not be appealed beyond the college level.

In matters other than grades and absences, appeals may be made to the Office of the Vice President for Academic Affairs if the grievance has not been resolved at the college level.

## Academic honors

## Dean's list

Full-time undergraduate students who demonstrate a high level of excellence in academic work have their names placed on the academic dean's list. The requirement for achieving the academic dean's list is a grade point average of 3.5 or above in the preceding semester with no fewer than 12 credit hours per semester included in the grade point average computation.

## Graduation with honors

The record of each senior with a very high point average is carefully reviewed 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 throughou four years of college. The tentative honor announced at commencement and released to the newspapers is figured without the grades from the student's last academic term. The final honor which is put on the permanent record and diploma is based on the student's entire academic record.

In determining academic honors, total letter-graded credits (TLC) are credits for those courses that determine the student's grade point average. The GPA requirement will be higher than the minimum of 3.50 , 3.75 , or 3.90 for those students who have completed less than 110 TLC. See formula below.

## Cum laude

Cum laude signifies a high level of academic achievement and graduation with praise. This honor requires a minimum of 55 TLC and an accumulative GPA at least as high as the larger of 3.5 and [4.5(TLC/110)].

## Magna cum laude

Magna cum laude signifies a very high level of academic achievement and graduation with greal praise. This honor requires a minimum of 83 TLC and an accumulative GPA at least as high as the larger of 3.75 and [4.75-(TLC/110)].

## Summa cum laude

Summa cum laude signifies the highest level of academic achievement and graduation with great praise. This honor requires a minimum of 99 TLC and an accumulative GPA at least as high as the larger of 3.9 and [4.9 - (TLC/110)].

## Transfer credis

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 transferred credit must meet the accumulative grade point average standard for honors in all hours completed, transierred and otherwise, which are considered joinily. In addition, the point average of all work taken at Bowling Green State University must be of honors quality:
2. A student must have completed at least 56 hours at BGSU. At least 30 of these hours must be in letter-graded courses.
3. A candidate should be in residence at least one academic year or 30 hours in consecutive summers (attending either the full summer session or both of the terms each summer) immediately preceding graduation. A student with written permission to participate in an approved combination curricula in cooperation with a professional school or college of another institution is exempt from this requirement.

In reviewing the record of a candidate for honors, each case is judged on its own merit.

## Repeating a course

A student may repeat a course in which a grade of $D, F, I, U$, or WF was received. If a student repeats such a course at the Uni-
rsity, then:
. The credit hours and quality points for me original registration will not be used in computing the student's accumulative grade point average;
2. The credit hours and quality points for each repeat registration will be used in computing the accumulative grade point average; and
3. The course must be taken for a letter grade unless it is graded S/U only.

No grade is removed or erased from a transcript by repeating a course.

For other courses that are repeated, the grades and credit hours for both the first and subsequent registrations are counted in computing the student's grade point average. If the student repeats a course in which a passing grade was received, no additional credit hours are thereby earned.

If a student receives a grade of $D, F, I, U$, or WF in a course and then receives credit for that course by successful completion of a similar course at another institution, the credit hours and quality points for the first registration will continue to be used in computing the students' grade point average.

Students must report each repeat registration to the Office of Registration and Records.

## Unsatisfactory academic

## rogress

cademic warning
Freshmen or sophomores are warned of unsatisfactory progress when their accumulative point hours and quality points indicate a deficiency from a C (2.0) average by more than three quality points. (See grade point average, page 12.)

## Academic probation

The academic standing of a freshman or sophomore is considered unsatisfactory and the student is placed on academic probation when the accumulative point hours and quality points indicate that the student is deficient from a C (2.0) average by more than six quality points. (See grade point average, page 12 .)

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

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

1. The course load must not exceed 16 hours and may be less if so determined by the college dean;
2. The student may not take part as a permer or an officer in any meeting or conence except for an activity begun the
preceding semester. A student on probation cannot compete in intercollegiate athletics.

## Academic cilamisesel

The freshman or sophomore student is academically dismissed from the University when the accumulative point hours and quality points indicate deficiency from a 2.0 average by more than 10 quality points. (See grade point average, page 12.)

The junior or senior student who is not in good standing at the beginning of fall semester is academically dismissed when grades are deficient from a 2.0 accumulative average by more than six quality points.

A junior or senior who is in good standing at the beginning of the fall semester may enroll for the spring semester of the same year without regard to academic standing at the close of the fall semester.

See Refund of Fees under Fees and Charges, page 24.

## Reinstatement

A student who is dismissed because of unsatisfactory academic standing may enroll in the next summer session, otherwise such dismissal is for at least one semester, return in a fall semester requires approval of the student's college. The student needs to have a total quality point deficiency of not more than 10 points as a freshman or sophomore or not more than six points as a junior or senior at the end of the semester to qualify for reinstatement. (See grade point average, page 12.)

If the enrollment capacity of the University for the next semester, as determined by University officials, has already been reached when the student becomes eligible for reinstatemeńt, readmission may be allowed in a later semester.

A student who does not qualify for reinstatement at the end of the semester but who has reduced the quality point deficiency by as many as three points may enroll for the next semester providing appropriate class and housing 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 granted for courses completed at another institution during a student's period of suspension from Bowling Green only upon acquisition of a 2.0 accumulative grade point average at Bowling Green.

## Advanced standing

Advanced standing may be achieved in six ways:

1. Demonstrating appropriate achievement on Bowling Green placement tests, which leads to exemption from courses but not credit.
2. Passing an examination administered by an academic department of the University; see Credit by Examination.
3. Completing a college-level course in high school and earning a prescribed grade in an Advanced Placement examination administered in the high school through the

College Entrance Examination Board
(CEEB). This leads to college course credit and/or exemption. (For more information, contact Center for Academic Options on the main campus, or the Office of Student Services at Firelands.)
4. Attaining appropriate scores on the general and selected subject examinations of the College Level Examination Program (CLEP). This leads to general elective credit; See Credit by Examination. Also, see Center for Academic Options, page 17.
5. Attaining appropriate scores on specific CLEP subject examinations. This leads to credit as approved by appropriate academic departments. (Not all academic departments accept credit for completion of CLEP EXaminations.) Students should contact Counseling and Career Development Center.
6. Passing a higher level course in sequence with a grade of " C " or above and thereby earning credit for lower level sequence courses in prescribed departments.

## Credit by examination

An undergraduate student currently registered for at least two semester hours may gain credit by examination with the approval of the student's dean and the department involved. The student wishing credit in a course must not have enrolled in the course previously and must present sufficient evidence of prior study or experience. The course cannot be a prerequisite for any course the student has completed. Once approved, the examination must be completed within four weeks of the approval. This option may not be repeated. A $\$ 30$ fee is assessed for a credit-by-exam course. Further information on procedures is available at the student's college office. General elective credit may be earned by attainment of appropriate score levels on the general and selected subject examinations of the College Level Examination Program (CLEP). See Center for Academic Options, page

A student may also receive credit for course work taken at another institution, in which the final grades were equivalent to C or better but which did not transfer because of BGSU policies, by taking a validation examination.

A student in the School of Nursing may take the National League for Nursing exam to validate course work taken before entrance into BGSU's baccalaureate program in nursing.

## Graduate courses for undergraduates

Under specified circumstances it is permissible for undergraduate students with excellent scholastic records to register for graduate course work prior to having received the baccalaureate degree. For further information, see Graduate Catalog, "Graduate courses for undergraduates."

# Special Academic Programs 

Bowling Green State University provides a variety of academic services to assist students in their educational development.

The Language Laboratory, located in 302 , 303 and 304 University Hall, serves the Romance Languages and German and Russian and East Asian Languages Departments, and occasionally English and Asian studies, providing intensive instruction in foreign language. Listening, recording and audio-visual facilities are available. Students may use the laboratory through their foreign language classes as well as during open hours. Laboratory personnel include assistants proficient in one or more languages who supervise and aid sludents.
The Developmental Learning Center, 101 University Hall, is an academic supportive service consisting of the following components: courses offered cooperatively with other departments to provide instruction in basic skills, tutoring and learning laboratories for reading, writing and mathematics.

The Reading Center, 576 Education Building and the Reading Laboratory, 101 University Hall, cooperatively provide diagnostic testing, counseling and instruction in reading and study skills. Services are delivered by individualized laboratory instruction and throuigh two courses: EDCl 100 (Developmental Reading: Vocabulary, Comprehension and Study Skills) and EDCI 101
$\therefore$ - (Speed Readirg). Each course carries two semester hours credit which may be applied toward graduation.

The Writing Center, 303 Moseley, provides individualized instruction for those who seek help with any aspect of basic college writing. The laboratory also offers continued instruction in specialized writing skills that sludents oftion need as they pursue advanced courses of study.

The Mathematics Labotatory, 100 University Hall, provides diagnostic testing and individualized instruction in the concepts and appications of basic mathematics.

The taboratory services are free and available to all students.


## Academic advising

In addition to these support programs. each student at the University may seek assistance from an assigned academic adviser. The adviser assists students in planning their schedules, checking their progress toward completing graduation requirements and helping them in the long-range planning of their programs. It is the student's responsibility to contact the adviser, names and locations of advisers are available in the college offices.

Academic advising and help in career planning are also available in each college office and in the Academic Enhancement Office. College office locations and telephone numbers are as follows:
Arts and Sciences. 215 Administration Building, 372-2015
Business Administration, 371 Business Administration Building, 372-2747
Education, 444 Education Building, 372-0151
Firelands, 150 North Building, 433-5560
Health and Human Services, 100 Health Center, 372-0242

## Musical Arts, Musical Arts Center,

 372-2181Technology, 201 Technology Building, 372-2436
Entering freshmen may be unsure of their major area of study, A number of options are therefore offered for these students. Some freshmen will know what they want to enter. a particular college but are unsure of the major they want to follow. Each college has academic advisers to work with these students. Freshmen who are not sure of their college choices may be advised in the Office of Pre-Major Advising.

In addition the these academic advising services, the Counseling and Career Development Center maintains information on a variety of majors and careers, and has available career-related interest and value inventories.

Also, a course entitled Career and Life Planning (CAO 131) is offered each semester.

## University honors program

The University Honors Program provides enriching and intellectually stimulating classes, at no additional cost, for academically talented students who are interested in participating. The program is optional and open to any eligible student within any aca- . demic discipline. An honors student may take as many or as few honors courses as he or she wishes (though actual registration for any University Honors class requires approval of the Honors director or assistant director).

The Honors Program accepts incoming students based upon the following criteria:

1. Placement in or exemption from English 112 as determined by a written essay judged by the English department;
2. An ACT composite of 26 or above or SAT composite of 1100 or above;
3. High school grade point average of 3.5 or above on a 4.0 point scale or graduation in the top 10 percent of the high school class;
4. Two favorable letters of recommendation from teachers.
Beginning students who wish to apply must complete an application form, write an essay and request letters of recommendation by
teachers be forwarded to the Honors Program office Transfer students should contact the Honors office.

Continuing students must have completed 15 credit: hours at BGSU with a 3.5 or better de point average or have completed two fors courses with grädes of B or better. and have at least a 3.0 overall grade point average and have been placed in, exempted from, or completed English 11.2: Such students should make an appointment with the director or assistant director to discuss acceptance and course enrollment.

Most of the classes offered through the Honórs Program are sections or seminars which satisfy general education course requirements clemanded of all students Additionälly, some upper-division seminars and courses are:offered which may qualify as electives. Each term.consists of different course offeringis. The classes are smali and are taught by professors with high academic standards who are particulary interested in professional interaction with highly motivated ștudents. Whenever possible, there is an effort to make the courses interdisciplinary - that is the content is approached from the perspective of at least two different disciplines Becautise the classes äre small, there is more responsibil ity placed on the individual student, 'more individual attention and the atmosphere tends to be more free and interactive.

A student may graduate with University Honors it he or she meets the following criteia:

1. Has at least a 3.5 GPA overall and at least'a 3.2 average in honors coürses, Completes at least 20 semester hours of University Honors coúrs'es with at least a B in each honors course and at leást one of the courses hatving been an interdisciplinary seminar:
2. Successfuilly completes an interdisciplinary senior honors thesis.
Application for graduation with University Honors musst be made the semester before graduating

Some departments on campus also have departmental honors prögrams. The University Honors Program does not conflict with suct programs because Honors Program courses are taken primarily in the freshman and sophomore years whereas departmental honors are upper division. In fact, University Honors courses are very.useful in preparation for departmental honors programs. It is also possible to graudate with departmental honors (in some departments). Any interested student should discuss such a possibility with his or her department.

The Honors Program also features an Honors Student Association to which any honors student may belong. The-HSA offers a variety of social and cultural activities: many of which take place in the Honors Center on campus:

For more information, ccontact the director or assistant director, University. Honors Program, 231. Adminişistration Building, Bowling in State University, Bowling Green, Ohio $3-0014(419 / 372-0202)$

## Combined baccalaureatemaster's program

Some students may be able to complete a baccalaureate degree in seven semesters, thereby making it possible to begin graduate school early. For more information, contact the Graduate College, 372-2791

## Study abroad

## Center for International Programs

The Center for International Programs is located in 16, Williams Hall (372-2247). The director and staff provide information and. counseling services regarding a variety of foreign universities, study abroad programs, faculty and student exchange programs such as the Fulbright and the study abroad programs in the United Kingdom and China. Some study abroad programs are offered for the entire academic year while others are for one semester: Students may also arrange for study abroad on an individưal basis by contacting the Center for International Programs.

The Center is the academic locale for all present international stüdent affairs and is the initial.office for screening all new international student applicants.

## KOREA, JAPAN

Through the Asian studies program,-students may have the opportunity to study in either Korea or Japan. This program is conducted on an exchange basis, with equal numbers of students exchanged between the participating universities. BGSU has an exchange arrangement with Yonseei University in Korea and Nanzan University in Japan. Tuition is waived for both the Asian and American stúdents. Students bear the cost of airfare, room, and board, and live
with a family in the host country for a tota cultural immersion experience. All academic credits earned at the host institution are transferable to Bowling Greén.

## AUSTRIA-Salzburg

The Department of German and Russian and East Asian Languages conducts an academic year abroad program in Salzburg, Austria The program consists of two semesters (three quarters) of academic stưdy in à German-speaking country with an excellent cultural environment. All academic work is done in German: The curriculum includes courses in German language and literature as well as the arts and the social sciences. Qualified music students máy also take courses at the Mozarteum: An American program director resides in Salzburg, but the teaching staff is drawn from the faculty of the University of Salzburg. Students -live with Austrian students in a dormitory.

The program generally runs from October 1 through June 30. Applications are accepted starting in January of every academic year : Applicants must hàve the equivalent of two year's of college German prior to leaving for the year abroad. Students must also have a minimum accumulative grade point average of 225 in all academic work, with a minimum GPÁ in German courses. A similar program is offered during the summer session: For more information, čall 372:2268.

## UNITED KINGDOM-Brighton, England

An exchange program exists for physical education majors with Brighton Polytechnic: of Brighton, England: This study abroad is. usually arranged for the second semester in: the juinior or senior:year. Recently plans have been discussed to expand the exchange arrangement to include students in art, sociology, recreation, and the humanities. "For móre information, call 372-2209 for


16 Special Academic Programs
physical education/ 372-2786 for art; and 372-2540 for sociology.

## PRANCE-Tours

Tours, situated in the "garden of France," is the site of BGSU's academic year in France, conducted by the Department of Romance Languages. All courses are conducted in French and include work in French language and literature, as well as the arts and social sciences. Students live with carefully chosen French families. A BGSU faculty member supervises the program, but the teaching staff is drawn from the University of Tours and the Institut d'Etudes Francaises de Touraine. The program also features an intensive language orientation session at the Alliance Francaise in Paris during September.

The program is open to any student having completed FREN 202, regardless of the major area of study. A student must have a minimurn 2.5 accumulative grade point average, with a 2.5 average in French courses. For more information, call 372-0278.

## FRANCE-Nantes

The College of Business Administration offers an opportunity to enroll in a five-week summer session at l'Ecole Superieure de Commerce ef d'Administration des Entreprises, a leading business school in Nantes, France. All students are eligible. Courses are taught in Englisin and carry six hours of credit. Graduate students are also eligible; four hours of graduale credit are granted. Knowledge of French is not required. Students live with carefully selected French families. The class schedule allows $3^{1 / 2}$ day weekends for traveling.

The course of study includes European background and civilization; the European Economic Community; and European labor unions, business and financial environment. Students also attend two days of classes at the headquarters of the European Economic Community in Brussels, Belgium. Classes are taught by European professors. Students have the option of receiving credit in either economics or business administration, and may take the courses for a letter grade, $S / U$ or audit.
More information can be obtained from the Director of International Programs in Business, 372-0180 or 372-2646.

## GERMAMY

In cooperation with the Federation of German American Clubs (West Germany), BGSU maintains a direct student exchange with German universities. This program brings two German students to BGSU each year, in exchange for iwo BGSU students going abroad to one of 13 cooperating German universities. BGSU students must have approximately a 3.00 grade point average and fluency in German. Preference is given to sludents entering their junior year. The program is open to all students, regardiess of major area of study. For information, con-
tact the Office of International Programs, 372-2247.

## SPAIN-Madrid

The Department of Romance Languages conducts a year-round study program in Madrid, Spain. The curriculum for the program, which runs for two semesters and the summer session, includes course work in the Spanish language and literature, as well as in the arts, history and geography of Spain. All courses are taught in Spanish and are approved by the respective departments at BGSU. The teaching faculty is drawn from the staff of Spanish institutions of higher learning. An American program director resides in Madrid and supervises the acadernic program. The program is open to any qualified student regardless of major area of study.

The department also offers a graduate summer study program for students enrolled in the M.A. degree program in Spanish. For high school students, a 3-week summer program is offered, as well as a 3- or 6week program for high school teachers. For more information, call 372-0053.

## CHINA-Xi'an

The Center for International Programs coordinates a summer study program for faculty and students offered by the Xi'an Foreign Languages Institute in Xi'an, China. This sixweek program consists of classes and field study trips conducted primarily by Chinese faculty members of the Xi'an Institute. In addition to a special orientation program in Beiling, the program is designed to provide opportunities for professional educators and students with little or no background in Chinese studies to experience, first hand, various aspects of the culture and language of China. For more information, call the Office of International Programs, 372-2247.

## UNITED KINGDOM-Norwich, England

The Center for International Programs sponsors an academic semester/year program in England at the University of East Anglia in Norwich, England. A range of courses in the humanities, arts, social sciences and business are available. Students live with British families and study with British students and professors; also, a BGSU faculty member is in residence.
For more iniormation, call the Office of International Programs, 372-2247.

## Student teaching abroad

Students enrolled in the College of Education and interested in completing their student teaching in another country may apply for student teaching sites in Sao Paulo, Brazil; Bogota, Colombia; or Montreal and Toronto, Canada. While completing the student teaching requirements, studenis live with national host families and participate in the daily cultural activities of the country. All instruction is provided in English, and knowledge of the national language is not a requirement. For more information, call 372-0151, ext. 367.

## Cooperative education program

The Cooperative Education Program offers graduate and undergraduate students an opportunity to integrate classroom theory with practical, on-the-job realities through a planned series of work assignments with employers in business, industry, government and the nonprofil sector that alternate with formal course work. Employers assign students work which is relevant to each student's academic degree program or career interests, provide on-the-job supervision, evaluate the student's performance on a regular basis and pay each student a fair wage.

The program is optional and open to any student, within any academic discipline on campus, who chooses to participate. Adviser approval is required. Academic credit may be awarded for the off-campus work experiences, subject to departmental approval. Interested students should contact the Office of Cooperative Education, 222 Administration Building, (419) 372-2451; for information.

## Continuing Education and Summer Programs

Continuing Education and Summer Programs offers educational services to traditional and nontraditional learners. The unit manages off-campus and summer credit offerings, provides academic support services to the nontraditional degree-seeking students, promotes life-long learning, supports the credentialing and recredentialing of professionals, and trains individuals to develop new skills. Continuing education also provides a counseling/testing service at a minimum charge to potential students through its adult learner services, meets the training needs of business and industry through its conference and customized training program, and meets the educational needs of the local community through its noncredit programs for children and adults.

## Summer Programs

BGSU's Summer Program consists of a wide range of offerings designed primarily to enable the University's traditional and nontraditional students to register for credit courses leading to degrees or to professional certification or licensing.
Summer courses are offered either in 5 -, 8 -, or 10 -week frames or in the workshop format. A student may enroll in a maximum of six semester hours during a 5 -week session and a maximum of 10 hours during the 8 week session and a maximum of 15 hours in the 10 -week session. Freshmen enrolling for the first time in the summer usually pursue a regular freshmen program in English, mathematics, reading and the social and natural sciences. They also receive tutorial


- and other academic support not readily available during the regular academic. year

During the summer session, noncredit programs are also scheduled for nontradi tional learners of all ages who may wish to enhance their skils or understanding of centain fields or disciplines

## Evening Program

The Evening Credit Program offers a wide variety of unclergraduate and graduate courses for students who attend the Univer sity after 5 pm. The student may take courses to update skills, to explore a new career or to work toward a degree. A stu: dent may begin University studies as an unclassified student while determining:aca demic interests and possibilities. An unclas

$\because$ sifieent may accumulate up to 16 urs off creclit before being admitted to the Aiversity and declaring a major, For information about the degree programs available in: the evening, contact the Office of Continúing Education, Regional and Summer:Programs, 300 McFall Center
The Evening Credit Program alilso offers special services to the student on campus

- during the evening Course offerings are advertised each semester and a special evening registration is held approximately four weeks béfore classes begin. Program advising is available during evening registration, or by appointment through the Office of Continuing Education, Regional and Summer Programs, 372-0181. The evening student can obtain neçessary forms and-parking stickers register for courses, drop or add courses, and obtain general information about University procedures and programs


## The Off-Campus Credit Program

The Off-Campus Credit Program offers. upper division baccalaureate and graduate courses att off-campus sites. The program. schedules à selected number of upper divi sion courses at the Firelands College campus and at some of the sites in its 25 county service region in northwest Ohio These courses are usually scheduled after 5 p.m. and generally meet once or twice
akly:

## Senior adults grants program

The Senior Adult Grants for Education (SAGE) program is an opportunity for all Ohio residents age 60 and over to enroll in courses on a non-credit basis at BGSU without payment of instructional or general fees: To be eligible, persons must have lived in Ohio for at least one year prior to enrollment. Participants have access to all University classes and workshops, in which space is available.

## Center for <br> Academic Options

The Center for Academic Options provides: programs and curricular options which serve to augment a práctical liberal education and enhance the under-graduate experience. The University General Education Core Curriculum, which provides the foundation of the University's mission in liberal education, is coordinated through the Center. The director works with faculty to initiate and develop curricular projects in gerieral education including such options as interdisciplinary cur ricula; a writing-across-the-curriculum program, and innovations in the teaching of critical thinking and the formation of values.

The Office of Special Programs in the Center promotes student growth and development by providing opportunities to experience education'in different settings, to test abilities to cope with unfamiliar environments and to develop independence and responsible leadership skills by putting liberal education to practical use The National Student Exchange offers students the opportunity to travel and take coứses at a choice of universities across the country; the Washington Center Internship Program allows students: to work as interns in their chosen fields in the nation's capitol: and independent studies permit, the exploration and application of diverse academic interests and skills. Credit alternatives for those students qualified for advanced standing, are also located in the Office of Special Programs including Advanced Placement; the High School College

Credit Program and the CLEP program. A Time-Flexible Degree Program is available which allows stưdents to púrsue individuàlized academic programs. A Career and Life Planning program assists students to assess their interests, skills and abilities and relate them to the world of work.

## Career and Life Planning (CAO 131)

The Career and Life Planning course helps students to assess those values; interests, needs and skills which will be most helpfulin selecting an academic major and relating, that major to a career. Studentș investigate occupations, learn about employer. expectations, identify issues affecting their career choice, develop interview skills"and learn to write a resume Stràtegies áre developed for making career and life planning decisions.

## Time-Flexible Degree Program*

The Time-Flexible Degree Program is designed to provide students with the opportunity to carry out an individualized plan of study for not more than fifteen hours toward the baccalaureate degree in lieu of required general education courses or electives. Students may thus be enabled to maximize such academicoptions as offcampus internships, double majors foreign travel, or develop a specialized interest:

To participate, ștudents develop with the program director an individualized plan of study for not more than fifteen hours. College of Arts and Sciences students will also submit this plan to Arts and Sciences Council for approval: Participating students must fulfill the criteria listed below:

1. Complete one year of a broad genera edučation program in the natural sciences; social sciences, humanities and arts with a minimum grade pointaverage of $3: 3$ for the freshman year.
2. Demonstrate proficiency in mathematics by placement in Mathematics 124,125 or 128
3. Complete, with a minimum grade of. B, English 1.12 and one of the following courses in critical thinking: Philosophy 103 (Logic), Philosophy 230 (Scientific Reásoning), Hơnors" 101 (Evaluáting Soçial Controversies)

## College Level Examination Program (CLEP)*

CLEP offerŝ general area examinations in English composition; nätural sciences; humanities, social sciences and mathematics. Students may use these

Although students may be awardedicollege credit throügh nore than one of these programs, students may not receive credit from more than one of these programs for the samecourse or acâclemic experience

18 Special Academic Programs examinations to earn general elective credil at Bowling Green. Selected subject examinations are also offered which grant credif for courses within the selected areas. There are individual test dates each month, but Bowing Green also offers a special campus test date for incoming freshmen, usually just before their fall classes begin. To be eligible for an area of the CLEP exams a student musi not have done college-level work in that specific area. For information on the Bowing Green testing dates, contact the Center for Educational Options or the Counseling and Career Development Center. Other questions about CLEP should be directed to the Center for Academic Options. The policies governing the administration of CLEP examinations are subject to change.

## Advanced

Placement Program
The Advanced Placement Program of the College Entrance Examination Board (CEEB) allows Bowling Green, as a member institution, to give college course credit to entering students who achieve qualifying scores on proficiency examinations in a vatilety of academic areas. These examinations are given in the high schools, following completion of college-level courses taught in the high schools. Bowling Green awards course credit and/or exemption in the following subject areas: art, biology, chemistry, computer science,

- English, toreign languages (Fiench, German, Laith, Spanish), history (American and European), mathematics, music and physics.


## High school college

credili program
High school students may enroll in regular University courses and receive college credil by applying and being accepted for the High School College Credit Program. For high school students who possess general or specific academic talent, the program offers an opportunity to take course work which is unavailable at their own institutions. College credit is granted for satisfactory completion of these courses whether or not they are used to complete a student's high school requirements. Interested students may consult with the program coordinator about application requirements and course selection.

## Of-eampus programs

## National Student Exchange

The National Student Exchange offers studenis the opportunity to take course work at another college or university in the United States. The program encourages students to experience and learn from different regional and cultural perspectives, and to broaden iheir educational backgrounds, frequently through courses of study not available at
their home campus. Bowling Green is a participating member of the NSE consortium of 60 state-supported colleges and universities.

Any qualified, full-time student may participate for up to one academic year. Out-ofstate tuition fees are waived at the host institution and courses taken at the NSE institution count toward Bowling Green graduation requirements. Students must be sophomores or juniors at the time of exchange and have at least a 2.5 grade point average. Interested students should consult with the NSE coordinator about costs, course selection, choice of host university and planning the best time for the exchange.

## Washington internships

Through the independent studies program, students can participate in internships in Congressional, federal agencies and public interest group offices in Washington, D.C. Bowling Green is affiliated with the Washington Center for Learning Alternatives, a private, non-profit, educational organization which provides comprehensive instruction and support to sludents who are pursuing academically credited internships in the nation's capital. The program includes placement, orientation, evaluation, seminars, counseling, small group discussions, a lecture and debate series, special events, support services and centrally located housing. Interns typically answer constituent mail, do legislative research and prepare reports, attend meetings, hearings and briefings, and sometimes have the opportunity to participate in campaigns. Students combine the internship with a research project, usually working in the office four-and-a-half days a week and using the remaining time to develop and complete a research paper. This program provides excellent experience for any qualified student, but is particularly valuable for those majoring in prelaw, political science, social studies, journalism, economics and American studies.

## Independent study

This program enables students to earn from one to 15 credits (on an elective, $S / U$ basis) for special work, travel or learning experience not normally handled through regular departmental courses. Working through the Center for Educational Options, students design their independent studies projects with the aid and supervision of faculty sponsors. While there is no minimum grade requirement, students must have completed their freshman year in order to participate in this program. Some recent independent study projects include:
Internship with Women's Equity Action
League (Washington, D.C.)
Wig and Make Up Apprenticeship with San
Francisco Opera Company
Development of Hospice Program (Hancock County)

Internship with Public Defender's Office (Washington, D.C.)
Oceanographic Cruise Shrimp Research (Gulf of Mexico)

## Academic <br> Enhancement Office

The University wide program offers a variely of services to students. Academic advising is available in the Office of Pre-Major Advising for students unsure of their major area of study. In addition other acadernic support services are available. A Writing Center, a Reading and Study Skills Laboratory, and a Mathematics Laboratory provide assistance for students needing help in these basic skills. Individualized tuforing can also be arranged. Each component in the Academic Enhancement Office is designed to offer a holistic approach to assisting students in their academic and personal transition to the University.

The Office of Pre-Major Advising provides an academic advising program for sludents who have not decided upon a major. At Bowling Green, we recognize that many students entering the University are not ready to commit themselves to a particular area of study. Some students may have so many strong interests that it is impossible to select a major. Other students may not know enough about the many options available to them to make a decision. Still other students may just be unsure of how their interests, abilities and values relate to different majors at the University. We understand the dilemmas of all these students and provide $\varepsilon$ program that will meet these needs.

Students enrolled in Academic Enhancement are contacted by their advisor at least once a semester and are assisted in selecting general education courses which prepare them for entry to majors at the universis ty. Advisors assist students to begin their search for an appropriate major and to explore the career options connected to that major. Advisors, also, recognize the importance of the freshman experience and assist students to learn to budget time, to develop appropriate study habits, to gain independence, and to learn to live in their new environment.

During the freshman year Pre-Major students take courses which compose the general education component of the bachelor's degree and which prepare the student for entrance to the major of his or her choice. Students are encouraged to enroll in one of the undergraduate colleges before completing their third semester at the University. Although the counseling and advising services of the Office of PreMajor Advising are used primarily by freshmen unsure of their major area of siudy, other students at the University may also use these services.

The Reading and Study Skills Center
provides testing, counseling and instruction in reading and study skills. The Writing Center provides individualized instruction for those who seek help with any aspect of basic college writing. The Mathematics
aboratory provides diagnostic testing and
dividualized instruction in the concepts and applications of basic mathematics.

All of these services, advising as well as the academic support services are available to assist students in making a successful transition to the University.

## Center for Environmental Programs

The staff of the Center for Environmental Programs, 124 Hayes Hall (372-0207), is responsible for coordinating, facilitating and monitoring a variety of academic programs relating to the environment. Four-year programs are available in the College of Arts and Sciences, the College of Education and the College of Health and Community Services. In addition, one- and two-year programs in environmental health are available at the Firelands College. In cooperation with academic advisers in the various colleges, the Center staff assists students in selecting the program options that can best fulfill their goals and provides a comprehensive overview of all the options. An Environmental Resource Room ( 127 Hayes Hall) is maintained by the Center, in cooperation with the Center for Environmental Research and Services. It contains current periodicals, technical information, general environmental literae and curriculum materials for vironmental education.

## ROTC (Reserve Officers Training Corps)

## Air Force ROTC

The objective of the Air Force Reserve Officers Training Corps (AFROTC) program, offered by the Department. of Aerospace Studies, is to provide college-level education that will qualify interested men and women for commissioning as second lieutenants in the United States Air Force in response to Air Force requirements: Emphasis is placed on the development of each student's sense of personal integrity, honor, individual responsibility and potential as a leader and manager:

The AFROTC program consists of a General Military Course (GMC) offered to freshmen and sophomores, and a Protessional Officer Course (POC) offered to selected juniors and seniors. Admission to the GMC is open to most U.S. citizens, male and female, between the ages of 14-26. The -student must be regularly enrolled in the University and registered for a minimum of. 12 academic hours. The student spends two hours per week in AFROTC courses, receiving one hour of credit each semester. A uniform and AFROTC textbooks are provided
out cost while enrolled in the GMC. The
enrollment of alien students is governed by Air Force regulations.

Admission to the POC is on a competitive basis for those students who successfully complete the GMC. Requirements for selection to the POC include successful completion of the Air Force Officer's Qualifying Test (general knowledge and aptitude) and an Air Force medical examination. The, student must be of high moral character and demonstrate outstanding leadership potential. A student who is accepted into the POC must complete a mathematical reasoning course and an English composition course prior to graduation. The student spends four hours per week in AFROTC courses, receiving three hours of credit each semester. While enrolled in the POC, students receive $\$ 100$ per academic month (tax-free), free AFROTC textbooks, and individually tailored uniforms. Enrollment of foreign students is governed by Air Force regulations.

A two-year program is available to students who have four semesters of any combination of undergraduate or graduate studies remaining. In addition to meeting physical requirements for selection, the student must attend a six-week summer field training camp prior to admission to the twoyear program.

Students enrolled in aerospace studies may substitute these courses for physical education courses as prescribed by the individual colleges. AFROTC leadership training activities (leadership laboratory) are a part of each course and offer opportunities for practical leadership training and experience in a supervised environment.

Certain selected students are eligible for two-, three-, and four-year ROT.C scholarships. Scholarships cover required fees and books, tuition, and pay the recipient $\$ 10$. peracademic month (tax-free). A student who accepts an Air Force scholarship must complete an English composition course prior to entry into the POC, a mathematical reasoning course, and one semester of an approved foreign language prior to graduation.

The student who successfully completes the AFROTC program and graduates from the University is commissioned. as a second lieutenant in the U.S. Air Force and will be called to active duty in the Air Force during the year following graduation. The active duty commitment incurred is normally four years; however, students designated for pilot or navigator training will serve seven years and six years, respectively.
For additional information, contact the Department of Aerospace Studies.

## Army ROTC

Army ROTC at BGSU provides an opportunity for men and women to participate in practical management and leadership activities designed to enhance the student's other academic pursuits. Upon successful completion of the Army ROTC program, graduates may be commissioned as second lieutenants in the Active Army, the Army Reserve, or the National Guard. All ROTC courses are fully accredited.

A two-year and a four-year program are offered at BGSU. The traditional four-year program consists of a Basic and an advanced course. The Basic Course is completed by enrolling in a 100 - or 200 -level military science course each semester during the freshman and sophomore years. Participation in the Basic Course entails no military obligation, no uniform wear, and no military drill.

Upon successful completion of the Basic program, students become eligible to enroll in the Advanced Course provided they have demonstrated officer potential; met physical standards, passed a general aptitude test and been accepted for enrollment by the military science department. Once accepted into the Advanced Course, a military obligation is incurred, and the student has the privilege of wearing the uniform. The Advanced Course is normally taken in the last - two years at BGSU. It includes a six-week Advanced Camp, for which students are paid, during the summer of the junior year. All Advanced Course students receive a monthly allowance of $\$ 100$.

The two-year program is a special option program designed for students with prior military service, or who are community or junior college graduates or who are members of the National Guard or Army Reserve. It is also available to BGSU and transfer students who were not able to take ROTC during their first two years. Students interested in the two-year program should contact the Department of Military Science.

All BGSU students (even those who have had no previous connection with ROTC) may compete for ROTC scholarships which pay for BGSU tuition, fees, books and supplies. Scholarship students also receive $\$ 100$ each month. Limited programs are available to assist qualified students in graduate study.

A course fee of $\$ 3$ is charged to students in the basic courses. Advanced Course students pay a $\$ 5$ course fee. These fees are applied to cadet activities such as dinners, formals and picnics. Students who are not U.S. citizens must obtain'permission from the military science department prior to enrolling in any ROTC course.

## Freshmen

For admission to Bowling Green State University a freshman applicant must:

1) be a graduate of a senior high school approved or accredited by the department of education of the state in which it is located; or
2) have earned high school equivalency through the General Educational Development (GED) testing program (issued by the state department of education); or 3) present an international Baccalaureate Diploma or Certificate.
All non-native speakers of English are required to take the TOEFL test, or if unavailable, the Michigan Test. This is required of international students issued immigrant visas, to those transferring from another American college or university, to those (with English as a foreign language) coming from U.S. territories (e.g., Puerto Rico) and to those granted U.S. citizenship within recent years.

- Applications for admission are accepted and processed each semester of the academic year and the summer session until the capacity of the freshman class is reached on the Bowling Green campus, and at the Firelands College campus in Huron, Ohio.

High school students are encouraged to apply for admission beginning August 1 between their junior and senior years. Since housing accommodations and classroom facilities are limited, students should submit their applications as soon after receiving them as possible. During the past several years admission to the Bowling Green campus has been closed to freshmen several months before the beginning of each semester and the summer session. Although the largest number of new students enters in August, it is possible to enter in the spring semester or the summer session. Applications must be submitted 30 days prior to the beginning of each semester or the summer session, and all admission credentials must be received by the Office of Admissions 14 days before each semester or the summer session to allow sufficient time for processing, notification, academic advising and registration for classes.

An Admissions Application packet is available from the Director of Admissions, Bowling Green State University, Bowling


Green, Ohio 43403. Applicants should complete the Application for Undergraduate Admission, the College Preparatory Curriculum Completion Form, Housing/Commuter Data Information Card and the application fee receipt card. They should take these, with a $\$ 25$ check or money order made payable to BGSU (no cash, please) for the nonrefundable application fee, to the high school counselor or principal to be forwarded with transcripts. All transcripts, test results and other academic credentials must be mailed from the school or agency to the Office of Admissions to be accepted as official. Academic credentials mailed by a student will be inadequate for evaluation for an admissions decision.
Applicants who have already graduated from high school may send their completed applications, housing and receipt cards, and application fee directly to the BGSU Office of Admissions. Upon receipt of the completed Application for Undergraduate Admission the Office of Admissions will send a high school transcript form. Either an official final high school transcript or this completed form should be sent from the school to the Office of Admissions. The College Preparatory Curriculum Completion Form should be given to the high school counselor or principal for completion, also.

Applicants who have earned high school equivalency through the General Education Development (GED) testing program should send their completed applications, housing and receipt cards and application fee directly to the BGSU Office of Admissions. Both an official copy of the GED results and an official high school transcript of all work completed must be sent to the Office of Admissions.

The American College Test (ACT) or the Scholastic Aptitude Test (SAT) is required of all freshmen except those who have been out of high school for three or more years. Either test will fulfill this requirement. International applicants are not required to submit ACT or SAT results.

As a condition of admission to the University and reflecting the educational philosophy of the institution, all freshman- and sophomore-level sludents are required to live in University residence halls excepi for students commuting daily from the home of a parent, legal guardian, or spouse (commuters must live within 50 miles of Bowling Green), or unless they have attained 60 academic semester hours or four semesters of campus residency on or before their first. day of classes. See Housing, page 26.

For residency requirements for Ohio residents and nonresidents, refer to residency regulations under Fees and Charges, page 24 .

## Recommended high school subjects

owling Green State University endorses. e cóllege preparatory curriculum as set forth by the Ohio Advisory Commission on Articulation between secondary schools and Ohio colleges. Students who plan to enter. the University after high school should have taken the following minimum core of courses: four units of English; three units of math (geometry; algebra I and algebra II); three units of natural sciences including two laboratory sciences (biology, chemistry, physics); three units of social studies; two units of the same foreign language; and one unit in the visual or performing arts. While high school course work will not affect a student's admission to Bowling Green, those without adequate preparation may be required to take dèvelopmental courses after they enter the University.;

The University recognizes the importance of adequate high school preparation and, since the fall semester 1985, requires the fóllowing:

1) Students who place in English 110 or 111 must complete English 111 before advancement to sophomore standing.
2) P Prior to aclvancement to junior standing, students must demonstrate compet-
$\therefore$ :... ency in mathematics, either by com. pleting two years of algebra and one year of geometry in high school or by successfully completing a "University-administered proficiency Examination
Students must demonstrate competency on a pre registration reading test in. order to advance to sophomore standing
Students who fail to meet these requirements will be suibject to dismissal from the University: Special consideration will be made for international and educationally handicapped students.

Similar requirements for the areas of science, social studies and foreign languages àre under consideration.
Correspondence pertaining to the admission of an undergraduate student to all colleges of the University except the College of Musical Arts should be addressed to the director of admissions: Those interested in music should address correspondence to the dean of the College of Musical-Arts.

## Transfer students

A transfer student who wishes to enroll at the University as an undergraduate must submit an' application for admission and a nonrefundable $\$ 25^{\circ}$ application fee. The University requires an official final high schoo. transcript sent from the school, or"a BGSU Office of Admissions high school transcript form completed by the high school counselor or principal. A transfer student who has ned a: baccalaureate degree from an acdited college or university does not need
to submit high school records. Transfer students are not required to submit American College Test (ACT) or Scholastic Aptifude Test (SAT) results.

An official transcript of credit is required from each college 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. Failure to indicate previous college attendance may result in refusal of admission, no transfer of credit and/or expulsion from the University if discovered subsequently. In addition, transfer applicánts will receive a transfer recommendation card to be completed by the personnel dean of the last institution attended and sent directly to the director of standards and procedures at Bowling Green State University. This card must be on file before formal admission can be granted: Transfer application deadline is 30 days before the start of the term to which the student is applying. All admission credentials must be received by the Office of Admissions 14 days before the semester or the summer session to allow sufficient time for processing, notification, academic advising and registration for classes:

Transter students applying to the physical 'therapy or the nursing program' protessional curriculum must apply to the University by December 1 șo that they may be.granted formal admission before applying to the physical therapy or nursing programs January 15 is the deadline for applying to the physical therapy professional curriculum for the following fall semester January 31 is the deadline for applying to the nursing professional curriculum.
A student who has;attended another accredited college or university and is in good standing iṣ considered for admission:

1: If the student has earned an associate degree or at least 60 semester hours with an accumulative grade point average equivalent to a 2.0 in a 4.0 system; or;
-2. If the student has earned fewer than 60 semiester hours (or fewer than 90 quarter hours) with an accumulative grade point average equivalent to a 2.5 in a 4.0 system.

A student whose accumulative grade point average is between 2.0 and 2.5 may be con: sidered for admission upon petition. After the initial evaluation of the student's completed admission'credentials, the Office of Admissions will send a petition form to the student. Upon return of this form, an admission decision concerning a ștudent 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 caninot meet the above transter admission "policies and who has not - attended aniother colliege or university for a period of one or more years may be considered for probationary admission by petitioning the "director of admissions:

A person receiving probationary admisșion needs to reduce quality ${ }_{2}$ point deficiencies by as many as three points in order to continue the following semester. (See
grade point average, page 12.) If academic and residénce hall accommodations are not available, próbationary admission may be available to the main campus for the summer session only. Generally, probationary admission to the Firelands College is available for either fall or spring semester or. the summer session.

BGSU's College of Technology offers two upper division (junior/senior) programs designed specifically for transter students. A transfer student who has received an associate degree with a technical specialization from an institution accredited either regionally or by the Ohio Board of Regents may apply for admission to one of these programs. When applying for admission, the, student must request acceptance of the associate degree.

Some upper division (junior/senior) majors have additional transfer requirements. Transfer students should refer to the catalog description of their intended major program for additional requirements.

## Transfer of credit

Bowling Green State University awards transfer credit for formal course work of baccalaureate level completed with a grade of C or better (or a mark of pass/credit on a pass/fail graded course)' which is judged to be equivalent to the University's own courses or which can be assigned to a BGSU department, school or program. Credit may be awarded also for experiential learning that meets the guidelines and is validated by procedures as described below.

## Acceptable Collegiate Sources

'Universities and' colleges with accreditations or which are candidates for accreditation by one of the accrediting associations, (e.g., North Central Association of Colleges and-Schools) and colleges and universities in foreign countries which : hold official recognition in the specific country in which located:

1. Gredit is accepted generally. Credit awarded may be exact BGSU course equivalent credit when a course is
$\therefore$ súbstantially equivalent to an existing
$\because$ BGSU course. (Example: History of U.S. to Civil War = History 205).
2. When a course is in a department existing at BGSU but is not equivalent to - a specific couurse, credif.may be awarded in that department but with. no course number assigned, i.e nonequivalent credit (Example: History of India would equal history elective.)
3. When the course is in a department not existing at BGSU, credit may be awarded in a different department, school, program or area. (Example: anthropology, some architectural courses assigned to art or technology)
4. Credit may be deferred when a course is of college level and in a department offered at BGSU but when equivalency cannot be determined by

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the Office of Registration and Records. Procedures exist for the further evaluation of deferred credit by faculty members in an appropriate department.
Community and technical colleges with accreditation or which are candidates for accreditation by one of the regional accrediting agencies:

1. Credit for basic education courses is accepled generally (with some specific exceptions).
2. Credit granted may be course equivaient and non-equivalent credil, or credit may be deferred.
3. Course work in technical or specialized disciplines is evaluated by faculty members in appropriate departments.
4. A maximum of 64 semester hours of credit up to the awarding of the associate degree may be transferred from a two-year institution or from all instifutions attended. Subsequent work at a two-year institution is to be included as parf of the 64 semester hours allowed for the associate degree and/or attendance at a two-year institution.
Technical colleges, business colleges and other schools lacking regional accreditation but having accreditation by another agency recognized by the Council on PostSecondary Accreditation (COPA):
5. Credit may be accepted only upon the recommendation of the specific department and/or college/school in which the course work is offered.
6. Betore credit is awarded, previous course work may be subject to validation by examination if recommended by department/college/school. Procedures for validation of credit are in existence.

## Aecoptable Noncollegrate Sources

Program on Noncoltegiate Sponsored instruction (PONSI): The American Council on Education (ACE) acts as an accrediting agency tor course work offered by diverse noncollegiate organizations (e.g., the Na tional Security Agency, General Motors, American Insitute of Banking, etc.). Course descriptions, together with credit recommendations, are available in ACE's The Na tional Guide to Credit Recommendations for Noncollegiate Courses.

1. Credit is accepted generally as recommended by ACE for lowerdivision (100-200 level) courses at BGSU.
2. Course credit recommendations for work which is on the upper-division (300-400) level at BGSU may be subject to validation by appropriate departments before credit can be granted.
Eoucational experiences in the armed services. The American Council on Education (ACE) also accredits work offered by the U.S. armed services. Course descriptions and credit recommendations are available in
its publication Guide to the Evaluation of Educational Experiences in the Armed

## Services.

1. Credit is accepted generally as recommended by ACE.
2. Normally, all credit accepted is nonequivalent course credit.
3. Equivalent course credit where appropriate may be subject to evaluation and recommendation of appropriale departments.
Experiential Learning
4. Credit for experiential learning may be granted for educational experience outside the classroom that corresponds to material taught at the University.
5. Credil granted for experiential learning is subject to Credit by Examination.
6. A $\$ 30$ fee is assessed for each course granted for successful completion of the Credit by Examination for validation of experiential learning.

## Appeal of Credil Transter

Students or institutions wishing to challenge a Bowling Green State University transfer of credit decision may submi? a written appeal to the Office of Registration and Records, who will determine whether a policy is at issue. If a policy is at issue, the Office of Registration and Records will perform the appropriate research and send the appeal to the Undergraduate Council. The Undergraduate Council will review all available information and make a recommendation to the Office of Academic Affairs. The Office of Academic Affairs will give final approval or disapproval of the Undergraduate Council's recommendation.

## Other admission calegories

## International students

Students from more than 50 international countries are enrolled at the University. Well qualified foreign students are welcomed.
Their participation is eagerly sought to enrich educational opportunities for all students. students from outside the United States interested in applying for admission should write the Center for International Programs, 16 Williams Hall, Bowling Green State University, Bowling Green, Ohio 43403.

For admission purposes, applicants whose native language is not English are required to take an English proficiency test-either the official Test of English as a Foreign Language (TOEFL) or the official Michigan Test. Arrangements to take the TOEFL must be made by the applicant in direct communication with the Educational Testing Service, Box 899, Princeton, New Jersey 08541, U.S.A. Although the TOEFL is preferred, the University also accepts results of the Michigan test. Arrangements to take it must be made by the applicant in direct communication with the Testing and Certification Division, English Language Institute,

The University of Michigan, Ann Arbor, Michigan 48109, U.S.A.

Upon reporting to the University and before registering for classes, all entering foreign students admitted through the Office of International Programs and the Office of Admissions, except those whose native language is English, are required to take additional English tests; foreign students transferring from other colleges or universities in the United States as well as students from Puerto Rico are also required to take these tests. On the basis of these tests, the Unim versity reserves the right to require enrollment either in ENG 100 (English as a Foreign Language) or in the Special Section for International Students of ENG 110 (Developmental Writing) and to limit the courses taken for credit.

## Evening and part-time students

Prospective students who plan to take evening classes only (after 5:30 p.m.) can apply for admission to the Evening Program or, if space allows, enroll as unclassified undergraduate students ( page 23) before seeking admission to the University.

## Concurrent enrollment

Concurrent enrollment at Bowing Green State Universily and the University of Toledo allows a student with at least a 2.0 GPA to take courses at both universities and receive credit toward a degree. in order to be enrolled concurrently during a single term, a student must be registered for courses at both institutions. If a Bowling Green student takes all courses at Toledo during a single term, then that student must register at the University of Toledo as a transient student. See transient studenks, this page.

Under this policy, the university that has most recently granted formal admission to the student is designated as the home university. The other university is the host institution.

A sludent registering for 12 hours or more of course work, at least eight of which are at the home university, shall pay all fees to the home university, If a student registers for fewer than 12 hours, instructional, general and nonresident fees are to be paid at the separate universities. (Special course fees are payable to the teaching institution.)
All course work taken under concurrent registration will be registered at the home university and will be considered by that university as resident credit. It will be included in the calculation of a student's grade point average. Seniors within the last 30 hours before graduation must receive permission from their deans before enrolling concurrentin courses at the University of Toledo.
Course work completed at the University of Toledo may not be used to delete F's and other low grades previously earned at Bowling Green State University in grade point average computation.

Concurrent enrollment forms are available through the Office of Registration and Re cords of either institution.

## Unclassified degree holder

A student who has an earned degree in higher educattion and who wishes to enroll in undergraduate courses without pursuing another degree is classified as an unclassified degree holder. An unclassified degreee blder iṣ required to apply for enrollment each term. The only requirements for this type of student are official confirmation from the appropriate institution of the highest degree received and available classroom space

## Unclassified undergraduate student

A student ${ }^{\text {}}$ who has not attended another college or university and who is not a candidate for a degree may be considered for enrollment as an unclassified undergraduate student Unclassified students will register at a time announced by the Office of Registration and Records (approximately two weeks prior to the beginning of any term). An unclassified student must apply for enrollment each term. Courses are offered. on a space available basis after advance registration has been completed. An unclassified undergraduate student is limited to 18 credit hours of work atternpted before applying for formal admission to the University: An unclassified student is not required to submit a high
school transcript (although the student must be a high school graduate) or American College Test results

## Readmission of former students

A student who has not been in continuous attendance during the regular academic year (excluding the summer session) must complete the application for readmission form and submit it to the Office of Registration and Records. A copy of this form may. be obtained by. writing to the registriar. The readmission of a former student is based on 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 the last enrollment at Bowling Green State University may be considered for readmission and must submit the application for readmission form and a complete transcript and provide evidenice of good standing, both personal and academic, at the institution last attended. A 2.0 accumulative grade point average (on a 4.0 system) is required

## Transient students

A student of another college or university who wishes to earn credits at Bowling Green State University may be enrolled as a transient student. The student must present
an official statement from the institution being attended that:certifies eligibility to enroll at the home institution and that the cred its earned at Bowling Green are acceptable as part of the program there.

The above principle applies to a student of Bowling Green attending another college or university as a transient student. Permişsion to attend other universities as a tran sient student is granted only to students who have at least a 2.00 accumulative grade point äverage at BGSU. Grades earned as a transient student at another college or university do not become part of the student's record at BGSU, but they are included in calculating all honors.

Transient students will register at a time announced by.the Office of Registration and Records (approximately two weeks prior to the beginning of any term). A transient studènt must apply for enrollment each term. Courses are offered on a space available basis after advance registration has been completed: A transient student is limited to 18 credit hours of work attempted before. applying for formal admission to the Univer sity. Transient students are not required to file a transcript of previous college credit:


Bowing Green's tuition is broken down into two charges: instructional fee and general fee. The instructional fee, which is supplemented by slate appropriations, finances the University's educational programs and the general fee pays for most sudent services and activities. In addition, those students living on campus pay room and board charges.

The following table shows what students paid during the 1985-86 academic year:

|  | semester | year |
| :--- | :---: | :---: |
| Instructional fee | $\$ 790$ | $\$ 1,580$ |
| General tee | $\$ 186$ | $\$ 372$ |
| Room charge | $\$ 547$ | $\$ 1.094$ |
| Meallboard) charge | $\$ 423$ | $\$ 846$ |
|  | $\$ 1,946$ | $\$ 3,892$ |

These charges were typical for a full-time Ohio student living on the main campus in standard housing and subscribing to the basic meal plan. There are different housing and meal plans available which, depending upon the plan selected, will alter the above fee schedule. (See Housing, page 27, for a description of room and meal plans.)

There is a surcharge for all out-of-state studenis. Nonresident students paid a surcharge of $\$ 2,308$ during the 1985-86 academic year.

The Board of Trustees reserves the right to make adjustmenis in fees or charges when deemed necessary. Current fee informaton can be obtained through the Office of Admissions or the bursar's office.

A student who is an Ohio resident and is enrolled for 11 or more credit hours pays fees as a full-time student.

A student who is an Ohio resident and is registered for 10 credit hours or tess pays on a per-credit-hour basis. A nonresident par-ime studeni pays an additional perhour surcharge.

If a student drops a course which reduces the fee siatus from full-time to part-time, the hourly rate schedule will be applicable to the remaining hours.

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

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

## Summer session fees

Full-time summer session students paid a $\$ 790$ instructional fee and a $\$ 116$ general fee for a total of $\$ 906$ in 1985. The nonresident fee was an additional $\$ 1,154$. Part-time students paid $\$ 89.50$ per hour.

## Graduate fees

For complete information regarding graduate fees consult the Graduate Catalog.

## Other fees, charges and deposits

Application fee- $\$ 25$ (nonrefundable) to be paid when application for admission is submitted.

Audit credit-charged at same per-hour rate as credit class registration.

Automobile registration-\$25 per year (fall semester through summer session). Firelands charge is $\$ 5$ per year.

Change of registration - $\$ 5$ for any change of registration made on or after the first day of classes.

Credit by examination- $\$ 30$ for each special examination.

Driver education fee- $\$ 25$ for HED 362; $\$ 20$ for HED 462.

Excess credit fee- $\$ 40$ per hour for each hour over 18 taken each semester.

Late payment charge- $\$ 5$ for each day (including Saturdays and Sundays) fees are paid late at the beginning of a term.

## Music fees-

Applied music private lessons
$\$ 45 /$ credit hour
Applied music classes $\$ 22.50$ /credit hour Music major equipment fee $\$ 25 /$ semester MUED 402 \$15/course Tools for piano tuning variable

## Proficiency examination- $\$ 5$ for

qualifying examinations in typing and shorthand given by the business education staff.

Service charges-will be assessed to those accounts not paid by the official due dates to help offset additional billing and collection costs.

Student teaching laboratory fee- $\$ 50$ for semester when student teaching is done.

Transcript charge- $\$ 2$ each.
Physical education course fees:

| Billiards | $\$ 15$ |
| :--- | :--- |
| Bowling | $\$ 22$ |
| Beginning golf | $\$ 5$ |
| Intermediate golf | $\$ 10$ |
| Advanced golf | $\$ 20$ |
| lce skating, curling, hockey | $\$ 15$ |
| Club hockey | $\$ 20$ |
| Skiing | $\$ 82.50$ |
| Horsemanship | $\$ 100$ |

The student is held responsible for apparatus lost or damaged and for materials wasted in laboratory classes. The student pays for all materials used in making articles or items that become personal properiy.

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

## Payment of fees

All fees and charges are payable in advance of the semester for which the student is enrolled. The final date for payment of fees for each semester is the last weekday before the official date for the beginning of the semester. A student paying fees after the last day designated for this purpose at the opening of a semester (including summer) is assessed a late payment fee of $\$ 5$ for each late day including Saturdays and Sundays to a maximum of $\$ 25$.

Fees are payable at the bursar's office on the first floor of the Administration Building between 8 a.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. At Firelands, fees are payable at the Office of Registration.
For a student desiring to use a credit card, Master Card and Visa are honored by the University.

## installment payment pian

An optional inslallment payment plan is available for the payment of instructional and general fees and room and board charges.

The installment plan, which has a persemester application fee, permits oncampus students to spread their fall semester fees over five payments and
spring semester fees over four payment dates. Off-campus students can spread instructional and general fees over four payments for fall and three for spring semester.
Students interested in participating in the istallment plan should contact the bursar's office, (419) 372-2815.

## Refund of fees

In the case of voluntary withdrawal of a student from the University in any semester, fees, except for the application fee, are refunded on the following basis: during the calendar week in which classes begin, 90 percent; during the second calendar week 80 percent; during the third calendar week, 60 percent; during the fourth calendar week, 40 percent; after the fourth week, no refund. A student withdrawing under discipline forfeits all rights to the return of any portion of fees. However, in the event of academic dismissal, all monies prepaid for a semester are refunded in full. This schedule pertains to instructional, general, and nonresident fees (where applicable); a separate refund schedule for room and meal plan charges is outlined in the housing contract-acceptance agreement. No deduction is granted because of late entrance.
Summer session fees are refunded as follows: 90 percent during the calendar week in which classes begin; 80 percent during the second calendar week; 60 percent during the third calendar week; 40 percent during the fourth calendar week; no refund after the fourth calendar week. A different refund schedule applies to students withdrawing from a five-week or eight-week ummer term.
If a student drops a course which reduces the fee status from full-time to part-time, the hourly rate schedule will be applicable to the remaining courses. Any refund is subject to the percentage refund schedule.

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 a minimum of four weeks to be processed.

## Charge cards

Personal charges at the University can be paid not only by check or cash but also by Master Card and Visa. Any questions should be directed to the bursar's office.

## Nonresident fee <br> regulations

A student classified as a nonresident of Ohio tor tee purposes who is entering or reentering the University is assessed a nonresident tee in addition to the instructiona and general fees.
The responsibility of indicating proper residence at the time of registration is placed upon the student. If there is any question regarding the student's state of residence. the Residence Status Review Committee in the Office of Registration and Records, 110 Administration Building hould be contacted. Any student who registers inproperly with respect to legal residence under the rules
identified below shall be required to pay all applicable nonresident fees. Students who fail to pay this fee within 30 days after having been notified of the assessment may have their registration in the University automatically nullified.
The University reserves the right to make a final decision in any case of disputed residence for the student as a condition of admission. In determining the student's proper residence, University officials use the following regulations approved by the Ohio Board of Regents on February 2, 1985.

## (A) Intent and authority

1. It is the intent of the Ohio Board of Regents in promulgating this rule to exclude from treatment as residents, as that term is applied here, those persons who are present in the state of Ohio primarily for the purpose of receiving the benefit of a state-supported education.
2. This rule is adopted pursuant to Chapter 119. of the Revised Code, and under the authority conterred upon the Ohio Board of Regents by Section 3333.31 of the Revised Code.

## (B) Definitions

For purposes of this rule

1. A "resident of Ohio for all other legal purposes" shall mean any person who maintains a twelve-month place or places of residence in Ohio, who is qualified as a residen to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability under Section 5747.02 of the Revised Code, provided such person has not, within the time prescribed by this rule, declared himself or herself to be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.
2. "Financial support" as used in this rule, shall not include grants, scholarships and awards from persons or entities which are not related to the recipient
3. An "institution of higher education" as used in this rule shall mean any university. community college. technical institute or college, general and technical college, medical college or private medical or dental college which receives a direct subsidy from the State of Ohio.
4. For the purpose of determining residency for tuition surcharge purposes at Ohio's state-assisted colleges and universities, "domicile" is a person's permanent place of abode; there must exist a demonstrated intent to live permanently in Ohio, and a legal ability under federal and state law to reside permanently in the state. For the purpose of this policy, only one domicile may be maintained at a given time.
5. For the purpose of determining residency for tuition surcharge purposes at Ohio's state-assisted colleges and universities, an individual's immigration status will not preclude an individual from obtaining resident status if that individual has the current legal status to remain permanently in the United States.

## C. Residency for subsidy and tuition surcharge

purposes.
The following persons shall be classified as residents of the State of Ohio for subsidy and tuition surcharge purpases:

1. A dependent student, at least one of whose parents or legal guardian has been a resident of the State of Ohio for all other legal purposes for 12 consecutive months or more immediately preceding the enrollment of such student in an institution of higher education.
2. A person who has been a resident of Ohio for the purpose of this rule for at least twelve consecutive months immediately preceding his or her enrollment in an institution of higher education and who is not receiving, and has not directly or indirectly received in the preceding twelve consecutive months, financial support from persons or entities who are not residents of Ohio for all other legal purposes.

## D. Additional critenia which may be considered in determining residency for the purpose may include

 but are not limited to the following:1. Criteria evidencing residency
(a) if a person is subject to tax liability under Section 5747.02 of the Revised Code
(b) if a person qualities to vote in Ohio:
(c) if a person is eligible to receive state weltare benefits;
(d) it a person has an Ohio driver's license and/or car registration.
2. Criteria evidencing lack of residency
(a) if a person is a resident of or intends to be a resident of another state or nation for the purpose of tax liability, voting, receipt of welfare benefits, or student loan benefits (if the student qualified for that loan program by
being a resident of that state or nation);
(b) if a person is a resident or intends to be a resident of another state or nation for any purpose other than tax liability, voting or receipt of welfare benefits (see paragraph (D) 2. (a) of this rule)
E. Exceptions to the general rule of residency for subsidy and tuition surcharge purposes:
3. A person who is living and is gainfully employed on a full-time or part-time and self-sustaining basis in Ohio and who is pursuing a part-time program of instruction at an institution of higher education shall be considered a resident of Ohio for these purposes
4. A person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile
5. A person on active duty status in the United States military service who is stationed and resides in Ohio and his or her dependents shall be considered residents of Ohio for these purposes.
6. A person who is transterred by his employer beyond the territorial limits of the fifty states of the United States and the District of Columbia while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile as long as such person has fulfilled his or her tax liability to the State of Ohio for at least the tax year preceding enrollment.
7. A person who has been employed as a migrant worker in the State of Ohio and his or her dependents shall be considered a resident for these purposes provided such person has worked in Ohio at least four months during each of the three years preceding the proposed enrollment

## F. Procedures

1. A dependent person classified as a resident of Ohio for these purposes and who is enrolled in an institution of higher education when his or her parents or legal guardian removes their residency from the State of Ohio shall continue to be considered a resident during continuous full-time enrollment and until his or her completion of any one academic degree program.
2. In considering residency, removal of the student or the student's parents or legal guardian from Ohio shall not, during a period of twelve months foliowing such removal, constitute relinquishment of Ohio residency status otherwise established under paragraph (C) 1 . or (C) 2 of this rule.
3. Any person once classified as a nonresident upon the completion of twelve consecutive months of residency, must apply to the institution he or she attends for reclassification as a resident of Ohio for these purposes if such person in fact wants to be reclassified as a resident. Should such person present clear and convincing proof that no part ol his or her financial support is or in the preceding twelve consecutive months has been provided directly or indirectly by persons or entities who are not residents of Ohio for all other legal purposes such person shall be reclassified as a resident Evidentiary determinations under this rule shall be made by the institution which may require, among other things, the submission of documentation regarding the sources of a student's actual financial support.
4. Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification.
5. Any institution of higher education charged with reporting purposes and assessing the tuition surcharge shail provide individual students with a fair and adequate opportunity to present proot of his or her Ohio residency for purposes of this rule. Such an institution may require the submission of attidavits and other documentary evidence which it may deem necessary to a full and complete determination under this rule

## Residence Halls

Bowling Green is primarily a residential Universily, and more than 8,000 undergraduate students live in residence halls.

University residence halls provide a physical environment designed to further the academic, cultural and personal development of the resident students. A wide range of living options is available to students and a wide variety of educational and social programs are offered.

Undergraduate students are required to reside in University-owned living units as a condition of enrollment unless they are commuting daily from the homes of their parents, guardian, spouse; or unless they have attained 60 earned academic hours and/or four semesters of campus residency on or before the first day of classes for fall. For the purposes of this regulation, a home is defined as the actual and regular place of residence in the community in which the parent, guardian, or spouse is eligible to register to vote. A guardian is defined as a person awarded legal guardianship by a court of competent jurisdiction. The housing acceplance agreement is a contract for the entire academic year. A student must be in compliance with the University housing policy as a condition for applying to be an exception to the policy.
Accommodations in University residence halls are available to any University student regardiess of race, religion, creed, color, national origin or handicap. The University expects landlordis of off-campus accommodations to practice this same nondiscriminatory policy.
The University Housing Office, 440 Student Services Building ( $372-2011$ ), 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 22 residence halls and 30 sororities and fraternities on campus. Issuance and cancellation of University meal coupons are also coordinated through this office.
The Office of Residence Life, 425 Student Services Building (372-2456), is responsible for the operation staffing and programming of all campus living units, including sorority and fratemity houses. A trained residence hall staff including undergraduate resident advisers (R.A.'s) are present to help students
derive the fullest possible benefits from the residence life experience.

## Housing regulations

## 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 guests of the University. If a student's parents have a blanket homeowner's insurance policy, the student's personal effects may be listed and covered in such a policy.

Generally, each room is completely furnished except for linens, pillows, blankets and personal toiletries. A linen rental service is available to students.

For detailed information regarding services and accommodations available contact the University Housing office.

## Occupancy of rooms

Each student is required to vacate and remove personal belongings from the residence hall within 24 hours after the close of final examinations for the spring semester, except for the student who receives a degree at the May commencement. Such a student may remain in the University residence up to a designated hour on commencement day.
A student in good standing with the University is not required to clear the room of possessions at the close of the fall semester unless that person has failed to acquire a paid housing reservation for the succeeding semester. A resident who has not paid for additionai accommodations, however, is required to vacate the room and remove personal belongings within 24 hours after the close of semester examinations.
The University undertakes at all times to maintain pleasant living conditions in all its residence halls, and the right is reserved to remove an occupant at any time for violations of University and/or residence halls policies, rules and regulations. Anyone found residing in University facilities who has not paid for accommodations, who is not a lawful resident of that facility or who is found in a closed building may be charged with trespassing.

## Vacation periods

During the vacation periods, the residence halls are not open to students. A student
remaining over the Thanksgiving and spring recesses or between semesters needs to make special arrangements for off-campus housing during these periods. The University Housing Office can assist in making these arrangements. The University reserves the right to assign, inspect, maintain and make repairs in residences any time during the school year.

## Change of universily address

If, for some reason, a student should find it necessary to change his or her campus address, such a change must be registered and approved by the University Housing Office in advance of the proposed move.

## Off-campus housing

The Off-campus Housing Office, 425 Student Services Building, maintains up-to-date listings of available houses, apartments, rooms in homes and subleases and their prices. The Off-campus Housing Office will not list housing vacancies unless the owners have agreed not to engage in discrimination to prospective tenants on the basis of race, color, religion, sex and national origin. The office operates a roommate locater service to help sludents find compatible roommates. The office can also provide move-in inventory forms, information on the public utilities and a variety of other information.

A student who lives off campus does so accepting individual responsibility. The University does not undertake to provide social and educational opportunities or the supervision furnished in University residence halls to students residing in off-campus housing. A contractual arrangement exisis between

the student and the landlord exclusive of the University.

As a condition of enrollment, an offcampus student is expected to register his or her correct community address with the Yousing Office before the payment of fees.

## Room and meal plan charges

A student who wants to live on campus must apply for housing and sign a residential contract in the spring before the opening of the fall semester. Dates and procedures for payment are outlined in the contract.

Four housing plans, with several different rates, are available to students regardless of class rank as long as space is available. Priority of assignments is given to continuing upperclass students with seniors, juniors, sophomores and incoming freshmen assigned in that order. Returning former students are assigned with new incoming students.

Plan / includes Conklin Hall and McDonald North. Students living in these residence halls are not required to purchase the meal plan. Double occupancy rate is $\$ 547$ per semester or $\$ 1,094$ per academic year. The single occupancy rate is $\$ 714$ per semester or $\$ 1,428$ per academic year. These rates are for room only (no meals).

Plan II covers these residence halls: Kreischer, Harshman, McDonald East and West, Founders, Rodgers, Kohl, Prout, and Alpha Phi Alpha. This rate also applies to students living in Conklin and McDonald Worth Halls who are taking part in the basic heal plan program. Multiple occupancy rates, including the basic meal plan, are $\$ 970$ per semester, or $\$ 1,940$ per academic year. Single occupancy, including the basic meal plan, is $\$ 1,137$ per semester, or $\$ 2,274$ per academic year.

Plan III applies only to Offenhauer East and Offenhauer West. The rate for double occupancy, including the basic meal plan, is $\$ 1,066$ per semester, or $\$ 2,132$ per academic year. A single occupancy room with the basic meal plan is $\$ 1,229$ per semester, or $\$ 2,458$ for the academic year.

Plan $N$ is for the room-only rent for fraternities, sororities, and the French House. These rates are $\$ 587$ per semester, double occupancy ( $\$ 1,174$ per academic year). Since most Greek houses operate their own dining facilities, the University collects only room rent, leaving the various groups to collect their own meal plan charges.

These are suggested rates for the 198586 academic year only and are subject to change as economic conditions warrant.

Additional information regarding living options and rates can be obtained from the University Housing Office, 440 Student Services Building, 372-2011.

## Payment schedule

Since arrangements for residence on campus must be made before the opening of fall emester and the University wishes to ccommodate as many students as pos-
sible, a forfeiture schedule for late cancellations is maintained. This schedule appears in the acceptance agreement which is provided when the residence hall contract is accepted. The acceptance agreement should be read thoroughly by both student and 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. Full payment may be made in advance for the semester, or entire academic year, or in accordance with an optional Installment Payment Plan described in the acceptance agreement. The initial payment date appears on the residential contract card.

## Refunds

Adherence to the 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.

For information regarding other fee refunds see fees and charges, page 25

## Meal plan

University Food Operations utilizes a variety of facilities to offer quality food at a reasonable price. Since 1971 the coupon system has given students a choice of what, when and where they may eat. Food Operations is also concerned about the nutritional value of each meal and makes sure that each student is more than satisfied with the services offered.

Coupons are treated the same as cash and should be handled accordingly. Coupons are redeemable for purchased food only and divided into denominations of $\$ .05$, $\$ .10, \$ .25$ and $\$ 1$. A single coupon book contains coupons worth $\$ 105.75$.

There are five dining halls, four snack bars, a deli and soda shoppe, two restau-
rants and the University Union. The dining hall menus offer five to eight entrees at each meal, plus cold sandwich lines, theme lines and a salad bar at lunch and dinner.
For the 1985-86 academic year, Food Operations offers six meal coupon plans. Plan A (4 books) - This is the required minimum meal plan. It will meet less than 50 percent of an average, college-age person's daily food needs. Residents selecting this plan should expect to supplement their food needs from other sources.
Plan B (5 books) - This plan will meet approximately 65 percent of the average, college-age persons; daily food needs. Again it would require supplemental food from other sources.
Plans $C, D, E(6,7,8$ books $)$ - These are the plans recommended by the Residence DIning Services staff as best meeting the nutritional needs of the majority of college students. These plans will allow for adequate nutritional meals and snacks.
Plan F ( 9 books) - This is the largest plan offered, designed primarily for the "big eaters" and for the person who enjoys restaurant dining and the many snack bars located across campus.
Coupon books purchased before and during a semester must be used that semester. Extra coupons can be used to purchase bulk food (for example, a six pack of pop) or can be sold to other students. Plans B through $F$ are discounted 20 percent which allows more food for less money. Because of fixed operating costs, the University cannot refund unused coupons. Extra coupons from the fall semester can be used during the "grace" period of one week into the spring semester. Guests are welcome in the dining halls and their meals can be purchased with coupons or cash.


All iypes of financial aid are coordinated through the University's Office of Financial Aid and Student Employment. The staff is also available for financial aid counseling.

Each student and the student's family are responsible for a reasonable contribution to the cost of the student's education. However, students may require financial assistance. Financial aid is generally limited to full-time sludents, but part-time undergraduate students may be eligible for some types of financial aid.
To apply for financial aid, students must file a financial statement which may be obtained from high school guidance counselors, the Office of Financial Aid and Student Employment, the Office of Admissions or the Firelands Financial Aid Office.
Prospective freshmen who complete the forms by February 15 , and are fully admitted to BGSU by March 1, will be notified in late March and early April about their financial aid awards. Late applications will be considered separately. Awards are made depending on the availability of funds and the terms and conditions of controlling legislation, regulations, and policies.

For more information about the types of inancial aid and eligibility criteria, see the financial aid brochure available from the Office of Financial Aid and Student Employment or from the Admissions Office.

## Assistantiships

Qualified juniors and seniors may apply to individua! departments to become undergraduate assistants. Upperclass siudents are also employed as residence hall advisers. information about residence hall advisers is available in the residence halls or in the Residence Life Office.

## Employment

A variety of student employment opportunities are available both on and off campus. The Office of Student Employment (460 Student Services Building) posts job openings and refers applicants for interviews with prospective employers. Campus employment is available to undergraduate students who are enrolled for at least six credit hours per semesier. Students typically work as clerks, custodians, receptionists, typists, and food service employees. A listing of summer job opportunities is also available from the Office of Student Employment.

Students in need of financial assistance may be eligible for the College Work-Study Program, financed partially by a federal grant. A student's eligibility for this program is determined by the Office of Financial Aid and Student Employment.

## Grants

## Pell (Basic Educational Opportunity) Grant

The Pell Grant program is the largest of the federal grant programs. It is designed to assist needy students to continue their education beyond high school and to provide a base of financial aid. The amount of the grant is determined by the student's need and the cost of attendance. Graduate students are not eligible. Students should indicate that they wish to be considered for the Pell Grant when filing the financial statement. A separate Pell Grant application is also available.

## Ohio Instructional Grant

Students must apply for this grant by filing an OIG application which is available from high school guidance counselors, the Office of Financial Aid and Student Employment, or the Ohio Board of Regents (30 East Broad Street, Columbus, Ohio). Students must be Ohio residents and enrolled for at least 12 credit hours.

## Supplemental Educational Opporiunity Grant

Students who file the required financial aid forms are considered for this federal grant, which is awarded to students with demonstrated financial need.

## Talent Grants-in-Aid

Talented students in ant, athletics, music, or speech may be eligible for these Universityadministered grants. Application should be made to the specific department.

## Loans <br> Guaranteed Student Loans

These are long-term loans with eight percent interest rates. Students may borrow up to $\$ 12,500$ as an undergraduate. Interest on
the loan is paid by the federal government while the student is in school. Repayment begins six months after the student leaves the University. Application is made directly to a bank or other lending institution that participates in the GSL program.

## National Direct <br> Student Loans

These are long-term loans with five percent simple interest rates. Students may borrow up to $\$ 6,000$ as an undergraduate. Interest on the loan is paid by the federal government while the student is in school. Repayment begins six months after the student leaves the University. Students who file the required financial aid forms are considered for this loan program.

## PLUS Program

These are long-term loans at twelve percent simple interest. Independent undergraduate students may borrow up to $\$ 12,500$. Parents of dependent undergraduate students may borrow up to $\$ 15,000$. Repayment oegins sixty days after the loan is disbursed. Application is made directly to a bank or other lending institution that participates in the PLUS Program.

## Short-term loans

The University has funds available for shoriterm loans to students for educational expenses and personal emergencies. Shortterm loans are available up to a maximum of $\$ 150$ for a period of one month without interest. A student may receive a larger loan, to be repaid within six weeks at eight or eighteen percent simple interest. These loans are not available to first-semester freshmen. Application is made at the Office of Financial Aid and Student Employment, 450 Student Services Building.

## Scholarships

A limited number of academic scholarships are available to undergraduate students, regardless of need, who have outstanding scholastic records. Other scholarships, including National Merit awards, are awarded on the basis of academic achievement and need. Information on scholarships may be obtained in each of the college offices and the Office of Financial Aid and Student Employment.

The Office of Registration and Records, 1.10 Administration Building is responsible for Geach student's class registration and academic record In addition" the schedule of. classes is compiled by this office with the așsistance of academic departments and colleges The officesis also responsible for commencement prograns and receives applications-for graduation. Other services. provided are the evaluation of transfer credit, certification for benefits under the Veteran's Education and Social Security Acts, issuance of student transcripts readmission of. former students, admission of classified and transient students, certification for eligibility. in athletics membership in honor societies: clarificationof residency processing of credit-by-exams and various other student-s related functions:

## Identification card

dentification cards are issued to all fully : dmitted and paid students each term. This. Cardiverfies enrollment in the particular term and includes the student's. name, identification number class college; hours registered, term and year These cards are only issued to students determined by the bursar to. have paid accounts Cards are distributed through the mailboxes in the residence halls and the on-campus mailboxes for all under-- gráduate students $\because$ Unclassified and transient students are hot:issued student identification cards except:on request Identificatiơn cards may be replaced if lost A. $\$ 2$ service charge is assessed Spouse identification cards provide. the spouse library and theater privileges and $\rightarrow$ are available for a $\$ 10$ service charge. T The information on the identification card is not correct the student should contact the Bursar's Office since the card is used for. various identification purposes. Any cracked or defective caid maxy be returned to the Office of the Bursar tor replacement at no charge

## Transcripts of credit

An official transcript of a student's record is used only for transferring credits to other. colleges and universities and for transmitting information to certifying agencies and employers An official transcript is issued only. It the written request of the student: A. harge of. $\$ 2$ is made for each transcript and
should be included with the request. A transcript is not released for:a student who is delinguent in any finäncial obligation to the University Requests should be submitted at least 48 hours in advance to the Office of Registration and Records, 110.Administra tion Building (104 East. Building at Firelands).

Transcripts from other institutions that : have been presented for adimission or evaIuation become part of the student's permañent academic file and are not returned nor copied for distribution: Students desiring transcripts covering work completed elsewhere should request them from the institutions concerned.

## Academic load

A fullitime undergraduate is defined as a student registered for 12 or more semester. hours. A full-time student normally should be registered for 15 to 16 hours per semester. The academic load of a regular undergraduate student should not be less than 12 hours at any time. Enrollment for more than 18 hours requires the approval of the office of the dean of the college in which the stu: dent is enrolled; such enrollment will be reviewed in accordance with the policies of the respective college.

## Registration schedule

Since late entrance is a handicap to aca demic achievement, every student is ex pected to register for classes during the time announced for registration. Continuing students receive registration materials in the mail during the seventh week of each se: mester: The registration requests are re-ceived at the Office of Reggistration and Records for two weeks following distribution of registration materials, and students are notified of their schedules prior to the succeeding term. (This does not apply to Firelands students.)
Anyone who fails to take advantage of the advance registration system is allowed to: *register up until the first day of classes without being charged a late fee Starting the first day of classes, a tee will be assessed for each change made.

## Drop/add

After the registration period has been completed, all changes must be processed at
the Office of Registration and Records in accordance with the policy of the college in which the student is enrolled. An undergraduate may enroll in a course within sevencalendar days from the beginning of classes in any semester: After this time, a student may add a course only with permission of the college dean.

A student may change the grading option (graded or $\mathrm{S} / \mathrm{U}$ ) for:a specific course only during the first seven calendar days of a given semester. Twenty-one calendar days ${ }_{z}$ are allowed for a student to withdraw from a : class at the Office of Registration and Records with no record on the transcript. Afterthese dates; exceptions may be granted only by the dean of the student's college.

An undergraduate who drops a course during the fourth through the ninth week of a semester receives a grade of WP (withdrawn passing) or WF (withdrawn failing) according to the student's standing in the course A grade of WF is assigned to courses dropped after the ninth week of a semester and to courses that the student ceases to attend without permisision. Any, student terminating attendance in an $\mathrm{S} / \mathcal{U}^{\circ}$. course without officially dropping the course. or withdrawing from the University will receive a WF.

See change of registration charge under fees and chargés, páge 24.

## Audit

A student who wishes to attend a class without receiving credit for it may register to audit that course. A per-hour instruction fee is charged as if the student had registered. for the course for credit: Aludit (no ciredit): registration must be indicated for the appropriate course(s) before the first day- of classes. A student may not change from audit to credit registration, and vice versa; during the given term:

# Qrganizations and Activities 

## Sudent organizations

Social, cultural and athletic programs are sponsored by various student organizations andi acadernic departments of the University rounding out the education of the student. This out-of-class education can be enhanced by the student's participation in extracurricular activites such as student clubs, groups or organizations. These organizations, regardless of their nature, i.e., social, special interest, service or professional, provide the student with invaluable transforrabie skills such as time management, leadership, group communication and goal seiting which not only supplement their learning experience at BGSU, but can carry on into future careers.

The Office of Student Activities and Orientation is the center for the student body government, campus organizations, the coordination of campus aclivities programming, and Freshman Pre-Registration and Orientation, all of which are designed to aid in the total development of the student at BGSU.

## Student organizational regulations

Students are free 10 organize and join clubs, groups or organizations to promote their common interests provided that these associalionts are organized for legal purposes and do not conflict with the University's educational objectives.

Ihe Office of Student Activities and Orientation will register social, service, special interest and professional organizations based on the following policy.

1. The initial registration of a group will be accomplished when a Petition for New Organization has been approved by the assistant vice president for student affairs/student activities.
2. A conslitution has been submitted which contains, but is not limited to, the following intormation:
a. name and purpose of organization
b. membership (how determined, who's oligible, etc.)
c. name of adviser
d. list of student officers (their duties, how they are elected, etc.)
a. mes and elections
. meetings (time, place, etc.)
3. An annual (academic year) Organization Information Shoot, listing cureent officers'
names, addresses and phone numbers has been completed.
4. Registration of all student organizations will terminate on the lasi day of spring semester. Organizations wishing to register for the following academic year must complete and submit, during the first two weeks of fall semester, an updated Organization Information Sheet listing new officers.
For purposes of continuity, direction, counseling and fiscal responsibility, each organization must have an adviser who is either a faculty member or an administrative staff member of Bowling Green State University.
Organizations shall not discriminate in their activities, programs, operations or membership selection on the basis of race, sex, age, religion, national origin, handicap or sexual preference.

For a current list of student orgarizations, contact the Office of Student Activities and Orientation, 405 Student Services Building, 372-2843.

## Student Government

The Undergraduate Student Government provides the student with a wide range of opportunities for responsible participation in the government of the University community and gives the University the advantage of student views and experience in arriving at the soundest possible policies and practices with respect to issues relating directly to each student enrolled in the University. All councils and boards of the Undergraduate Student Government have available the advice of faculty members or administrative cfficers of the University.
In addition to the Undergraduate Student Government, the qualified student may serve on other policy-determining and administrative councils and committees of the University.

## University Activities Organization

All students may participate in planning and organizing social, cultural. educational and recreational events for the University community through the University Activities Organization.
The entire organization is involved with such major events as the annual Fall Fest and Mardi Gras celebration, in addition to programs planned and implemented by the
following 13 committees: administrative, campus films, exhibits, games, mini courses, news and views/leciures, outdoor recreation, performing arts, publications, public relations, publicity, spotlight entertainment and travel.

The University Activities Organization provides students with the opportunity to organize functions affecting the entire sludent body while developing leadership skills.

## Athletics

## intercollegiate athletics

Participation and excellence are the primary goals of Bowling Green intercollegiate athletics. As part of the largest total-sports program in the Mid-American Conference, nearly 1,000 men and women compete for championship recognition each year on 19 varsity teams.

Men's and women's teams exist in basketball, cross country, golf, swimming, tennis and track. Men compete in football, baseball, hockey and soccer, while women compete in gymnastics, volleyball and softball.

Club sports include cricket, fencing, flying. gymnastics, hockey, ice hockey, lacrosse, orienteering, prevision skating, racquetball, riflery, rugby, sailing, sking, soccer, synchronized swimming, table tennis, volleyball, water polo, water skiing and weight training.
The University is a member of the National Collegiate Athletic Association (NCAA) and the 10 -university Mid-American Conference (MAC). Bowling Green competes regularly with nationally prominent teams from other major conferences.

To be eligible for intercollegiate athletic competition, a student must meet various academic standards established by the University, the NCAA and the MAC, as appropriate. When a student becomes involved on any of teams that compete in intercollegiate contests, it is assumed that consent to do so has been received from the student's parents or guardian. Every precaution is taken to safeguard the health of the student athlete, and a physician is generally present at intercollegiate contests in the more rigorous sports.

## Intramural and recreational sports

The intramural and recreational sports program offers a wide variety of activities for men and women including basketball, bowling, ice hockey, innertube water polo, flag footbail, floor hockey, golf, handball, racquetball,
soccer, softball, swimming, touch football and volleyball. Many of these are offered as coed sports. Information regarding these and other activities may be obtained at the intramural office, located in 108 Student Recreation
nter. (Women's and Indoor Coed) and 201 emorial Hall, (Men's and Outdoor Coed) from 8 a.m. to 5 p.m. daily.

## Athletic facilities

Athletic facilities at the University include: an 18-hole golf course; and ice arena; 25 outdoor tennis courts; the Eppler Physical complex; 5,000-seat Anderson Arena; 30,000-seat Doyt Perry Stadium; Steller Field, which seats 2,000 for baseball; Whittaker Track; numerous activity and practice fields; and the Student Recreation Center (see below).

## Student Recreation Center

The Student Recreation Center, with its two swimming pools, 14 handball/racquetball courts, running track, saunas, whirlpool spa, universal/nautilus areas and courts for basketball, volleyball, tennis, squash and badminton, among other facilities, is a focal point for campus recreational activities.

All registered full-time students may use the Center as often as desired. A usage fee is included in the general fee paid each semester. Part-time students must pay a pro-rated usage fee. Special plans for spouses and children of students are available. For more information, contact the Center or consult the Student Recreation Center brochure.

## Firelands College rganizations

See Firelands College section for a description of organizations and activities there.


## Computer Services

Bowing Green State University provides students, faculty and staff with access to diverse computing capabilities through several large-scale mini and microcomputers. DEC VAx 780. 785, and System 2060 are available for interactive use with BASIC, FORTRAN. APL and oiher popular computer languages, irom terminals located in the Mathematical Sciences Building and other areas on campus, including several residence halis. An IBM 4341 is available for batch processing via a computing service center in the University Union. More than a dozen taboratories equipped with IBM, Apple Il and Apple Macintosh microcompuiers are atso available for student use. There is at teasi one microcomputer laboratory located in every major residence hall.

Siudents using these facilities for course work will be introduced to the appropriate compuier systems by their instructors. Others should contact a consultant at one of the computing service centers for assistance.

A staff of consultants is available to help users of the many lest scoring, modeling and statistical sofware packages maintained by the University Computer Services deparment. A comprehensive list of available hardware, software and user documentation is available upon request from one of the consultants.

Many of these computer services are available through remote communication faclities located at the Firelands College campus in Huron, Ohio. For further information, contact the director of computer services at Firelands College.

## Counseling and Career Development Center

The Counselirig and Career Development Cemier, 320 Student Services Building (3722081) providos free educational, career and personal counseling services to students. Caroer development workshops and alcohol education proyrams are also offered through the center. The slaff includes licensed psychologists, career counselors, graduate student assisiants and a test monitor.

Information aboul academic majors and coreer options arc avallable on microfiche, audiotepes and a variely of printed materials in the center's Career Education Library. A course entitied Career and Life Planning
(CAO 131) is offered each academic session by members of the center's staff. Career-related interest inventories are also available to students as aids in career planning.
Tests in foreign languages are administered to students for placement in appropriate undergraduate language courses. A number of testing programs including the American College Test (ACT), College Level Examination Program (CLEP), Graduate Record Examination (GRE), Graduate Management Admissions Test (GMAT), National Teacher's Examination (NTE), Medical College Admissions Test (MCAT), Law School Admissions Test (LSAT), Miller Analogies Test (MAT) and the Cooperative English Examination (CEE) are administered by the center.

The staff is available for consultation with individual faculty and staff regarding student concerns.
Students are seen by appointment. Center hours are 8 a.m. -5 p.m. Monday through Friday.

## Commuter Center

The Commuter Center, located in the basement of Moseley Hall, provides a home base for students who commute to the University. Facilities include a study area, vending
machines and room to rest and socialize. An active Commuter Off-Campus Organization (COCO) sponsors programs and services of interest to commuters.

## On-campus Mailbozes

A mailroom for on-campus mailboxes is located in 208 Moseley Hall. Maillboxes are assigned to undergraduate students living off campus. They are assigned at the beginning of fall semester, and students continue to use the same box for spring semester. (The mairoom is closed during the summer session.) A listing posted outside 208 Moseley Hall indicates the mailbox numbers for students assigned mailboxes. Students may request or cancel mailboxes through the Office of Registration and Records. The mailroom is used by University offices and organizations to make off-campus students aware of University information and events.

## Handicapped Services

The Office of Handicapped Services. 705 Administration Building, provides disabled persons with the opportunity to participate in a broad range of educational and employment activities by eliminating architectural barrier, modifying attitudinal barriers, encouraging independence of the individual and

acting as a liaison between rehabilitation agencies and various University offices.
A student classified as having a learning disability may also be assisted by Handicapped Services, through the Application of irning techniques, testing and academic Onitoring. Acceptance to the University does not suggest, however, that course content will be modified.

## Student Health Service

The Student Health Service, located in theUniversity Health Center (372-2271), provides medical care to students at the firstcontact phase in the health care delivery system.

The Student Health Service has clinical facilities and à staft of physicians, registered nurses, a pharmacist and technicians working in the clinical laboratory, pharmacy and x-ray services.
Regular clinic hours are 8 a.m. - 4:30 p.m. Monday through Friday.

Students are charged for, laboratory, x-ray, and pharmacy services of the Student Health Service. Some laboratory procedures and medical consultations are referred to outside sources at the student's expense.

Students who become' ill or are injured at times when the Student Health Service is closed and who believe that immediate medical attention is required should report to the emergency room of the Wood County Hospital. Students who use this service will be expected to pay for the cost of treatment.
Nonemergency transportation service to nd from the Student Health Service and jod County Hospital will be provided by oniversity personnel at no cost. Ambulance service is provided by the City of Bowling Green at the student's expense.

A student group insurance program is available to students àt a reduced student rate. Studenis should check any hospitalization program under which they are covered (generally as a dependent) since insurance companies have varying reimbursement policies. Students are encouraged to carry some form of health care insurance.

## Instructional Media Center

The Instructional Media Center, with its main office in 101 Education Building; provides audio-visual equipment and instructional materials to the academic program at BGSU. Other service satellite centers are maintained in 112 Math Science Building and the Technology Building. Media specialists, production technicians and utilization experts work with faculty, staff and students. in identifying instructional needs for class- : room presentations. Equipment available includes slide projectors, movie projectors, public address systems and video tape recorder/players. A film library is maintained and film rentals are available from outside sources. Instructional developers are available to assist faculty in improving their indiyual classroom techniques.
Production services for instructional use
include photography and graphic arts. Design, typesetting ànd photographic services for publication purposes are also available for organizations and individuals associated with the University. Professionally typeset resumes are available to students at a nominal cost.
Services for faculty in regularly scheduled classes are free of charge (typesetting services excluded); however, students and non-academic areas are charged a nominal fee based on materials used and wages if operators are uséd. There is no charge for AV equipment used by students for presentations in regularly scheduled classrooms.

## Parking and Traffic

The University requires that any motor vehicle owned or operated by a student be registered through the Parking and Traffic Office within 48 hours after the time it is initially operated or parked on any property owned or controlled by the University:

An automobile registration charge of $\$ 25$ per year (fall semester through summer session) is required of each student who registers an automobile with the Parking and Traffic Office, Commons Building (3722776). A temporary registration can be obtained for $\$ 2$ per week, and may be renewed for $\$ 2$ per each additional week. Each automobile on campus must be registered and its decal displayed in accordance with instructions.

## Placement Service

The University Placement Service, 360 Student Services Building ( $372-2356$ ), is responsible for providing counseling and employment services to graduating seniors, advanced degree candidates and alumni To facilitate these services, more than 1,400 employer representatives from education, government, industry and social service organizations are invited to the campus each year. Normally, these recruiters conduct over 9,000 interviews in their search for qualified employees.

The Placement Service provides individual counseling and a variety of programs and services which assist students in determining and implementing career and educa-' tional choices. Students are encouraged to use the services of the office at the beginning of their senior year, especially in regard to establishing files and scheduling interview times.

## Psychological Services Center-

The Psychological Services Center, located in the Psychology Department, provides services through its doctoral training program to University students on a limited basis. Services include diagnostic evaluations, treatment of behavior disorders through psychotherapy, behavior therapy, biofeedback, marriage counseling, and case and program consultation to University and community agencies. The Center may be contacted by calling 372:2540.

## Speech and Hearing Clinic

The Speech and Hearing Clinic, 338 South Hall:(372-2515) provides screening, diagnostic and treatment serviceș for students with communication problems such as stuttering, voice foreign, dialect, cerebral palsy, articulation or hearing loss. The Clinic is open Monday thru Friday from 8:30-5:30, and appointments are scheduled by individual arrangement. Studénts may obtàin this service through the University by registering for CDIS 1.21 (Personal Remediation). Registration fee is $\$ 25$, and credit does not count toward graduation (graded $S / U$ ). Students may also choose to pay on a per session. basis. Fee schedule is arranged through the Clinic. Anyone interested in making. an appointment should contact the Clinic directly. Services are also extended to children and adults throughout northwest Ohio.


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## COLLLEGE OF

ARTS AND SCIENCES

Kendall L. Baaker, dean, 205 Administration Building; 372-2015
Ralph N. Townsend, associate dean, 205 Administration Building, 372-2015
Joseph G. Spinelli; assistant dean, 205 Administration Building, 372-2015
Department of Biological Sciences, Reginald D. Noble, Ph.D. chair, 217 Life Sciences Building, 372-2332
Department of Chemistry, Douglas C. Neckers, PhD; chair; 110 Hayes Hall, 372-2031
Department of Computer Science, AnnMarie Lancaster, Ph.D., chair, $207 \mathrm{Ma}-$ thematical Sciences Building, 372-2337
Department of English, Lester E. Barber, Ph.D., chair, 202 University Hall, 372-2576
Department of Ethnic Studies, Robert L. Perry, Ph.D., chair; 117. Shatzel Hall, 372-2796
epartment of Geography, Joseph C. Buford, Ph.D., chair; 305 Hanna Hall, 372-2925
$\because$ Department of Geology, Charles F. Kahle Ph:D., ćhair, 170 Overman Hall, 372-2886
Department of German, Russian, and East Asian Languages, Joseph L. Gray, Ph.D., chair, 139 Shatzel Hall, 372-2268
Department of History, Gary R. Hess, Ph.D., chair;-117 Williams Hall, 372-2030
Department of Interpersonal and Public

- Communication;303.South Hall, 372-2823

Department of Mathematics and Statistics, Vijay K Rohatgi; Ph.D., chair, 450 Math Sciences Búlding, 372-2636
Department of Philosophy, Thomas W. Attig, Ph.D., chair, 219 Shatzel Hall, 372-2117.
Department of 'Physics and Astronomy, Ro'--bert Boughton, Ph.D.; chàir, 270 Overman Hall, 372-2421
Department of Political Science, 223 Williams Hall; 372-2921
Department of Popular Culture, Ray B. Browne Phi.: chair, Popular Culture Building, 372-2981
Department of Psychology, Robert L. Conner, , Ph.D., chiair, 207. Psychology Building. . $372-2301$
Department of Romance Languages, Diane G: Pretzer, Ph D', chair, 122 Shatzel Hall, -372"2667
Department of Sociology, Meredith D. Pugh, Ph.D., chair, 40. Williams Hall, 372-2294
Departmént of Theater, 322 South Hall, 372-2222
School of Art, Maurice J. Sevigny, Ph.D., director, Fine Arts Building, 372-2786
School of Mass Communication, Jóhn L. Huffman, Ph:D., director, 304 Mass Communications Building, 372-2136

## Academic Objectives

The College of Arts and Sciences has two primary instructional purposes: to provide specialized training for students majoring in the basic disciplines of the arts and humanities, the social and behavioral sciences, and the natural, physical and mathematical sciences; and to provide the basic courses that serve as the foundation for the liberal education of all students in all colleges of the University.

Through a flexible curriculum, the College of Arts and Sciences combines the traditional and continuing values of a vigorous and broad general liberal education with. sound preparation for immediate occupational needs, or for advanced graduate or professional education. Attuned to changing needs and times, the College of Arts and Sciences has preserved and strengthened the central values of a liberal education, while providing specializations geared to today's career opportunities.

## Organization of the College

Largest of the collegiate organizations of the University, the College of Arts and Sciences includes two schools (Art and Mass. Communication), and twenty-one academic departments, as well as an additional number of formally organized program areas. The academic departments span the range of the traditional disciplines in the humanities, the languages, the sciences and mathematics, and the social sciences.

A strong faculty of nearly 400 teacher/ scholars offers general and specialized instruction leading to five different undergraduate degrees: the Bachelor of Arts, the Bachelor of Science, the Bachelor of Fine Arts, the Bachelor of Liberal Studies and the Bachelor of Arts in Communication. Under these five degree programs, students may choose from more than 70 different major fields, and an equal number of minor fields. These wide-ranging choices provide ample opportunity to pursue individual interests and needs: All programs unite the common characteristics of combining breadth of intellectual inquiry with the specialized instructional needs of students seeking either im: mediate and meaningful post-baccalaureate employment, or preparation for graduate or professional study.

## Special Opportunities

Membership in Phi Beta Kappa, the nation's first Greek letter society and most prestigious honor society, is restricted to those students enrolled in Arts and Sciences degree programs who meet the stringent crite ria and are elected to memberşhip. The. . BGSU chapter of Phi Beta Kappa was installed in 1983
The College of Arts and Sciences offers opportunities for year-long study in Tours, France; Salzburg; Austria; and Madrid, Spain. Students participating in these programs enroll in courses offered by department/ schools in arts and sciences during their academic year abroad, but participation is : not limited to arts and sciences students. : Fashion merchandising majors have the op: portunity to spend their senior year at the nationálly recognized Fashion Institute of Technology located in New York City

Arts and sciences stüdents who are undecided about a-major are assignied to one: of the college office advisers and thereby have access to a program designed to be of assistance to students in the selection of a major.
Opportunities for involvement in cocurricular activity abound in the College of Arts and Sciences. Its academic units sponsor. the theater and forensics programs as well as numerous discipline-based honor societies and interest groups. Often, enrollment in the College of Arts and Sciences is not a prerequisite for participation in these activities:
The college also sponsors an internship program through which-students can gain practical, "hands-on" experience in workplace settings related to their field of study, Several departments and schools in the college also offer internship programs. Arts and sciences students interested in internship experiences may also work under the auspices of the University's Cooperative Education Program.

## Programs offered

Majors and minors are available in all areas listed below unless otherwise noted. The following degree programs are available:
Bachelor of Arts
Individualized planned programs
American studies-planned program
Art
Ant history
Asian studies
Business, general studies in
Classical studies--major only
Computer science
Economics
English
Environmental policy and analysisplanned program
Ethnic studies
Family Resource Management and Consumer studies - minor only
Film studies
French
Geography
Geology
German
History
Home economics
Fashion merchandising
Focd science and nutrition
Home economics general
Interior design
Textiles and clothing
International studies-pianned program
Interpersonal and public communication
talian-minor only
Latin
Latin American studies-planned program
Library and educational media-minor only
Linguistics--minor only
Mass media--minor only
Mathematics
Music
Philosophy
Political science
Popular culture
Psychology
Radio-television-film
Russian
Russian studies-planned program
Scientific and technical communication
Sociology
Spanish
Statistics-major only
Theater
Women's studies

Bachelor of Science
Individualized planned programs
Astronomy-minor only
Biological sciences
Microbiology
Chemistry
Computer science
Environmental science-planned program
Geology
Geochemistry
Geophysics
Paleobiology
Mathematics
Physics
Psychology
Science-minor only
Scientific and technical communication
Statistics-major only
Bachelor of Liberal Studies
Bachelor of Fine Arts
Creative writing
Bachelor of Arts in Communication
Interpersonal and public communication
Radio-television - film (see School of Mass Communication)
Theater
School of Art
Bachelor of Fine Arts
Ceramics
Crafts
Design
Environmental Graphic
Drawing
Glass
Jewelry and metalsmithing
Painting
Photography
Prints
Sculpture
Teacher preparation
School of Mass Communication
Bachelor of Science in Journalism Journalism
Bachelor of Arts in Communication
Radio-tv-film
The College also offers the following special programs:
Preprofessional programs-four-year curric-
ula providing preparation for:
Business
College teaching
Graduate study
Home economics careers
Library work
Mathematics and the sciences
Public administration
Religious work
Arts professional curricula
Preparation for dentistry
Preparation for law
Preparation for medicine
Preprofessional preparation for:
Engineering
Mortuary science
Occupational therapy
Optometry
Osteopathy
Pharmacy
Veterinary medicine

The college also offers an arts-education curriculum and other programs leading to dual degrees, including certification to teach in the public schools. Combined bacca-laureate-master's degree programs are offered in chemistry. For more information, see page 53.

## 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 the general education requirements for the baccalaureate degree listed on page 8 , in addition to the following:

1. Meet the general education requirements listed below, preferably in the freshman and sophomore years;
2. Satisfy the requirements for a major and minor area of specialization (if applicable-courses taken for a major may not also be counted for a minor).
3. The college requirements surpass the University-wide general education requirements. Students are encouraged to take courses from the general education core to meet Arts and Sciences requirements.

## Academic Advising

Although the adviser and the dean's office advise students and check each student's record, upon request, the responsibility for meeting graduation requirements lies with the student and not with the adviser, the department or the dean. Thorough familiarity with the Undergraduate Catalog is essential.

## BACHELOR OF ARTS DEGREE

Each student must complete the general education requirements fisted 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. Every student, however, must take English and physical education in the first year. If known, the major or minor should be started in the first year, but selection of the major may be deferred as tale as the beginning of the sophomore year. Certain majors and programs require course sequences. These sequences should be started in the freshman year.

## General Education Requirements

## Group 1: English Composition

Students are required to complete ENG 112 or to demonstrate by examination that they have proficiency in written expression equivalent to that attained by the student who completes that course. (A penalty is imposed if ENG 112 is not completed within the first 60 hours.) SPCH 102 is recommended for each student.

## Group II: Foreign Language and Cultural Experience <br> Each student is required to demonstrate a

 proficiency in a language and language area by one of the options listed below:1. having been graduated from a high school where all instruction was conducted in a language other than English; or
2. passing a proficiency examination in the language on the 202 course level; or
3. having completed four years of one language in high schoo; or
4. having completed one of the departmental options listed below ( 14 hours minimum in the same language area, or fewer by advanced placement).

## German, Russian and East Asian Languages (Chinese, Japanese)

Completion of GERM 101 and 102 plus a minimum of six additional hours from: GERM $100,117,118,201,202,217,231,331$
and/or GERM 260, 315, 316; or
Completion of CHIN 101, 102, 201 and 202; or

Completion of JAPN 101, 102, 201 and 202; or

Completion of RUSN 101 and 102 plus a minimum of six additional hours from: RUSN $100,201,202,303,315,316,317,319,331$ and/or RUSN 311, 312.

## Romance languages (French, Italian, Latin,

 Spanish)Option I:
FREN 101, 102, 201 and 202; or
ITAL 101, 102, 201 and 202; or
LAT 101, 102, 201 and 202; or
SPAN 101, 102, 201 and 202
Option II: (one of the following)
FREN 111, 112, 211 and 212;
LAT 101, 102 and two of: LAT 141, 142 or 201;
SPAN 111, 112, 211 and 212
A student may transfer at any point from option I to option II but not vice versa. If a student selects option II, all courses in that sequence must be completed subsequent to the first course in which the student is placed. Course 202 is required for admission to 300 -level courses

Credit toward a degree is not granted for foreign language courses which duplicate more than one unit of high school study.

## Group III: Mathematics and Computation

Each student must complete one of the following:
a. three and one-half years of high school mathematics or equivalent proficiency as demonostrated on a placement test;
b. MATH $115,124,128,129$ or 130 ;** c. MATH 121 or $127^{* *}$ and one of the following: PHIL 103, CS 100 or CS 101; d. three years of high school mathematics and CS 100 or CS 101. High school mathematics means college preparatory mathematics, which normally includes algebra I and II, geometry, and in the case of three and one-half years, trigonometry. Remedial, technical and business mathematics are not applicable.

## Natural Sciences

Each student must complete at least three courses elected from astronomy, biological sciences, chemistry, geology, physics or physical geography (including GEOG 125 , $126,127,213,404$ ) including at least two courses approved for laboratory credit from a list of approved courses printed in the College of Arts and Science's Handbook.*

## Group IV: Social Sciences: Economics, Ethnic Studies, Geography, History, Political Science, Psychology, Sociology

Each student is required to complete six courses selected from at least three areas with at least three courses in one area (excluding GEOG $125,126,127,213,404$ ). A student majoring in one of the social sciences may include two major courses in this group. A list of approved ethnic studies courses is printed in the College of Arts and Sciences Handbook.

## Group V: Arts and Humanities

Each student is required to complete one course in literature (American, English or foreign), one course in the fine arts (art, music, theater, television and film), and three additional courses from at least two of the following areas: ART 101, art history; American, English or foreign literature; American studies; ethnic studies; music appreciation, music history, music literature, philosophy (except PHIL 103 used to apply to group III), popular culture, drama, history of public address and women's studies. It is recommended that philosophy be one of these areas. A list of courses approved for group $V$ requirements is printed in the College of Arts and Sciences Handbook. A student majoring in the arts and humanities may count one major course in this group.

## BACHELOR OF ARTS: MAJORS AND MINORS

By the beginning of the second year most students select a major and minor subject. The number of hours required for a major or minor varies with departmental requirements but at least 32 hours are required in the major and 20 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.

Outlines listed for each major represent the usual sequences, but may be modified upon departmental approval to meet individual needs.

[^0]
## Individualized Planned Program Option

If educational objectives cannot be met by one of the departmental majors or minors or by one of the planned programs, students may create an individualized planned program in consultation with a faculty adviser or advisers to substitute for the major or minor or both. A student who has earned at least 30 hours of credit and who needs at least 30 hours to complete the program may petition the Academic Appeals Board of the college by presenting a statement of rationale for an individualized planned program as well as a detailed list of courses to be taken. Upon approval, the student is obligated to complete the program as planned unless changes are approved by the office of the dean. The general education requirements remain the same.

## American Studies

214 University Hall, 372-0145

## Planned program

An interdisciplinary program dedicated to the holistic study of American culture, society and institutions, American studies offers individualized programs using offerings in the humanities and social sciences which focus on the American experience. American studies courses develop the skills and methods appropriate to cultural studies and serve to integrate the substance of other disciplines into coherent patterns reflecting the complexity of American life and our national heritage. The director of American studies and the undergraduate adviser help students design programs suited to their needs and interests within the general requirements of the program and the college.

The program requires a minimum of 36 hours including the following:
AMST 200 and 400 (6)
ART 230, 240 or 300 (3)
HIST 205 and 206 (6)
21 hours in an emphasis area: American Thought and Expression, American Society and Institutions, Comparative Cultures, or Culture and Community. Each of these emphasis areas is designed to allow the student to work across departmental lines to develop a program that is both interdisciplinary in approach and focused in purpose. Within each emphasis area students have the opportunity to design a program (in consultation with the undergraduate adviser) uniquely suited to individual needs and interests. Of the 21 hours in the emphasis area, at least two departments must be represented and no more than 9 hours in a single discipline may be counted toward fulfillment of this requirement; 15 of the 21 hours must be upper division. A minor is required.
Minor (21 hours)
HIST 205 and 206 (6)
AMST 200 and 400 (6)
Courses outside the major selected in consultation with the American studies adviser (9)

## Other programs

Programs in American studies also are avallable through the College of Education

## Art

120 Fine Arts Building, 372-2786
鯒道or (33 hours)
First year (12 hours)
ART 102, 103 and 112 (9)
ARTH: 145 (3)
Second year (15 hours)
ART 205 and 261 (6)
ARTH 146 (3)
ARTO 211, 212, or 213 (3)
select one:
ART 277, 371, 373 or 325 (3)
Third and fourth years ( 6 hours)
select one:
ART 263, 265, 321 or 267 (3)
Art elective (3)
Minor (21 hours)
First year (12 hours)
ART 102, 103 and 112 (9)
ARTH 145 (3)
Second year ( 6 hours)
ARTH 146 (3)
Art electives (3)
Third and fourth years (3 hours)
Arl elective (3)

## Other programs

Bacheior of Fine Arts programs in art are offered by the School of Art in the College of Arts and Sciences. In addition, a Bachelor of Science program in visual art and education is available through the College of Education. A Bachelor of Science in Arl Therapy is offered through the College of Heatth and Human Services.

## Art History

120 Fine Arts Building, 372-2786
Hajor (33 hours)
ART 102 (3)
ARTH 145. 146 (6)
Studio electives (3)
ARTH 440, 442 or 456 (3)
APTH 445 or 446 (3)
ARTH 451 or 454 (3)
ARTH 458 or 459 (3)
At history electives (9)
Winor (21 hours)
ART 102 (3)
ARTH 145 and 146 (6)
Art history electives (12)

## Asian Studies

114. Williams Hall, 372-2169

## Planned program

Through a multi-disciplinary approach, the Asian studies program is designed to provide students with:

1. A broad and comparative view of Asia.
2. An in-depth knowledge of a selected country or region of Asia.
3. An ability to comprehend either Chinese or Japanes tanguage.
 courses available in the new Asian studies brochure, and the completion of a Chinese or Japanese language sequence through the 202 level).

Students majoring in Asian studies should work closely with the Asian studies adviser in the selection of courses and a second major or minor, such as in the field of international business, journalism, pre-law, history, political science, comparative education or sociology.
Minor (20 hours selected in consultation with the Asian studies adviser from the list of approved courses. Asian language sequence is not required.)

## Student exchange program

Every year, upon the recommendation of the Asian studies faculty, the University sends two students to Nanzan University in Japan and one student to Yonsei University in Korea. Each student receives one acadermic-year, tuition-free scholarship while studying in Asia. The credit earned in Asia counts toward graduation from the University.

## Financial aid

Students majoring in Asian studies may qualify for a scholarship awarded each year through the Kiyo Kitahara Scholarship Fund for Asian Studies.

## Business, General Studies in

312 Business Administration Building, 372-0211
Planned program; no minor required.
(53 hours)
MATH 124 and 125 (or MATH 131)
CS 100 or 101
ECON 202 and 203
STAT 211 and 212
ACCT $22 \dagger$ and 222
LEGS 301
MKT 300
MGMT 300 and 360
FIN 300
OR 380
Arts and sciences electives* (6)
MATH 124 and 125 are prerequisites for STAT 211 and 212
*Courses to be selected with approval of the College of Arts and Sciences. No additional business courses may be taken for credit towards graduation.

## Classical Studies

227 Shatzel Hall, 372-2667
Major (only) (24 hours)
Fourteen hours of Latin beyond the 202 level including Latin 351 and at least two courses at the 400 level.
ART 445 or 446 (3)
HIST 441 or 442 (3)
PHIL 211 (3)
Greek language courses recommended.

## Computer Science

246 Mathematical Sciences Building, 372-2337
Major (30 hours)
CS 101, 201, 202, 205, 305, 306, 307 (21)
Three CS electives at the 400 level, excluding CS 490 (9)
PHIL 344 or SOC 320 (3)
MATH 131 and MATH 222 (8)
MATH 247 or 313 (3)
Students will not be allowed to declare computer science as a major until after completing CS 101, CS 201, CS 205, MATH 131 or 222, and ENG 112 with satsifactory grades. See the College of Arts and Sciences for details. Students with a minor or joint major in MATH need not complete the listed MATH courses:
Minor (18 hours)
CS 101, 201 and 205 (9)
CS electives (9)
The following courses may not be applied to the 18 -hour minor requirement: CS 100, 130 . $180,260,281,282,390,490$

## Recommended electives

ACCT 221, ENG 388, PHiL 303; it is recommended that the natural sciences requirement be completed by taking PHYS courses.

## Other programs

A Bachelor of Science in computer science also is offered by the College of Arts and. Sciences. In addition, programs in computer science are available through the College of Education.

## Economics

301 Business Administration Bullding, 372-2646
Major (33 hours)
First year (8 hours)
MATH 124 and 125 (8) or MATH 131 (5) (prerequisites to STAT)
Second year ( 12 hours)
STAT 211 and 212 or equivalent fnot included in major hours) (6)
ECON 202 and 203 (6)
Third year ( 9 hours)
ECON 302, 303 and 473 (9)
Fourth year ( 18 hours)
ECON electives (18)*
Minor (20 hours)
Second year ( 6 hours)
ECON 202 and 203 (6)
Third year ( 6 hours)
ECON 302 and 303 (6)
Fourth year (8 hours)
ECON electives (8)
*ECON 304 cannot be counted toward the requirements for the economics major without permission from the adviser.

## Other programs

Programs in economics also are available through the College of Business Administration and the College of Education.

## English

216 University Hall, 372-2576
Major (36 hours beyond ENG 112)
First year
ENG 111, 112 (University requirement; prerequisite for all major/minor courses)

Second' year (11 hours)
ENG 201 or ENG 205 and 206, prerequisite for all third year courses (4)
ENG 261 or 306 (3)
ENG 190 (1)
ENG 290 (3)
Third year (12 hours)
Two chosen from ENG 264, 265, 266, 267, prerequisite for all fourth year courses (6)
ENG 301 (3)
One chosen from ENG 320, 323, 325, 330, 333, 335 (3)
Fourth year (13 hours)
One major author(s) course chosen from ENG $400,401,408,435$, or, if topic is appropriate, $423,470,480$ (3)
ENG 300 or another thematically organized course-if topic is appropriate, ENG 423, 470, 480 (3)
Any 300 or 400 level ENG literature course (except $342,343,442$ ) (3)
ENG 498 (4)
Special studies option
English majors with specific career goals, such as commercial or technical writing, legal studies or linguistics, may, with the approval of the English adviser, substitute two relevant ENG courses for two required courses (not 498).
Minor (22 hours beyond ENG 112)
Second year (7 hours)
ENG 201 OR ENG 205 and 206 (4)
ENG 290 (3)
Third year (9 hours)
Two chosen from ENG 264, 265, 266, 267 (6)
ENG 301 (3)
Fourth year (6 hours)
One chosen from ENG 320, 323, 325, 330, 333, 335 (3)
Any 300 or 400 level ENG literature course (except 342, 343, 442) (3)
Though, not required for the minor, ENG 190 and ENG 261 or 306 are recommended.

## Other programs

- The College of Arts and Sciences also offers the Bachelor of Fine Arts degree with a major in creative writing and the Bachelor of Arts and Bachelor of Science degrees in scientific and technical communication. Programs in English are also available through the College of Education.


## Environmental Policy and Analysis

124 Hayes Hall, 372-0207
Planned program; no minor required
The program emphasizes the multidisciplinary nature of the field of environmental studies and the roles of these disciplines which address environmental issues from a point of view other than natural science. The curriculum includes basic instruction in the ecosystem approach and an individually planned area of emphasis which is designed to prepare each student to enter the career field of his or her choice. Required courses are:
ENVS 101, 301, 401 and 402 (10)
CS 100 or 101 (3)
ECON 200 or 202 (3)
SOC 101 or PSYC 201 (3-4)
PHIL 332 (3)
POLS 336 (3)
ENG 207 or 488 (3)
LEGS 431 (3)

BIOL 101, 104 or 204 and 205 (two courses) (7-10)
IPCO 203, 204 or 205
Two from: GEOG 125, 126, CHEM 115, 116,
GEOL 100, 104, PHYS 100 (6-8)
Statistics: MATH 115 or 247, or PSYC 270, or SOC 369, or STAT 211 and 212 , or STAT 200 (3-6)
Four courses chosen from: ECON 435; EDFI 416; ENVH 404; ENVR 421; GEOG 325, 331, 333, 426, 442; GEOL 322; HIST 338; POLS 331, $333,335,337$; PSYC $440^{*}$; RED 273; SOC 312, 315, 414 (12)
Fifteen hours must also be taken in an area of emphasis such as environmental planning, management and administration, legislation and policy development or environmental analysis (economics and statistics). Students should file an approved course list no later than the end of the junior year. An internship is highly recommended. Individualized planned minors in environmental studies are available also.

## Other programs

The College of Arts and Sciences offers a planned program in environmental science leading to a Bachelor of Science. Environmental programs are also available in the College of Health and Community Services and the College of Education. Students should contact the Center for Environmental Programs, 124 Hayes Hall, 372-0207, for help in selecting the program that most closely meets their career objectives.
*Environmental issues oniy.

## Ethnic Studies

113 Shatzel Hall, 372-2796
Ethnic studies is an interdepartmental and interdisciplinary program designed to provide a comprehensive study of the ethnic groups in America with particular attention given to the life and experience of each group in relation to their native land.

The program also provides opportunities for students to participate in a congressional or governmental internship in Washington, D.C., one year in a university in Africa, a summer in Mexico or a field study program.
Major (32 hours)*
6 hours introductory courses: ETHN 101 and either ETHN 110 or ETHN 120
9 hours of courses in approved departments outside of ethnic studies (a list is available from the ethnic studies adviser).
17 hours ethnic studies electives

* A student, in consultation with the adviser, may choose to focus on a specialized area of ethnic studies (e.g. black studies, Latino studies).
Minor (21 hours)
Must include two introductory courses with remainder of courses relating to ethnicity in consultation with the adviser.


## Film Studies

Popular Culture Building, 372-2981

## Planned program; no minor required

Film studies is an interdisciplinary program designed to provide a general education in all major aspects of film study and areas of specialization that meet an individual student's interests and needs. Students majoring or minoring in film studies may select courses from the following departments or schools: art, English, German-Russian, history, industrial education, journalism, philosophy, popular culture, romance languages and speech communication.
The program consists of a minimum of 43 credit hours for a film major and 21 credit hours for a minor.
Major (43 hours)
After completion of 24 hours of course work in the basic core, the student selects an additional 19 hours of course work in the creative/technical track or in the history/theory/criticism track. The creative/technical track provides tools and techniques for the talented student to use in cinematic expression. The history/theory/criticism track seeks to explore film in a variety of ways in order to prepare skilled film teachers or critics. The program for each student is individually planned in a series of conferences between the student and the director/adviser.
Core courses
RTVF 261, 264, 464 and 466 (12)
POPC 250 or ENG 200 (lit. and film) (3)
VCT 282 (3)
RTVF 469, POPC 350, ENG 385 or PHIL 335 (3)
GERM 415, RUSN 415, ROML 200 or ITAL 261 (3)
Creative/technical track-19 hours in addition to those courses taken for the core.
RTVF 263, 364, 469, 490
THEA 241, 243, 341, 342, 343, 349, 443
JOUR 306, 307, 407, 430
ART 325
VCT 203, 382, 386, 460, 482
History/theory/criticism track- 19 hours in addition to those courses taken for the core.
ENG 200, 251, 385, 485
HIST 391
PHIL 335
POPC 350, 355
ROML 200
ITAL 261
GERM 415
RUSN 415
RTVF 469
Minor (21 hours)
RTVF 261 and 464 (6)
ENG 200 (3)
POPC 250 (3)
GERM 415, RUSN 415, ROML 200 or ITAL 261 (3)
VCT 282 (3)
RTVF 466, RTVF 469, POPC 350, ENG 385 or PHIL 335 (3)

## Other programs

Programs in radio-television-film are offered by the College of Arts and Sciences as Bachelor of Arts sequences and by the college's School of Speech Communication as Bachelor of Arts in Communication sequences.

## Prench

122 Shatzel Hall, 372-2657
Nifaior (24 hours beyond FREN 202)
FREN $351,361.371$ and 372 plus 12 hours including two 400 -level courses, at least one being hierature. (independent study courses will not fulfill the literature requirement.)
Niner ( 16 hours beyond FREN 202)
FAEN $351,361,371$ or 372 plus seven hours of elecitives, including one 400 -level course (not independent study course.)

## Geography

305 Hanna Hall, 372-2925
細alor (32 hours)
GEOG $125,126.127$ or 213 (2-3)
GEOG 225 or 230 (3)
GEOG 321 (3)
Electives (in consutation with adviser) (23-24)
A student may specialize in urban, rural and regional planning; delivery and planning of social services, cartography, economic geography, environmental resources, population and other aspects of geography.
Dhinor (20 hours)
Other programs
Programs in geography also are offered by the College of Education.

## Geology

170 Overman Hall, 372-2886
Mapion (35 hours including GEOL 493
아 494)
Minor (20 hours)

## Other programs

The College of Arts and Sciences also offers Bachelor of Science programs in geology. The Coliege of Education offers programs in earit science.

## Gemman

130 Shatzel Hall, 372-2269
Maior (24 hours beyond GERM 202)
GERM 317,318 and 417 (9)
Electives in GERM at 400 level (4-6)
GERM 260 and 360 do not count toward the major.
Minnor (14 hours beyond GERM 202)
Oher mograms
Programs in German also are avallable through the Coilege of Education.

## History

206 Williams Hall, 372-2769
Halor ( 33 hours)
Nine hours chosen from the following: HIST 151, 152, 205, 206. 280
Twenty-four hours chosen from the following, with at least three hours at the 400 level in each of the three categories:
European History
HIST 357, 363, 367, 370, 377, 415, 444, 448, 454. 458, 459, 464, 469, 470, 471
U.S. History

HIST 301, 302, 303, 306, 307, 320, 323, 325, 326, $338,419,420,421,422,425,426,427,428$, 429, 430, 433, 436, 437, 438

Other
HIST 304, 305, 309, 310, 311, 315, 316, 340, 360 , $381,382,386,401,411,413,414,441,442$, $462,481,483,486$
(HIST 391, 395, 400, 480, 495 may be used to fulfill the requirements of the major and minor with approval of the department adviser)
Minor (21 hours)
Nine hours chosen from the following: HIST 151, 152, 205, 206, 280
Twelve hours at the 300 or 400 level chosen from at least two of the three categories indicated above with at least three hours at the 400 level.

## Home Economics

206 Johnston Hall, 372-2026
Five programs are available through the Department of Home Economics. These include planned professional programs in fashion merchandising and interior design; major programs in food science and nutrition, and textiles and clothing; and a general home economics major with a concentration in foods and nutrition or textiles and clothing. Programs must be planned with the adviser no later than the second year. After the first year, students may participate in a supervised field experience during the summer or academic year.

## Fashion Merchandising

206 Home Economics Building, 372-2026
This is a planned program designed to prepare students for careers in business and industry. These may include executive management positions; retail or wholesale merchandising; educational and/or sales representative for fabric, apparel, and accessory firms. Fashion merchandising students may choose to study at the Fashion Institute of Technology in their senior year. No minor is required.
First year (21 hours)
ART 101 and ARTH elective (6)
HOEC 101 and 103 (6)
SOC 101 (3)
SPCH 102 (3)
CS 100 (3)
Second year (13 hours)
ECON 202 (3)
PSYC 201 (4)
HOEC 202 and 204 (6)
HOEC 389 (1-5) optional
Third year ( 21 hours)
HOEC 303 and 313 (6)
MKT 300 (3)
BA 203 or STAT 200 (3)*
ACCT 325 (3)
Business elective (3)
MGMT 305 (3)
*STAT 200 may be substituted for BA 203 if students have not completed MATH 127 or a higher level MATH course.
Fourth year (21 hours)
HOEC 401, 402 and 403 (9)
MKT 410 and 430 (6)
Select two: HOEC 404, 412, 414 or 480 (TCID) (6)

## Food Science and Nuirition

206 Johnston Hall, 372-2026
A major program designed for the student who wishes to specialize in thefood science field preparatory to graduate study or for a career in business or industry. A minor is required.
First year (13 hours)
CHEM 125 and 126 (10)
SOC 101 (3)
Second year ( 24 hours)
CHEM 306, 308, and 309 (8)
ECON 202 and 203 (6)
HOEC 210 and 212 (6)
PSYC 201 (4)
Third year (10 hours)
HOEC 307, 326, and 480 (10)
Fourth year (18 hours)
HOEC 405, 431, 432, 435, 436, and 480 (18)

## Interior Design

209 Home Economics Building, 372-2026
The interior design program trains students in the planning and executing of residential and contract interiors. Course work is designed to help students evaluate problems and devise solutions for them. Students who complete the approved four-year program are eligible to apply for associate membership in the American Society of Interior Designers (ASID). No minor is required.
First year (24 hours)
ART 102 and 103 (6)
HOEC 103 and 219 (6)
CS 100 (3)
SPCH 102 (3)
SOC 101 (3)
DESN 104 (3)
Second year (22 hours)
ART 112, 146 and 213 (9)
HOEC 303 (3)
ECON 202 (3)
CONS 235 (3)
PSYC 201 (4)
Third year (24 hours)
ACCT 325 (3)
ART 313 (3)
HOEC 319 (3)
HOEC 333 or DESN 450 or ART 418 (3)
DESN 301 (3)
MKT 300 (3)
Select 6 hours from:
HOEC 105
HOEC 313
HOEC 389
HOEC 406
MKT 410
MKT 430
Fourth year (21 hours)
ART 417 and 440 ( 6 hours)
HOEC 417, 418, 419 and 470 (3) (12)

## MGMT 305 (3)

Also see School of Art for specializations in graphic and environmental design and College of Technology for a specialization in product design.

## Textiles and Clothing

101 Home Economics Building, 372-2026
A major program designed for the student who wishes to specialize in the textiles and clothing field preparatory to graduate study of for a career in business and industry. A minor is required.

First year (6 hours)
HOECTOI and $103^{(6)}$
Second year ( 6 hours)
HOEC 202 año 204 (6)
Third year (6:hours)
HOEG303 and 313 (6)
Fourth year ( 15 hours)
HOEC:401: (3)
Elect 12 hours from: HOEC $404,412,414$ or $480 /$ TCID (12)

## Home Economics General

206 Johnstōn Hall, 372-2026
A program designed for the student who desires a general'home economics báckground with a concentration in foods and nutrition or textiles and clething or plans to
continue in graduate school. A minor
is required.
Core courses (18 hours)-
HOEC 103, 105, 205, 250,321;303 or-406
Foods and inutrition concentration (17. hours)
HOEC 206, 210;:212; 307, 310, 431
Textiles and clothing concentration ( 15 hours)
HOEC 101, 202, 401, 404
HOEC 412
Miñor (21-22 hours)
HOEC 103; 105; 205: Or 405, $207,210,321,303$ $\checkmark$ or 406
Family Resource Management and Consumer Studies Minor (24 hoúrs)
HOEC 205, 311, 405 and 480 (RMCS) (12)
Eléctives: the remaining 12 hours selected from the following HOEC. $107,206,305,406,408$; 413415 STAT: 200 , GEOG 325, 326; MGMT 360 ECON 202 ,SOWK 225 ; 322; POLS 330.

## Other programs

Programs in home economics also are available through the College of Education and the College of Health and Human Services

## International Studies

233 Williams Hâll, 372-2921
Planned program ( 37 nours):
International studies is an interdisciplinary program for students preparing for positions in public administration/policy, non-profit agenciés, research organizations, interna-
titional: organizations, teaching and interna
tional business Students are encouraged to participate in appropriate programs of study abroad sponsored by Bowling Green or ánother university

Students must (a) complete HIST 152 , POLS 101, EEON 202, GEOG 230, SOC
-231, and 6 hours of language study above
the 202 evel in GERM, RUSN or:FREN, and
(b) sélect in consultation with the interna-

- tional stiudies adviser a minimum of 16 hours of courses which concentrate on one of the following areas the Middle East, Soviet: Zunion, Eastern or Western Europe. -An appropriáté minoor is chosen in consul. tation with the international studies adviser


## Italian (minor only)

122 Shatzel Hall $372=2667$
Minor $(15$ hours beyond ITAL 202)
TAL 361371 and 372 .

## Latin

122 Shatzel Hall; 372-2667
Major (21 hours beyond LAT 202)
No more than 6 hour's from LAT: 480, 481 , 485 or 486 .
Minor ( 12 hours beyond LAT-202)

## Latin American Studies

202 Williams Hall, 372-2805

## Planned program

An interdisciplinary planned program for those students who want to specialize in the Latin American areá: The student must. complete 33 semester hours of courses in: HIST, GEOG, POLS, SPAN ECON and. SOC, along with a Latin American studies senior seminar. The student's foreign language is Spanish and an appropriate minor is selected in consultation with the tatin American studies adviser
Core courses (21 hours)
HIST 309, 310
POLS 355
GEOG 349
SPAN 377,378
LAS 401
The remaining 12 hours will be selected from the following HIST $317,411,413 ; 415$; SPAN $368,431,481,482,488$ and 489 ; ECON 454,476 ; SOC 334

## Library and Educational Media (Planned minor only)

216 Hayes Hall: $37.2-2461$ (20 hours)
L\&EM 203, 403, $407,408,428,491$ and three-hours of L\&EM electives.
This minor prepares students for employment in non- school settings such as libraries, and in instructiónal media and informa tion science, as well as for graduate school programs in library science.

## Other programs

Both a major and a minor in library and edu. cational media are offered by the College of Education:

## Linguistics (Planned minor only)

305-A University Hall; $372-2576$
An interdepartmental and interdisciplinary. program designed for the student who is interested in linguistics primarily for its relevance to the major field The program re quires 20 hours of course work appropriately, selected from courses recommended by the linguistics,adviser No work can be counted both for the major and the minor at the same time

## Reqüired courses

LING 310 and 490 (5-6)
One of the tólowing (remaindeff may be used ași-: electives) (3-4):
GERM. 482
ENG 380
SPAN $455^{\circ}$
Electives: 10-12

## Mass Media (Planned minor only)

A program designed to give students - as consumers of the mass media - an opportunity to examine the role of the mass media in a democratic society Primarily for students not planning careers in print, broad= cast or film media; the program consists of a minimum of 20 hours. At least three depart ments are to berepresented and no more than three courses are to be selected from: any one department
POPC $165^{\circ}, 250,270,290,350,355$ and 390 MKT 410
HIST 323
JOUR $103^{*}, 340,402,435,470$ and 471
POLS $341,342,443$.
RTVF 255* or $365^{*} 261$ or $466 ; 260 * 366 ; 460$
*No more than one of the following;courses may be: counted in the mass media planned program: $P O P C$ 165'RTVF 255 RTVF 260 , RTVF 365 and JOUR 103.

## Mathematics

450 Mathematical Sciences Building, 372-2636
Basic requirements for the major and minor "are listed below along with several recommended selections of electives for the major: These options provide an opportunity to plan a major appropriate for entry into the specific areas of application or graduate study
Major (34 hours)
"MATH 131":232, 233' 332 and 322 (19)
Five courses* at the 300 or 400 level to total 34 "
$\hat{v}$ hours including:-
A.** MÄTH 403

B:** MATH 430,434 or 465 .
C. "af least two courses from any one of the fol lowing groups ${ }^{* * *}$
MATH 401,$403 ; 404 ; 432$
MATH $337,437,439$
MATH 451,452
MATH 402, 405
MATH 313, 421, 422
MATH $430,434,461,465$
MATH. $441,442,445$
Minor (22 hours)
MATH131,232,233, and 332 (16)
Two electives at the 300 or 400 level ${ }^{\star}$.(6)

## Recommended electives

Actuarial science (insurance) option
MATH 226, 426, 430, 432, 441, 442, 451
INS, courses
CS 101; 440;442
ACCT-221; 222:
Engineerring and physical science application option
MATH $337,430,432,434,441,452,461$
PHYS.211, 212
MATH-437 or 439
CS 101
Two electives in physical science
Numerical and statistical application option MATH $337,430,432 ; 441,442,451,452^{\circ}$
CS101:440, 442
PHYS 211: 212
Pregraduate study in mathematics, statistics, - computer science and operations research MATH 403, 430,432 and 465 are basic to all graduate study in the mathematical sciences. The remaining, electives should be chosen ac cording to one's area of interest after consulting with a department adviser.

## Oher programs

A Bachelor of Science in mathematics also is offered by the College of Arts and Sciences. In addition, programs in mathematics
are avaitable through the College of Education.
*except MATH 222. 226, 395, 414, 470, 495
"*may be modified in a planned program by an adviser and the department
**some of these courses may not be offered every year

## 睤usic

Musical Arts Center, 372-2181
Students who wish to pursue a major or minor in music should contact the assistant dean of the College of Musical Arts.
Maior ( 38 hours)
MUCH 131, 132, 231, 141, 142, 241 (17)
MUSP, applied siudy (4)
MUSP ensemble (4)
MUSIC electives* (13)
Minor ( 25 hours)
MUCH 131, 132, 141, 142, 241 (14)
MUSP appleá (3)
MUSP ensemble (3)
MUSC electives* (5)
"MUCH, MUED and MUSP excluding MUCH 316. MUED 240, 249, 256, 257, 331, 332, 340, 349, 359, 402. 450. 451. 458, MUSP 367, 368, 453, 454, 458, 459 and 466

## Oheq pregrams

Degree programs in music also are offered through the College of Musical Arts.

## Philosophy

221 Shaizel Hall, 372-2117
The Pbilosophy Department seeks to serve three kinds of students

1. Students taking philosophy as preparation fict a vocational goal outside of teaching might especially want to take PHIL 210, 245, 318, 319, 327, 332 and 342. When such students major in philosophy, an internship for academic credit is recommended in the senior year.
2. Students taking philosophy as a prelaw, pre-med or pre-theological major or as a second major might choose philosophy courses related to other disciplines such as PHL 204, 230, 318, 320, 331, 334, 418 and 431.
3. Students primarily interested in studying philosophy for its own sake might choose specialized courses such as PHIL 315, 325, 412, 414, 423 and 425. When such students major in philosophy, PHIL 303 is recommended in preparation for graduate school. Maict (32 hours)
At least three of the four courses in the history of philosophy (PHIL 211, 212, 311, 313) and at least two courses of philosophy at the 400 level. All majors are encouraged to take PHIL 103 or PHIL 303.
Flivor (20 hours)
At least two of the four courses in the history of philosophy (see above) and at least one course of pritiosophy at the 400 levet.
For the major or minor in philosophy, students are encouraged to take the history of philosophy courses not later than the junior year. Allhough not required, most students will probably want to begin their program by taking a course or two at the introductory level.

## Political Science

227 Williams Hall, 372-2921
Major (33 hours)
POLS 101, 201, 290.
POLS 290 must be taken no later than the end of the junior year. A minimum of 24 hours of political science at the 300-400 level distributed among at least three areas of political science with a concentration in one (at least 9 hrs .) is also required. The following areas in political science are available:
American Government POLS 201, 302, 331, 333, $334,335,336,337,341,342,345,346,347,431$, 434, 440, 443.
Comparative Government POLS 271, 335, 337.
$351,354,355,361,366,368,434,453,454,458$,
$460,462$.
International Relations POLS 271, 335, 337, 372, $374,434,458,460,462,473,475$.
Political Theory POLS 250, 301, 304, 402, 403, 404, 405, 452.
Public Administration POLS 221, 302, 330, 331, 346, 420, 421, 422, 423, 430, 431, 459.
Public Law POLS 416, 417, 418, 419, 420 . 424, 425

POLS 221 is a prerequisite for any of the 300-400 level courses in public administration. The beginning student is encouraged to take the following courses before taking advanced courses in a particular area: POLS 201 for American government, POLS 250 for political theory and POLS 271 for comparative politics/international relations.

All students must consult with an adviser early in their pursuit of a major. Students with a strong background in political science may petition the department chair or the undergraduate adviser to have the POLS 101 or 201 requirement waived. Students opting for honors in political science must* also take POLS 495, Honors Seminar in Contemporary Political Science, and write a senior thesis under the direction of a faculty adviser.
Minor (21 hours)
POLS at 100-200 level (6)
POLS at $300-400$ level (15)

## Other programs

A program in political science also is offered through the College of Education.

## Popular Culture

Popular Culture Building, 372-2981
Planned program (no minor required)
The Department of Popular Culture broadens the base of college education by using the subject matter and methodologies of many disciplines, yet focusing on the dominant or "popular" culture of any period of time. While studies of contemporary culture are an important part of the popular culture program, historical material is emphasized as well.
To insure a diverse program, the student is expected to take as many courses in as many different department/schools as feasible while, at the same time, completing course requirements for the program. Not more than 10 credits may be taken in any one department other than POPC.

The director and adviser direct the program and assist students in designing programs adapted to their special needs and interests and the requirements of the colliege and the department.

## Major (43 hours)

Required courses POPC 160, 165, 220, 480, 426; one of the following: $250,270,350,355,370$ (17). Plus 26 hours selected from POPC courses or from the list of electives available in the college and department office.
Minor (20 hours)
Required courses POPC 160, 165, 426; one of the following: $250,350,355,370$ (12). POPC 220 and 480 are recommended. Plus eight hours selected from POPC courses or from the list of electives available in the college and department office.

## Courses approved as electives for major or

 minor:AMST 200, 300, 400
ART 146, 440, 441, 442
ARTD 419
CONS 235
CRJU 210
DESN 104
ECON 460, 462, 471, 472, 473
EDFI 408, 460
ENG 200, 251, 265, 266, 267, 272, 300, 322, 342. 343, 385, 423, 485, 488
ETHN 205, 210, 215, 304, 308, 410
FREN 371, 372
GEOG 225, 230, 325, 327, 333, 335, 337, 426 442, 451
GERM 315, 316, 415
HIST 205, 208, 280, 302, 303, 306, 307, 323, 326, $377,386,419,420,421,422,425,426,427$, $428,429,430,436,448,459,462,464,470$. 481, 483, 486
HOEC 105, 107, 302, 326, 328, 401, 403, 406, 407, 408, 428, 429
ITAL 261, 371
JOUR $306,416,423,430,433,435,471$
LAT 480, 481
MKT 402, 410, 411, 412, 420
MUCH 125, 232, 236, 321, 401, 420, 431
PEP 356
PHIL 204, 245, 315, 333, 334, 335
POLS 341, 342, 434, 443
PSYC 306, 307, 309, 311
RED 380
ROML 200
RTVF 225 or $365 ; 261,263,360,364,460,466$
RUSN 312, 315, 415, 432
SOC 202, 210, 231, 301, 311, 312, 314, 315, 316,
317, 318, 331, 334, 342, 352, 361, 404, 415,
416, 417, 418, 453, 460, 463
SPAN 371, 377, 378
SSM 421, 425
TECH 152 or 322
THEA 350, 352
VCT 203, 208, 282, 386, 460
WS 200, 300

## Psychology

139 Psychology Building, 372-2301
Major (30 hours in psychology and a minor or 24 hours 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, after consultation with an adviser, courses from at least three of the following fields: BIOL, CHEM, CS, ECON, MATH, PHIL, PHYS. SOC. Two courses that are used to fulfill group requirements may also be applied to this minor.

## First year

PSYC 201 and 270 (7)
Seconá year
PSYC 290(4)
PSYC èlectives
Third year
One 300 -level laboratory course
PSYC electives
Fourth year
One 300-level laboratory.course
PSYC electives
Minor (20 hours in PSYC)

## Other programs

The Bachelor of Arts program in psychology is primarily designed for the student interested in psychology as the focus of a liberal education. There is also a Bachelor of Science'program in psychology offered by the College of Arts and Sciences that is designed for the student who is preparing for graduate study Other programs in psychology are available through the College of Education.

## Radio-Television-Film

41.3 South Hall: 372-2138 or 372-2224

Major (35 hours)
SPCH 102 (3)
RTVF 260, 262, $263,364,460,464$ and 466 (23)
CDIS 2 23 (3)
THEA 141 (3)
IPCO 305 (3)
Minor (23 hours)
IPCO 305 (3)
SPCH 102 (3)
RTVF 460 or 466 (3)
RTVF 260 , 262, and 263 (11)
THEA 141 or CDIS 223. or IPCO 306 (3)

## Other programs

Program's leading to the Bachelor of Arts in Communication degree also are offered by the College of Arts and Sciences.

## Russian

128 Shạtžel Hall: 372-2369
Major (20 hours beyond RUSN 202, or equivalent, and including RUSN 317, 318
"and RUSN 303 or 319)
Minor (12 hours beyond ṚUSN 202) Other programs
Programs in Russian also are offered by the College of Education.

## Russian Studies

241 Shatzel Hall, 372-2921
Planned program (46-66 hours)
Russian studies is an interdisciplinary program which examines Russian and Soviet society, politics and culture. The program aims to develop reading and conversational skills in the Russian. language and a knowledge of Russian and Soviet society. The student selects either a humannities or social science option and completes cóurses in.six areas: preparatory studies, lánguage studies, concentrated. studies, supporting studies, integrative studies and applied studies.

A list of courses approved for inclusion in the following areas of the planned program is available in the college office:-
Preparatory courses (12-16 hours)
Language ( 6 hours beyond Russian 202)
Concentrated studies (17-24 hours)
Support studies (8-14 hours)
Integrative studies (3-6 hours)

## Scientific and Technical Communication

219 University Hall, 372-2576
Technical communication conveys scientific and technical information precisely, clearly and accurately. Although technical writers are not expected to be scientists or engineers, they should have a good background in at least one technical area.

A combined major/minor (no formal minor required), this program consists of a communication core, including an internship; group requirements in computer science/technology, graphics and design, and project management; and a science or techriology cognate appropriate to the: student's career interests.
Major (57-63 hours)
Communication core (18-24)
ENG 207, 388, 389, 488
ENG. 484 or JOUR 301 or any 300 or 400 ENG
literature course
ENG 489
Computer science/Technology group (9)
(one each from 3 of the subgroups below)
MIS 200 or CS 101 or 130
MIS 360 or CS 260 or 201
CS 360 or 205 or TECH 152 or ET 191
STAT 200 or MATH 115 or 247 or SOC 369 or PSYC 270
Design and Graphics group (6).
(any two from)
DESN 104 or VCT 203 or 208 or ART 102 or 112 Project Management (6)
(any two trom) PSYC 452 or 454 or MGMT 305 or IPCO 203 or 303 or 304 or SOC $318^{\circ}$ or 415
Science or Technology cognate.
A program of 18 hours (beyorid any courses counting fori college general education re: quirements) in one or two disciplines such as biological sciences, chemistry; computer science, environmental sciences, foreign languages, geography, industrial technology, mathematics, physics, psychology-worked out in consultation with and approved by the program adviser.
Minor-recommended for students with science, technology or business majors (21 hours)
ENG 207, 388, 389, 488
ENG 484 or JOUR $301^{\circ}$
Any two courses chosen from computer science/techinology, graphics and design, and project management groups above.
Minor-recommended for students with humanities majors (21 hours)
ENG 388, 389, 488
ENG 484 or. JOUR 301
Any three courses chosen from computer science/technology, graphics and design, and project management groups above

## Other programs

- A Bachelor of Science program in scientific and technical communication.also is offered through the College of Arts and Sciences.


## Sociology

45 Williams Hall, 372-2294
Major (32 hours)
SOC 101, 369 and 370
SOC 302 or 303
SOC electives are generally chosen to serve student career goals. Students who anticipate graduate study in sociology should also consider SOC 303 and SOC 480 in addition to the required courses. Majors or minors are strongly encouraged to concentrate course selections in one of the following areas:
Anthropology. Anthropology is the study of the world's, cullures, its technologies, values, languages and beliefs. Course work in anthropology is suited for occupations involving foreign travel and contact with people from other cultures and countries. Such career areas include international business, international diplomacy; tourism and ethnic relations.
SOC 23.1, 33.1, 332, 334, 335. 453
Criminology. This concentration includes the nature of criminal law, the causes and consequences of criminal behavior and the ways in which society, deals with criminal offenders. Criminology is appropriate preparation for careers in both the adult and juvenile justice systems: the police, the courts, probation, and corrections.
SOC 301, 341, 342, 344, 352, 441, 442, 443, 449
Organizations and policy. This concentration is suited for students preparing for careers in agencies responsible for the planning, delivery and administration of services and reșources for the well-being of individuals. Course work provides fundamental understandings for management decisions involving the family, poverty, aging and other human service programs.
SOC 301, 316, 318,361, 404, 417, 460; and 463
Population studies. This concentration ex amines the composition of human populations, communities and organizations as they adapt to their environment. Basic understandings of contemporary energy and ecological issues are emphasized. The curriculum provides a breadth of training for careers in business planning, labor force anal:ysis and economic development. Population analysts are employed in all levels of government and private business.
SOC $311,312,315,414,415,416$
Applied data analysis. The collection, management and interpretation of social data are the primary concern of this concentration. Course work covers sampling techniques, data processing and statistical analysis as applied to research in areas such as public opinion, electoral behavior, consumer behavior, community, planning, program evaluation, needs assessment and environmental impact. Social research analysts hold a variety of positions in government agencies as well as in commercial firms specializing in market research and planning
SOC 311. $312,318,369,370,371,418$

All of the programmatic concentrations histed here may involve cooperative educaLion placements or internships which offer an opportunity for students to work in settings where they can apply their knowledge and lean more about careers in their area of study, as well as cognate courses in other departments

Students can consult the undergraduate adviser in the Department of Sociology for the planning of other concentrations (e.g., pre law and social science education) and for planned individual programs.

- Pantar (20 hours)

A student roinoring in sociology is strongly encouraged in complete SOC 301, 302, 369 and 370.

## Other programs

A minor in sociology is also offered in the College of Education

## Spanish

122 Shatzel Hall, 372-2667
期ajor (27 hours beyond SPAN 202)
SPAN 351, 352, 367, 368, 371; 377 or 378 plus nine hours of electives at the 400 -level.
Winor ( 20 hours beyond SPAN 202) SPAN 351,$352 ; 367$ or $368 ; 371 ; 377$ or 378 plus five hours of electives with one course at 400 level.

## Statistics

450 Mathematical Sciences Building, 372-2636
This major should be combined with a minor or second major in an area of application or technique, such as psychology, science, computer science or business
administration.
Majar ( 36 hours)
MATH 131, 232, 233 and 332 (16)
MATH 441 and 442 (8)
MATH 430 or 465 (3)
Plus three courses from the following, with at least two from Statistics (9):
MATH 432, 445, 451 and 461
CS 440 and 442
STAT 402, 404, 406, 410, 412 and 414
ohner programs
The College of Arts and Sciences also offers a program in statistics leading to the Bachetor of Science degree. A program in statistics is also offered by the College of Business Administration.

## Theater

326 South Hall, 372-2523 or 372-2222
Waior (39 hours)
SPCH 102 (3)
ATVF 260 (3)
CDIS 223 (3)
THEA 347 or 348 (3)
THEA 202, 241, 243 and 341 (12)
IPCO 305 (3)
THEA electives ( $300-400$ level) (12)
Minor (24 hours)
IPCO 305 (3)
SPCH 102 (3)
THEA electives (15)
CDIS 223 or RTVF 260 or IPCO 306 (3)

## Other programs

Programs leading to the Bachelor of Arts in Communication degree also are offered by the College of Arts and Sciences

## Women's Studies

4th floor, Union, 372-2620
Women's studies is an interdisciplinary program allowing students to design their own curriculum in consultation with the director and an adviser in their area of concentration The object of the program is to encourage students to understand the crucial issues in their own lives while preparing for a variety of careers. Through research, analysis and hypothesis, women's studies seeks to understand women's experiences in the past and present and to chart directions for the future. It endeavors to identify that which is unknown and yet believed about the achievements of women individually and collectively as well as their present and potential roles in our own and other cultures. No minor is required.

## Major

WS 200, 400 and;
Eight courses chosen from the following repre senting at least six departments and a 16-hour concentration in one of the departments of the College of Arts and Sciences appearing in the following list

BA 305/HOEC 305
EDFI 460
ENG 200, 423*
ETHN $300^{*}$
HED 301
HIST 326
HOEC 105, 302, 426, 427
IPCO $406^{*}$
PHIL 245
POLS 434
POPC 231, 424, 460, 470*
PSYC 306, 307
SOC 300*, 361, 460, 480, 490
SSM 425
THEA 449*
WS 300. 470
*indicates variable topic courses which may be included in the program when the topic is appropriate to women's studies.

## Minor

WS 200, 400
15 hours of courses chosen from the above list

## BACHELOR OF SCIENCE DEGREE

Each student must complete the general education requirements listed below preferably in the freshman and sophomore years and must satisfy the requirements for a major and minor area of specialization as outlined. Every student, however, must take English and physical education in the first year. If known, the major or minor should be started in the first year, but selection of the major may be deferred as late as the beginning of the sophomore year. Certain majors and programs require course sequences. These sequences should be started in the freshman year.

A Bachelor of Science degree is only available in biological sciences, chemistry, computer science, environmental science, geology, mathematics, physics, psychology, scientific and technical communication or statistics. The student also completes a minor area of specialization as outlined below.

## General Education Requirements

## Group : English Composition

Students are required to complete ENG 112 or to demonstrate by examination that they have proficiency in written expression equiv-* alent to that attained by the student who completes that course. (A penalty is imposed if ENG 112 is not completed within the first 60 hours.) SPCH 102 is recommended for each student.

## Group II: Foreign language and cultural experience

Each student is required to demonstrate a proficiency in a language and language area by one of the options listed below:

1. having been graduated from a high school where all instruction was conducted in a language other than English; or
2. passing a proficiency examination in language on the 202 course level; or
3. having completed four years of one language in high school; or
4. having completed one of the departmental options listed below ( 14 hours minimum in same language area, or fewer by advanced placement).

## German, Russian, East Asian Languages (Chinese, Japanese) <br> Completion of GERM 101 and 102 plus a minimum of six additional hours from: GERM $100,117,118,201,202,217,231,331$ and/or GERM $260,315,316$; or Completion of CHIN 101, 102, 201 202; or Completion of JAPN 101, 102, 201, 202; or Completion of RUSN 101 and 102 plus a minimum of six addifional hours from: RUSN $=$. $100,201,202,303,315,316,317,319,331$ and/or $311,312$.

## Romance languages (French, Italian, Latin,

 Spanish)Option:
FREN 101, 102, 201 and 202; or
ITAL 101,102, 201 and 202; or LAT 101, 102, 201 and 202; or
SPAN 101, 102, 201 and 202.
Option II: Oñe of the following:
FREN 111, 1,12, 211 and 212,
LAT 101, 102, and two of: LAT. 141 and/or 142 and/or 201 .
SPAN 111, 112, 211 and 212
A student may transfer at any point from option I to option II but not vice versa. If a student selects option Il, all courses in that sequence must be completed subsequent to the first course in which the student is placed. Course 202 is required for admission to 300 -level courses.

Credit toward a degree is not granted for foreign languaige courses which duplicate more than one unit of high school study.

## Group III: Mathematics and Computation and natural sciences: biological sciences, chemistry, computer science, geology, mathematics and statistics, physics, psychology

A student is required to complete a minimum of 45 hours of credit, including: 1. a major in biological sciences, chemistry, computer science, environmental science, geology,"mathematics, physics, psychology: scientific and technical communication or statistics:
2. a minimum proficiency in mathematics equivalent to MAT.H 131;*
3. a laboratory sequence in one of the sciences. (A list'of approved courses is printed in the College of Arts and Sciences Handbook.)

Certain science courses numbered 100 do not apply toward a student's degree requirements if credit has been granted for the introductory course in thé same science See departmental listings in the course descriptions' for specific applications.
*See MATH course descriptions for placement in MATH 130/4.31; or Math Department for placement test..
Group IV: Social sciences:
economics, ethnic studies, geography, history, political science, psychology, sociology
Each student is required to complete four courses in one or more of these areas (excluding GEOG $125,126,127,213,404$ ). A psychology major may include two psychology courses in this group. A list of approved ethnic studies courses is printed in the College of Arts and Sciences Handbook.

## Group V: Arts and humanities

Each student is required to complete one course in literature (American, English or foreign), one course in the fine arts (art, art history, music, theater, television and film), and two additional courses from the folliow ing areas: ART 101, art history; American, English, or foreign literature; American studies, ethnic studies, music appreciation, music literature, philosophy, popular culture, drama, history of public address and women's studies. It is recommended that philosophy be one of these areas. A list of courses approved for general education group $V$ requirements is printed in the College of Arts and Sciences Handbook.

## BACHELOR OF SCIENCE: MAJORS AND MINORS

By the beginning of the second year most students select a major and minor subject. The number of hours required for a major or minor varies with departmental requirements but is at least 32 hours in the major and 20 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

These outlines represent the usual sequence, but-you may modify these upon departmental approval to meet individual needs

## Individualized Planned Program Option

If educational objectives cannot be met by one of the departmental majors or minors or by.one of the planned programs, the student may create an individualized planned program in consultation with a faculty adviser or advisers to substitute for the major or minor or both. A student who has earned at least 30 hours of credit and who needs at least 30 hours to complete the program may petition the Academic Appeais Board of the College by presenting a statement of rationale for an individualized planned program as well as a detailed list of courses to be taken. Upon approval, the student is obligated to complete the program as planned unless changes are approved by the office of the dean. The general education requirements remain the same.

## Astronomy (minor only)

270 Overmañ Hall, 372-2422

## Planned program to substitute for minor

 (18-21 hours)Five courses chosen from the following ASTR'201, 212,305, 307, 309, 321 and 403 Plus six additional hours in PHYS.
This program is intended for students with an avocational interest in astronomy. Students planning a career in astronomy should major in physics and choose astronomy courses as electives.

## Other programs

A program in astronomy also is offered by the College of Education.

## Biological Sciences

111A Life Science Building, 372-2058
Major (32 hours)
First and second years
BIOL 204 and 205 (10)
CHEM 125 and 126 (10)
300-level BIOL courses as required for the student's program
Third and fourth years
One course in organic chemistry (CHEM 306 or CHEM 341 and 342). (4-10)
(At least one course in biochemistry is strongly recommended.)
MATH through 131 or equivalent
PHYS 201 (5)
A minimum of 10 hours at the 400-level and:12 additional hours, electives in BIOL .
At least one course in each of the following groups:
Group 1: Biology of Organisms
BIOL 220, 311, 312, 313, 322, 331, 332, 343, 405, 406, 409, 410, 414, 415, 416, 421, 424, 426, 43.1, 432, 434, 435, 440, 472, 473, 474, 475, 476, 477
Group 2. Ecology and Behavior
BIOL 321, 354, 412, 420, 422, 425
Group 3: Gènetics and Evolution
BIOL 350, 404, 447, 449, 451
Group 4: Cell Biology and Physiology
BIOL 407, 41.1. 417, 419, 433, 438, 439, 443
Minor (20 hours)
First and second years
BIOL 204 and 205 (10)
CHEM 125 and 126 or equivalent (10)
Third and fourth years
Electives in BIOL (10)

## Microbiology

541 Life Sciences Building, 372-2731
BIOL 204, 205 and 313 (14)
CHEM 125, 126 and 201 (13); or CHEM 135 and 136 (10)
CHEM 341 and 342 (10); or CHEM 306 (4)
CHEM 308 and 309 (4) or CHEM 445 and 447 (6)
MATH equivalent to 131
PHYS 201 and 202 (10)
A minimum of 18 hours to be selected from the following: BIOL 405, 406; 407, 409, 410, 421; 424, 426. $439,443,447$
BIOL 490 (seminars in micróbiology) and BIOL 400 and $401^{1}$ (with consent of adviser only)

## Other programs

Programs in biology are offered also through the College of Education. A program in applied microbiology is available through the College of Health: and Human Services.

## Chemistry

110 Hayes Hall; 372-2031
Students who take two courses in any one of the following groups may not receive grad uation credit for' both: CHEM 100, 104, 115, 125, 135; CHEM 126, 136; CHEM 116, 306 341 : CHEM 116, 308,445; CHEM 321, 454; CHEM 352, 405. Students should secure more detailed descriptions of these courses from the department office.

Wajor ( 32 hours)
A chemistry major may follow several programs of study depending upon career aspirations. All chemistry majors must take the following:
CHEM 125, 126 and 201 (13);
or CHEM 135, 136 (10)
CHEM 341, 342 (10)
CHEM 321 or CHEM 454, 407 (3-5)
CHEM 352 or CHEM 405 (3-4)
PHYS 202 or PHYS 212 (preferred) should be taken by the end of the second year
GERM or RUSN should be selected as the foreign language. MATH 232 should be completed by the end of the second year, except in the least figorous major. CHEM 313, 395, 413 and 483 may not be included in the 32 hours.

The following program will meet American Chemical Society professional training standards and is the recommended program for students who plan professional careers in science.
First year
CHEM 125, 126 (10) or CHEM 135, 136 (10)
MATH 131 (5)
Second year
CHEM 201 (for those having taken CHEM 126) (3)

PHYS 211, 212 (10)
MATH232 (5)
CHEM 341, 342 (10)
Thiro year
CHEM 405, 406, 407 and 408 (12)
CHEM 413 is highly recommended
-PHYS 401 or MATH 233 and 332 (3-6)
Fourth year
CHEM 454 (3)
CHEM 463 (4)
Additional 400 -level CHEM courses to a min-
imum of five credit hours of lecture and two credit hours of laboratory.

A student who wishes a more limited major but one that is still adequate for advanced study or professional work in chemistry follows the same schedule during the first three years as given above, except
PHYS 401 or MATH 223 and 332 are not required.
Fourth year
CHEM 454 (3)
Electives from 400 -level CHEM
This program also gives excellent preparation for premedical students and other preprofessionals who anticipate possible research careers.

The least rigorous major is useful for certain preprofessional (predental or premedical) programs or for preparation for limited postions in industry or government:
First year
CHEM 125, 126 (10) or CHEM 135, 136 (10)
MATH 131 (5)
Second year
CHEM 201 (3) (for those having taken
CHEM 126)
CHEM 341.342 (10)
PHYS 201. 202 (10) or PHYS 211, 212 (10)
Third and foutth years
CHEM 352 (3) or CHEM 405 (4)
CHEM 321 (3) or CHEM 454 (3) and 407 (5)
300 - and 400 -level CHEM courses to a minimum of 32 hours; at least one CHEM course must be 400-level (not CHEM 413). CHEM 313, 395, 413 or 483 may not be counted in the 32 -hour minimum

## Biochemistry Specialization

Chemistry majors preparing for graduate study or research in the health related academic area requiring biochemistry should take: CHEM 445, 446, 447 and 449; BIOL $204,205,313,350$, and 411 or 439 . CHEM 413 is recommended.
To complete either a standard chemistry major or the more rigorous ACS major, the student should consult the above guidelines for additional courses that are required to complete the major program of choice.
The student is urged to seek advice from departmental advisers at the chemistry office before planning an academic program, and at regular intervals thereafter. Detailed supplements to this publication are available in the chemistry office that describe courses, programs (including graduate) and professional requirements.

## Minor (20 hours)

First year
CHEM 125, 126 (10) or CHEM 135, 136 (10)
Second year
CHEM 201 (3) (for those having taken
CHEM 126)
CHEM electives
Third and fourth years
CHEM electives
CHEM 313, 395, 413 and 483 cannot count toward the 20 hours required.

## Other programs

Programs in chemistry also are offered by the College of Education.

## Computer Science

246 Mathematical Sciences Building, 372-2337
Major ( 30 hours)
CS 101, 201, 202, 205, 305, 306, 307 (21)
Three CS electives at the 400 level, excluding CS 490 (9)
PHIL 344 or SOC 320 (3)
MATH 131 and 222 (8)
MATH 247 or 313 (3)
Students will not be allowed to declare computer science as a major until atter completing CS
101, CS 201, CS 205, MATH 131 or 222, and
ENG 112 with satisfactory grades. See the Col-
lege of Arts and Sciences for details.
Students with a minor or joint major in MATH need not complete the listed MATH courses.
Business systems specialization
A student interested in the application of computer science to business systems may take ECON 202 and 203 as part of the group IV requirement and may choose electives such as ACCT 221 and 222, FIN 300,
MATH 226, MGMT 300 or 305 , MIS 371 and 472, and MKT 300. See the Department of Computer Science for details.
Microcomputer systems specialization
A computer science major may choose to specialize in microcomputer systems. No minor is required in this program. The student should include CS 428 in the computer science major. In addition, the following courses must be taken:
PHYS 201, 303, 428 (11)
ET 358, 453 (6)
ET 490 or PHYS 429 (1-3)
A total of 19 hours is required.

Minor (18 hours)
CS 101, 201 and 205 (9)
CS electives (9)
The following courses may not be applied to the 18 -hour minor requirement: $C S 100,130,180$, $260,281,282,390,490$.

## Recommended electives

ACCT 221, ENG 388, PHIL 303; it is recommended that the natural sciences requirement be completed by taking PHYS courses.

## Other programs

A Bachelor of Arts in computer science also is offered by the College of Arts and Sciences. In addition, programs in computer science are available through the College of Education.

## Environmental Science

## 124 Hayes Hall, 372-0207

## Planned program; no minor required

This program emphasizes the multidisciplinary nature of environmental issues and the role of the natural sciences in addressing and solving environmental problems. Students receive a basic understanding of the sciences, particularly biology and chemistry. Additional courses in the social sciences and humanities are included to help the student obtain a holistic view and understanding of the overall context in which environmental issues are placed. Each student also takes courses in an individually planned area of emphasis designed to prepare for a career field. Close consultation with the staf' of the Center for Environmental Programs is essential. Required courses are:
ENVS 101 (2)
ENVS 301, 401 or 402 (choose two) (5-6)
CS 100 or 101 (3)
ECON 200 or 202 (3)
SOC 101 or PSYC 201 (3-4)
BIOL 204 and 205 (10)
CHEM 125 and 126 (10)
GEOL 104 (4)
MATH 131 (5)
ENG 207 or 488 (3)
Two courses from PHYS 201, 202; 211212 (10) or CHEM 306 and one PHYS course (7-9)
MATH 115, 247, PSYC 270 or SOC 369 (choose one) (3)
IPCO 203, 204 or 205 (choose one) (3)
Four courses from: ENVH 404*: LEGS 431: PHIL 332*; PSYC 440; POLS 331, 333, 335, 336, 337; HIST 338; ENVR 421; GEOG 321, 333, 412, 331, or 442, 426; GEOL 322; SOC 312, 315, 414 (12)
(No more than two courses with an asterisk may be chosen.)

Fifteen hours must also be taken in an area of emphasis such as energy use, chemical analysis, geography/geology, coastal studies or computer modeling. The area of emphasis is planned by the student with faculty members and academic advisers to reflect the student's occupational goals. Students should file an approved course list for their area of emphasis no later than the end of the junior year. An internshir-s. is highly recommended. Individualized planned minors in environmental studies are available also.

## Other programs

The College of Arts and Sciences offers a Bachelor of Arts planned program in environmental policy and analysis. Environmental programs are also available in the College of Education and the College of Health and Human Sérvices. Students should contact the Center for Environmental Programs, 124 Hayes Hall, 372-0207, for help in selecting a program that most closely meets their goals.

## Geology

170, Overman Hall, 372-2886
Major (38 hours)
GEOL $104,105,300,301,308,309,315.423$ and
494 (plus six hours of electives) (38)
MATH:131(5)
CHEM 125 and 126 (10) or 135 (5)
PHYS 201 (5) or 211 (5)
One computer science course in FORTRAN is recommended.

## Geochemistry

A ștudent specializing in geochemistry
should take the following courses:
GEOL 104, 105, 300, 301, 308, 309, 315,423,
431 and 494 (35)
PHYS 211 and 212 (10) or 201 and 202 (10)
MATH 131 (5)
CHEM 125 and 126 (or 135 and 136) 201, 306 and 352 (20) ${ }^{3}$
No minor is required.

## Geophysics ${ }^{*}$

A student specializing in geophysics should take the following courses:
AEOL 104, 105, 300, 301, $308,309,315,423$,
432 and 494 (34)
PHYS 211, 212,307.401 and 427 (18)
MATH 131 and 232 (10)
CHEM-125 and 126 (or 135 and 136) (10)
CS $101^{12}(3)$
No minor is required

## Paleobiology

A student"specializing in paleobiology is required to take the following courses:
GEOL 104, 105; 300; 301, 308, 309, 315, 419, 423; 425 and 494 (37)
GEOL 490 (seniorresearch problem to be ap .proved by paleobiology adviser) (1-3)
CHEM 125 and 126 (10) or 135 (5)
MATH 131 (5)
BIOL 204, 205 and a minimum of two additional courses to be approved by paleobiology adviser (16-20)
One course in statistics,(4-5) is recommended.
No minor is required.
Geology minor (20 hours)

## Other programs

A progiam in geology leading to the BacheIor of Arts also is offered by the College of Aits and Sciences.

## Mathematics

450 Mathemaảtical Scieñces Building, 372-2636
Basic requirements for the major and minor are listed below allong with several-recom nded selections of electives for the major hese options provide an opportunity to plan a major appropriate for entry into the specific areas of application or graduate study.

Major (34 hours)
MATH , 131, 232, 233, 332 and 322 (19)
Five courses* at the 300- or 400 -level to total 34
hours including:***
A:** MATH 403
B:**".MATH 430 or 434 or 465
C: at least two courses from any one of the fol lowing groups ${ }^{* *}$
MA.TH 40.1; 403, 404, 432
MATH'337,437, 439
MATH 451, 452
MATH 402, 405
MATH 313, 421, 422
MATH 430; 434, 461, 465
MATH 441: 442, 445
Minor (22 hours)
MATH 131, 232; 233 and 332 (16)
Two electives at the 300\% or 400 -level* ${ }^{*}(6)$
*except MATH 222, 226; 395; 414, 470, 489. 495
**may be modified in a planned program by an adviser. and the deparment
***some of these courses may not be offered every year

## Recommended electives

Actuarial science (insurance) option
MATH 226, 426, 430, 432, 441: 4,42 and 451
INS courses
CS 101, 440 and 442
ACCT 221. and 222
Engineering and physical science
application option
MATH 337, 430, 432, 434, 441, 452 and 461
PHYS 211 and 212
MATH 437 or. 439
CS 101
Two electives in physical science
Numerical and statistical application option.
MATH 337, 430, 432, 441, 442, 451 and 452 . CS 101, 440 and 442
PHYS 211 and 212
Pregraduate study in mathematics, statistics, computer science and operations research MATH 403, 430, 432 and 465 are basic to all graduate study in the mathematical sciences. The remaining electives should be chosen according to one's'area of interest atter consulting with a department adviser.

## Other programs

A. Bachelor of Arts in mathematics also is offered by the College of Arts and Sciences. In addition, programs in mathematics are available through the College of Education.

## Physics

270 Overman Hall, 372-2422
Major ( 32 hours)
PHYS 211, 212; 301 and 313 (14)
PHYS 305, 307, 401, 406 and 418(14)
PHYS 429 or 470 (1) and other 300 - or 400 -level courses in. PHYS (3)
It is recommended that a student majoring or minoring in physics take the following:
CHEM 125 and 126 (1.0)
MATH 332 (3)
For students expecting to continue on to grad uate school the following courses are recommended
P'HYS $303,309,402,417$ and 419 (15)

## Microcomputer systems specialization

A studeñt may elect to specialize in micro computer systems. The following courses. should be included as part of the major: PHYS 303, 428 and 429 (9)
In addition, the following courses must be taken: CS 101 (3)
CS 201, 202, 205 and 307 (12)
MATH 332 (3)
No minor is required.

## Applied physics specialization

A student may elect to specialize in applied physics, with emphasis on the areas of current interest in the modern optics and solid state fields. The following courses should be included as part of the major:
PHYS 303, 306, 309, 4.10 or 4.11, 417, 428 and 429 (21)
In addition, the following coursses must be taken:
CS 101 (3), 201 (3)
CHEM 125 and 126 (10)
DESN 243 (3)
No minor is required.
Minor (22 hourś)
PHYS 211, 212, 301 and 313 (14)
PHYS 305 and 406 (5)
and other 300 - and 400 -level courses in PHYS (3)

## Other programs

Programs in physics are also available through the College of Education.

## Psychology

139 Psychology Building, 372-2301
Major (30 hours in PSYC and either 24 hours in cognate fields or a minor in a second department. The 24 hours in cognate fields should be selected, after consultation with an adviser, from at least three of the following fields: BIOL; CHEM, CS, ECON, MATH, PHIL. PHYS, SOC. Two courses that are used to fulfill group requirements may' also be applied to this minor.)

Note: The Psychology Department departs from the arts and sciences group requirements in the following aspects:
'Group III. (science and mathematics): a minimum of 43 hours must be completed in two or more of the following fields: BIOL, CHEM, CS, GEOL,MATH, PHYS, PSYC. No more than 24 hours of PSYC may be applied to this group. Each student must demonstrate proficiency equivalent to completion of
MATH 232. Additional preparation in MATH is advisable for the student planning to do advanced graduate work in psychology. Group IV (social sciences): two PSYC courses may be applied. Group V (humanities): courses in logic and the philosophy of science are recommended.

## First ẏear

PSYC 201 and 270 (7)

## Secon'd yëar

PSYC 290 and 370 (7)
PSYC electives
Third year.
Two 300-level PSYC laboratory courses
PSYC electives
Fourth year
PSYC electives
Minor (20 hours in PSYC)

## Other programs

The Bachelor of Science program in psychology is designed for the student who is preparing for graduate study. There is also a Bachelor of Arts program in psychology of fered by the College of Arts and Sciences primarily designed for the student interested in psycholớgy as the focus of a liberal education. Other programs in psychology are available through the College of Education:

## Science

205 Administration Building，372－2015
oiner only
This minor is offered for the student who re－ ceives the Bachelor of Science degree．In place of a conventional minor a student may bring the total in group III（science and mathematics requirement）to 53 hours by following a program approved by the major adviser．No more than 33 hours in the major field may be applied to this requirement．

## Scientific and Technical Communication

## 219 University Hall

龍解品
The program for the Bachelor of Science in scientific and technical communication is the same as that for the Bachelor of Arts described on page 43，except that approp－ riate courses from the science or technol－ ogy cognate and from the computer science／technology group may count to－ ward the 45 hour Group III（Mathematics and Sciences）general education require－ ment for the bachelor of science degree．A plan for these courses is worked out in con－ sultation with and approval of the program adviser．

## 

See description under Bachelor of Arts Degree．

## Suatistcs

450 Mathematical Sciences Building， 372－2636
This major should be combined with a minor or second major in an area of application or technique，such as psychology，science， computer science or business
administration．
Maior（ 36 hours）
MATH 131，232， 233 and 332 （16）
MATH 441 and 442 （8）
MATH 430 or 465 （3）
Plus three courses from the following，with at leasit two from Statistics（9）：
MATH 432，445， 451 and 461
$\operatorname{CS} 440$ and 442
STAT 402．404，406，410， 412 and 414

## Olher programs

The College of Arts and Sciences also offers a program in statistics leading to the Bache－ lor of Arts degree．A program in statistics is also offered by the College of Business Administration．

## BACHELOR OF LIBERAL STUDIES DEGREE

205 Administration Building，372－2015
To be eligible for admission to the Bachelor of Liberal Studies degree program，a student must have completed at least 30 hours of credit with a 2.0 accumulative grade point average．Applications for admission are available in the college office and must be returned to a college office adviser within the first seven calendar days of the semes－ ter in which admission is desired．
A bachelor of liberal studies candidate must：
1．Complete the university requirements listed on page 8 of this catalog．

2．Complete 100 semester hours of course work within the College of Arts and Sciences including not more than 27 semester hours in any one discipline．（A list of courses and departments outside of the College of Arts and Sciences is printed in the College of Arts and Sciences Handbook．）
3．Complete a minimum of 30 semester hours after admission to the program．

## BACHELOR OF FINE ARTS DEGREE

103 Hanna Hall，372－0379
Each student must complete the general education requirements listed below pre－ ferably in the freshman and sophomore years and must satisfy the requirements for a major in creative writing and a minor in an area of specialization．

## General Education Requirements

## Group I：English Composition

Students are required to complete ENG 112 or to demonstrate by examination that they have proficiency in written expression equiv－ alent to that attained by the student who completes that course．（A penalty is im－ posed if ENG 112 is not completed within the first 60 hours．）

## Group II：Foreign Language and Cultural Experience

Each student is required to demonstrate a proficiency in a language and language area by one of the options listed below：

1．having been graduated from a high school where all instruction was conducted in a language other than English；or
2．passing a proficiency examination in the language on the 202 course level；or

3．having completed four years of one language in high school；or
4．having completed one of the depart－ mental options listed below（14 hours min－ imum in same language area，or fewer by advanced placement）．

## German，Riussian，East Asian Languages

 （Chinese，Japanese）Completion of GERM 101 and 102 plus a minimum of six additional hours from：GERM $100,117,118,201,202,217,231,331$ and／or GERM 260，315，316；or

Completion of CHIN 101，102，201，202；or
Completion of JAPN 101，102，201，202；or
Completion of RUSN 101 and 102 plus a minimum of six additional hours from RUSN $100,201,202,303,315,316,317,319,331$ and／or RUSN 311， 312.
Romance languages（French，Halian，Latin，

## Spanish）

Option 1
FREN 101，102， 201 and 202；or
ITAL 101，102， 201 and 202；or LAT 101，102， 201 and 202；or SPAN 101，102， 201 and 202.
Option II：one of the following：
FREN 111，112， 211 and 212；or LAT 101， 102 and two of：LAT 141， 142 and／or 201；
SPAN 111，112， 211 and 212.
A student may transfer at any point from option I to option II but not vice versa．If a student selects option II，all courses in that sequence must be completed subsequent to the first course in which the student is placed．Course 202 is required for admis－ sion to 300 －level courses．

Credit toward a degree is not granted for foreign language courses which duplicate more than one unit of high school study．

## Group III：Mathematics and Computation and Natural Science

Each student must complete al least two courses elected from astronomy，biological sciences，computer science，chemistry， geology，mathematics，physics or physical geography（including GEOG 125，126，127， 213,404 ），including at least one course ap－ proved for laboratory credit from a list of ap－ proved courses printed in the College of Arts and Sciences Handbook．

Group IV：Social Sciences： Economics，Ethnic Studies， Geography，History，Political Science，Psychology，Sociology

Each student must complete three courses in one or more of these subjects．A list of approved ethnic studies courses is printed in the College of Arts and Sciences Handbook．

## Group V Humanities：Art，Art History，English，Music， Philosophy，Popular Culture， Speech Communication

Each student must complete five courses chosen from at least four of the above disci－ plines．One course taken in the student＇s major may be counted in this group．A list of courses approved for the group $V$ require－ ment is printed in the College of Arts and Sciences Handbook．

## Creative Writing

Enrollment in the creative writing major is
dependent upon an ACT score of 22 or igher in English; or consent of the creative writing staff.
Major (37. hours)
ENG 208, 209; 308a, 308b, 407a and 407b (18)
ENG 205, 206. (or:ENG 201) (4)
ENG-261 or 262 (3)
ENG 320, 323, 330 and 333 (12)
Minor (20 hours)
ENG 208, 209, 308,407 (12)
ENG 205 or 206 (2)
ENG 320 or 323 (3)
ENG 330 or 333 (3)

## BACHELOR OF <br> ARTS IN <br> COMMUNICATION DEGREE

The requirements for the degree of Bachelor of Arts in Communication (BAC) include completion of the general requirements for the baccalaureate listed on page 8 and;

1. Completion of the general education requirements in the six areas listed below.
2. Completion of a specialized program in communication studies as defined below;

## General Education

Requirements

## Group I: Communication

Students are required to complete ENG 112 or to demonstrate by examination that they have proficiency in written expression equivalent to that attained by the student who completes that course. (A penalty is imposed if ENG 112 is not completed within the first 60 hours. See page 10.) SPCH 102, THEA 202 and IPCO 305 are also requited:

## Group II: Foreign language or cultural experience

Each student is required to demonstrate a proficiency in a language or language area by one of. the options listed below:

1. having been graduated from a high school, where all instruction was conducted in a language other than English; or

2 passing a proficiency examination in the language on the 202 course level; or
3. having completed four years of one $\therefore$ language in high school; or
4. having completed one of the depart-: mental options listed below. (14 hours minimum in the same language area, or fewer by advanced plaçement).

## German, Russian, East Asian Languages (Chinese, Japanese)

Completion of GERM 101 and 102 plus a minimum of six additional hours from GERM D0, 117, 118, 201, 202, 217, 231, 331 or. GERM $260 ; 315 ; 316$, or

Completion of CHIN 101, 102, 201, 202; or

Completión of JAPN 101, 102, 201 202; or;
Completion of RUSN 101 and 102 plus a minimum of six additional hours from: RUSN 100, 201, 202, 303, 315, 316, 317, 319, 331 and/or 311, 312.
Romance languages (French, Italian, Latin, Spanish)
Option. I
FREN 101, 102, 201 and 202; or
ITAL 101, 102, 201 and 202; or
LAT 101, 102, 201 and 202; or
SPAN 101, 102, 201 and 202
Option II: one of the following:
FREN 111, 112211 and 212; or
LAT 101, 102 and two of LAT 141,142 or 201
SPAN 111, 112, 211 and 212
A student may transfer at any point from option I to option II but not vice versa. If a student selects option II, all courses in that sequence must be completed subsequent to the first course in which the student is placed. Course 202 is required for admission to 300 -level courses

Credit toward a degree is not granted for foreign language courses which duplicate more than one unit of high school study.

## Cultural experience

Those students who have completed two years of one foreign language in high schooi may select a planned program of at least four.courses involving study of foreign or ethnic cultures drawn from an approved list printed in the Communication Handbook.

## Group III: Mathematics <br> and science

Each student must complete at least two courses elected from astronomy, biological scienćes, computer science, chemistry, geology, mathematics; physics or physical geography (inclüding GEOG 125, 126, 127 , 213; 404), including at least one.course approved for laboratory credit from a list of approved courses printed in the College of Arts and Sciences Handbook.

## Group IV: Social sciences: economics, ethnic studies, geography, history, political science, psychol-: ogy, sociology

Each student must complete three courses. in two of these areas. Students may count two courses from their specialized program/ support field in this group as appropriate. A. list of approved ethnic studies courses is printed in the College of Arts and Sciences Handbook
Group V: Arts and humanities: art, literature; (American, English, or foreign), film, music, philosophy; popular culture, theatre
Each student must complete three courses in at least two of these areas from an approved list of courses. Students may count
one course from their specialized program/support field in this group as appropriate. A list of çourses approved for group. $V$ requirements is printed in the College of Arts and Sciences Handbook.

## Group VI: Cognate studies experience

Students must complete as specified by the nature of their specialized programs, six additional courses, from at least two of the above groups. No more than three courses from the Schooltof Speech Communication may be used to satisfy this requirement.

## Specialized Programs

Each student is expected to present a program of specialization in communication : study from existing structured options (theater, radio-television-film, interpersonal and public communication), or a previously approved individual program to approximate the equivalent of a range from 42-54 hours:

## Interpersonal and Public Communication

All BAC students with a specialization in interpersonal and public communication must complete a minimimun of six three-hour courses ( 18 credit hours), selected in consultation with their adviser. Students must also elect a support fièld of 24 sèmester. hours, which augments the communication major in terms of occupational choice.

## Other Programs

Programs leading to the Bachelor of Arts. degree also are offered by the College of Arts and Sciences

## Forensics

The forensics program is a nationally recognized intercollegiate activity, traveling throughout the midwest and the nation to: compete ägainst students from other colleges and universities. Both individual events and debate are included in the program, which has a number of graduate students to. coach the competitors. Limited financial support iș available through talent grants.:

## Radio-TV-Film

See School of Mass Communication

## Theater

1. Theater All BAC students with a spe:cialization in theater must take the following theater core courses: THEA 241,243,341, 347 and 348 , BAC students specializing in. theater may develop specialized programs in consultation with their adviser in the following areas: musical theater, äcting, directing, design and techrical theater; develop:mental drama-and theater management.

## Other Programs

- Programs leading to the Bachelor of Ants degree also are offered by the College of Arts and Sciences.


## University Theater

The University Theater, serves as a laboratory for University students interested in theater. The University Theater presents twelve productions during the academic year. Plays and musicals that are presented represent a wide range of dramatic literature in a variety of production styles. The productions are presented in Main Auditonum and the Joe E. Brown Theater, both in University Hall. Open auditions are held for all productions and the entire University community is invited to participaie. Opportunities are available for students to work in all aspects of theater production from management and promotion to acting, directing, designing and crew work.

The theater program offers talent scholarships in acting to qualified undergraduates. The scholarships are awarded on a competitive basis with students submitting applica--tions, lefters of recommendation and doing a live audition. Students interested in obtaining a taient scholarship audition form should contact the theater office, 322 South Hall.

The theater program also sponsors the Huron Summer Playhouse each year. Students must audition to be considered for membership in the company. Each year the Playhouse presents four plays and two musicals during an eight-week season. The Playhouse provides students with a full range of summer stock experiences.

The theater program is accredited by the National Association of Schools of Theatre.

## PREPROFESSIONAL PROGRAMS

The College of Arts and Sciences provides five kinds of preprofessional programs:

## Poureyear Curricula

Thesc 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. Curriculat requirements and arts and sciences preparation for some special fields of work are discussed in the following section.

## Arts-professional curricula

These are 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 à professional school. Upon satisfactory completion of the first year in the professional school, a bachelor's degree is granted from Bowling Green.

## Preprofessional preparation

From two to three years of preprofessional study may be completed at Bowling Green. The student then transfers to a professional schuol or college to complete a professional program.

## Combined curricula

The student may obtain both an arts and sciences degree and an education degree at Bowling Green by following this program.

## Combined baccalaureate- <br> master's program

By following this program, the student may finish the course work for a bachelor's degree in less than four complete years and is prepared for early enrollment in a graduate program.

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 Preprofessional 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 attending graduate school, bearing in mind that many graduate schools require a reading knowledge of one or more of either French, German or Russian. It may be advantageous to take the combined baccalau-reate-master's program described on page 53. Specific curricula for teaching subjects in areas of technology at the community and technical college level are available from advisers in the Department of Home Economics and the School of Technology.
Students preparing for high school teaching should register in the College of Education unless they elect the combined artseducation curriculum described on page 53.

## 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.

## 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 public school or working 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 and educational
media 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 of a foreign language is 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 Careers in Actuarial Science

Professional status in the insurance industry as an actuary is attained by passing a series of examinations administered by the Society of Actuaries and the Casualty Actuarial Society. Normally some of the examinations are taken while working for an insurance company. A strong mathematics major is required. A list of recommended courses is listed under the major. Up to four of these examinations can be taken while in school. There is a separate process for pension actuaries.

## Preparation for Professional Work in Mathematics and Statistics

For careers in research and higher education, a graduate degree is required. The undergraduate preparation should have both breadth and depth. For careers in the application of mathematics or statistics, it is essential that a strong minor be selected in computer science or a field of application, such as business administration, psychology, physics or other sciences. Courses should also be taken to develop communication skills. A graduate degree may not be required, but students with talent should seriously consider graduate work.

## 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.

## 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. A sludent may desire, however, to secure the 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 the student to shorten the time required for the two degrees.

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 sub: stituting 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: ,

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

1. Eârn â minimum of 92 hours either in residence or by.advanced standing including two hours in PEG 100; at least 60 hours must have been taken at Bowling Green in the student's last two academic years prior to entering the professional school;
"2. Earn a point average of at least 2.5 in all courses undertaken in residence;
$\therefore \quad \therefore 3$ Meet the group requirements of the degree sought;
2. Meet the major and minor requirements of the general curriculum selected.

## Other programs

$\dot{A}$ combined arts-professional curriculum is also offered through the College of Education.

## Preparation for Dentistry

503 Life Sciences Building, 372-0361
Admission to dental school is selective and based upon scholarly achievement and aptitude as indicated by scores on the Dental Aptitude Test, which is generally taken in the spring semester of the student's third year of college. The predental student should select an academic program that provides for an alternate career should acceptance into dental school be denied. The Bachelor of Science degee program can be planned to meé all course requirements for dental school arid still provide time for sufficient ${ }^{\text {s }}$ lectives in other areas so that the student may attend graduate school:or pursue new career alternatives: There are no preferred majors for entrance into dental school, atthough students generally choose biology or chemistry.

Predental students are encouraged to meet frequently with an adviser to insure progress in meeting the designated prerequisites, to prepare for the Dental Aptitude Test and to make application to dental school.

## Recommended course sequence:

BIOL 204, 205, 350, 352, 431 and 432
CHEM 125, 126 or 135; 136; 201 if 125 series is taken; $341,342,308,309$ (plus 445, .446, 447 if CHEM major)
PHYS 201, 202 or 211 and 212
MATH 130 and 131 or 232 depending on major
A student should take the required: courses to complete a major and a minor, as well as the general education requirements for the particular degree program selected,'PEG requirements and electives to total 122 hours. A science minor may be desirable.

## Preparation for Law

206 Williams Hall, 372-2030
All accredited law schools in Ohio, like most accredited schools throughout the country, require a college degree for admission: $A$. college degree is also a prerequisite to taking the Ohio Bar Examination and the bar examinations for most other states.
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. Above all, they stress the importance of acquiring certain intellectual skills and abilities rather than a particular body of information. Foremost among these skills are facility in writing and speaking; logical reasoning and the use of abstract concepts. Because the student can develop these skills in a variety of courses, there is no basis on which to prescribe a rigid and detailed "prelaw.curriculum" or any particular major.
Law schools, however, uniformly emphasize the special value of courses in which considerable writing is required In addition, courses in American government help acquaint the student with the basic legislative, administrative and judicial processes of our society. Business and economics courses often provide an understanding of business and financial concepts and terms with which the lawyer may deal. Other disciplines, such as history, philsophy, psychology and sociology, offer concepts; information and perspectives that are important in dealing with modern legal issues. Finally, prelaw students may wish to take a course taught by case method in order to discover if their aptitudes lie in this direction.

## Preparation for Medicine

503 Life Sciences Building, 372-0361; or 112 Hayes Hall, 372-2031
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, (normally taken during the spring semester of the student's third year), and by other criteria. The student should include in the premedical program a course of study to prepare for admission to medical school and for
admission to an appropriate graduate school or for an industrial, government or teaching position in case the first choice cannot be realized. To meet the requirements for admission to most medical schools, the . Bachelor of Scienice curriculum 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 medical school is not attended. There is no preferred major for entrance into medical school. Generally, either chemistry or biology is chosen by the premedical student, but other majors are possible.

The premedical student is urged to confer frequently with the 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 the student's choice.

## Recommended course sequence

BIOL 204 and 205 (10).
CHEM 125, 126 or 135 and 136 (10).
CHEM 341 and 342 (10)
MATH 130 and 131 (232 optional depending upon major) (8-13).
PHYS 201, 202 or 21.1 and 212 (10). ENG 112 (3)
In addition, a stüdent should plan'to take the required courses to complete a major and a minor, general eduçation group requirements for the degree sought; PEG requirements and electives. Total: 122 hours. Note: the science minor may be advantageous.

## Preprofessional Preparation

## Preparation for Engineering

270A Overman Hall, 372-2421
The two year curriculum outlined below closely parallels the introductory course work of engineering schools and is designed for the student who expects to transfer to a college of engineering at the end of two years. Since the requirements in different engineering colleges and in different fields of engineering vary considerably, the student should consult with the pre-engineering program adviser early in the freshman year in order to plan a schedule to meet the requirements of the institution and branch of engineering in which he or she expects to receive a degree.
Engineering is presently a high-opportunity career area, and a pre-engineering program at Bowling Green offers several advantages, especially for those students who are uncertain about an engineering specialty. However, students should be advised that all engineering specialties require a high aptitude for mathematics and quantitative reasoning. In order to complete the curriculum below in two years, a student must be qualified to enroll in MATH 131 during the first semester of the freshman year; this normally requires four years of high school mathematics and good mathematics aptitude.

## Ficcommended course sequence

MATH 131, 232, 233 and 332 (16)
CHEM 125,126 or 135 and 136 (10)
PHYS 211, 212, $30 \dagger$ and 313 (14)
CS 101 (3)
CS 205 (3)
DESN 104 (3)
ENG 112 (3)
Electives

## Preparation for Mortuary Science

503 Life Sciences Building, 372-0361
The Board of Embalmers and Funeral Directors of Ohio requires a minimum of 60 semester hours of general education to be eligible to register with the board prior to entering a college of moriuary science. At least 30 hours must be in the following subject areas, with a minimum hourly distribution of: English (eight hours), science (eight hours), social science (eight hours), fine or applied arts (six hours). For information about colleges accredited by the Commission of Schools of the American Board of Funeral Service Education, write to the agency at 201 Columbua St. P.O. Box 2098, Fairmont, WV 26554.

A cooperative arrangement exists with the Cincinnati College of Mortuary Science, whereby a student can complete three years at Bowling Green, plus the CCMS diploma program and receive a Bachelor of Arts degree with an individualized planned program in moriuary science. For further information, contact G. Lee Caldwell, 205 Administration Bldg., 372-2015.

## Preparation for <br> Occupational Therapy

503 tite Sciences Building, 372-0361
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 trained therapists as part of the treatment of an adult or a child in the areas of orthepedics, psychiatry, tuberculosis, general medicine and surgery.

Recommended course sequence for transter to Ohio State. Students planning to attend any other professional school should consult an adviser.
BIOL 104,331 and 332 (10)
CHEM 115 (4)
ENG 112 (3)
TECH 313 and 457 (6)
MATH 115 (3)
MRA 301 (2)
PHYS 201 (5)
POLS 101 (3)
PSYC 201 and 302 (7)
PSYC 303, 304 or 309 (3)
PSYC 403 or 405 (3)
SOC 101 or 202 (6)
Humanities (15)
PEG (2)
Electives

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

## Preparation for Optometry

112 Hayes Hall, 372-2031
Requirements vary for admission to the schools and colleges of optometry. Typically, they include courses in English, mathematics, physics, chemistry and biological sciences. Requirements of specific schools should be examined before planning the program for the sophomore year. A list of accredited schools and colleges of optometry in the United States can be obtained from the American Optometric Association, 7000 Chippewa St., St. Louis, MO 63119.

The following two-year pattern coordinates with the program of the Coliege of Optometry of Ohio State University. Many students find that three or four years of pre-optometry are necessary before gaining admission.

## Recommended course sequence:

( 62 hours)
CHEM 125, 126, 306 and 308 (17) or
CHEM 341 and 342 (10)
PHYS 201 and 202 (10)
BIOL 204 and 205 (10)
ENG 112 (3)
MATH 130 and 131 (8)
PEG 100 (2)
Electives
The amount of foreign language to be taken depends upon the requirements of the professional school and the student's high school preparation. Students who do not need foreign language courses should substitute those courses which meet the requirements of the professional school they plan to enter

## Preparation for Osteopathy

The requirements and recommendations for entrance to schools of osteopathy are essentially the same as those for medical school.

## Preparation for Pharmacy

112 Hayes Hall, 372-2031
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 prepharmacy curriculum outlined below. The state boards of pharmacy usually require a period of practical experience in pharmacy. Students should request information concerning requirements for a certificate to practice pharmacy from the board of pharmacy in the state in which they wish to practice. In Ohio this information may be obtained from the secretary, State Board of Pharmacy, Wyandotte Building, 21 West Broad St., Columbus, OH 43215.

Since colleges of pharmacy vary in their requirements, prepharmacy students should ascertain the requirements of the school they plan to enter before selecting 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 prepharmacy program.

A list of accredited colleges of pharmacy may be obtained from the American Association of Colleges of Pharmacy, 4630 Montgomery Ave., Suite 201, Bethesda, MD 20014.

## Recommended course sequence:

(62 hours)
BIOL 204 and 205 (10)
ENG 112 (3)
PHYS 201 and 202 (10)
MATH 130 and 131 (8)
PEG 100 (2)
Electives chosen from social sciences, literature and philosophy
CHEM 125, 126, 341 and 342 (20)
Some pharmacy schools require additional calculus.

## Preparation for Veterinary Medicine

112 Hayes Hall, 372-2031 or 503 Life Sciences Building, 372-0361
Colleges of veterinary medicine require at least two years of preveterinary medical work for admission; however, most students find that three or four years of pre-veterinary study are necessary. The two-year preveterinary medical program which follows is typical, but colleges of veterinary medicine vary greatly in their requirements. Students should obtain information as early as possible about the requirements of the school where they plan to apply. A list of acciedifed colleges of veterinary medicine in the United States can be obtained from the American Veterinary Medical Association, 900 N .
Meacham Rd., Schaumberg, IL 60172.
The College of Veterinary Medicine of Ohio State University recommends courses in animal husbandry and related areas which cannot be taken at Bowling Green. It is possible for the student who plans a three- or four-year preveterinary medical program to defer them temporarily by substituting advanced biology courses, but it may be more advantageous for the studeni to transfer after one or two years to the Agri-culture-Veterinary Medicine Program al Ohio State University.

## Recommended course sequence:

( 62 hours)
BIOL 204 and 205 (10)
ENG 112 (3)
PEG 100 (2)
CHEM 125, 126, 306, 308 and 309 (18)
MATH 130 (MATH 124 acceptable for a student who enters with prerequisite for physics) (3)
PHYS 201 and 202 (10)
Electives selected to meet requirements of the college of veterinary medicine to be entered.

## Combined Curricula

## Arts-Education Curriculum

205 Administration Building, 372-2015
The student who desires to take an arts and sciences degree to qualify for certification to teach in the public schools may take work in education after graduation or qualify for the combined degree program outlined here. On the basis of the accumulative point average, a student may register in both the Colleges of Education and Arts and Sciences for the combined degree as soon as eligible.

The student in the dual-degree program leading to the Bachelor of Arts or Bachelorof 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. complete the requirements of both colleges for the degrees sought;
3 earn at least 142 hours including edu-cation courses.
By:careful selection of electives, the program in both colleges can be completed in eight semesters plus one summer. The superior student may increase the number of subjeects to be carried each semester and complete the program in less time

## Other dual degree programs

205 Administration Building, 372-2015
The student who wishes to earn a dual degree involving the:College of Arts and Sciences and another undergraduate college within the University may do so by ad--hering to the following requirements

1. secure permission to pursue a dual degree progrạm from the offices of both deans before the end of the junior year;

2: meet the general education group requirements of both colleges;
3. earn a minimum of 142 semester hours for graduation ( 20 hours beyond the single degree requiremént)

## Certification to Teach in the Public Schools

365 Education Building, 372-0151
The student who tiolds 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 requiremẻnts tor such certification. These requirements and degree-holder program.applications are available in the program advisement office of the College of Education; 365 Education Building. Several institutions including Bowling, Green offer graduate programs whereby an arts and sciences graduate may take work leading both to certification to teach in thé. public schools' and a mäster's degree. An-: nouncement of such programs may be iñspected in the College. of:Education, 455: ducation :Building.

## Combined BaccalaureateMaster's Program in Chemistry

110 Hayes Hall: 372-2031, or
205 Administration Building, 372-2015
The combined baccalaureate-master's program in chemistry offers the well-qualified science-student the opportunity to complete the Bachelor of Science degree in three years and the Master of-Science degree at the end of the fourth. By completing the two degrees in four years, the student may become better prepared to earn the Ph.D. degree because of the more concentrated background. In addition a preprofessional student may elect either to complete the three-year bachelor of science program and go directly to protessional school or to continue on to earn the master of science degree to prepare for a research-oriented career
The programis structured on a schedule of foưr years, including summers. Courses should be carefully chosen so that major and group requirements will be completed on time.:

## First year

A first-year student will take two semesters each of chemistry and calculus, will complete the English requirement and take social science and/or humanities courses. In the summer session the student will take either eight hours of German (or Russian) or three hours of quantitatitive analysis, or both.

## Second year

A second-year student completes two semesters of physics and two semesters of organic chemistry and finishes the require ments in social sciences and humanities as well as the physical education requirement. If these have been completed other courses may be substituted

## Third year

This year includes two semesters of physical chemistry and electives chosen from biochemistry or advanced organic chemistry. A course in instrumentation or incrganic chemistry completes the undergraduate chemistry major. Some students may choose independent research or other electives such as differential'equations. During the third summer, a student begins research and completes the Bachelor of Science requirements.

## Fourth year

Upon admission to the Graduate College, courses in thermodynamics, kinetics, quantum mechanics, reaction mechanisms, inorganic chemistry and atomic and molecular. structure are taken. During the fourth year, the student may become eligible for a stipend as well as tuition waivers for assisting in one or more uñdergraduate laboratories. In the final summer, the student would normally be expected to complete a formal thesis as part of the master of science program.(plan I). Under certain circumstances, however; a student may, by early consultation with an academic adviser, elect the nonthesis option (plan II) and still complete the program within the.four-year period.

This program also offers students the option of studying off campus for a semester in a governmental or industrial laboratory,
which would likely be done during the summer between the third and fourth years.

## Other combined BaccalaureateMaster's programs

205 Administration Building, 372-2015
An undergraduate capable of maintaining high grades can take the undergraduate degree in the middle of the fourth year by car: rying an average of 18 hours for seven semesters. The resulting total 126 hours is foutr more than the required minimum for the un=: dergraduate degree. These four hours might be taken as graduate credit and followed by a full semester of graduate stúdy A candi- $\therefore$ date for a graduate degree may not become. a candidate for a degree in an undergradü-: ate college without the permission of the dean of the Graduate College.

## School of Art

Maurice J. Sevigny, Ph.D., director 116 Fine Arts Building
372-2786 or 372-2787

## BACHELOR OF FINE ARTS DEGREE

The School of Art is accredited by the $\mathrm{Na}-$ tional Association of Schools of Art and Design and offers several degree options in the arts. Central among them is the Bachelor of Fine Arts degree. The requirements for the B.F.A. degree, in addition to the general requirements listed on page 8 , include the completion of:

1. general education requirements;
2. 48 hours in the art core;
3. a major in either two-dimensional studies, three-dimensional studies or design studies, including:
a. 15 hour specialization in either ceramics, crafts, drawing, environmental design, glass, graphic design, jewelry/metalsmithing, painting, photography, printmaking or sculpture.
b. 9 -hour art minor and 12 hours of support courses in art for studio majors. 15 hours of support courses in approved areas for design majors.

## General Education Requirements

## A: English Composition

Completion of ENG 112, or demonstration by examination of proficiency in written ex. pression equivalent to that attained by a student who completes ENG 112. (A penalty is imposed if ENG 112 is not completed within the first 60 hours. See page 10.)

## II. Foreign language or cultural experience

Each student is required to demonstrate a proficiency in a language by one of the options listed below:

1. A 2-year study of one language in high school: or
2. passing a proficiency examination in the language on the 102 course level; or 3. having graduated from a high school where all instruction was conducted in a language other than English; or
3. having completed one of the departmental options listed below ( 8 hours minimum in same language area, or fewer by advance placement):

Chinese, German, Japanese, Russian
Completion of CHIN 101 and 102; or GERM 101 and 102; or JAPN 101 or 102; or RUSN 101 and 102.

## French, Italian, Latin, Spanish

Completion of FREN 101 and 102, or FREN 111 and 112; or ITAL 101 and 102; or LAT 101 and 102, or SPAN 101 and 102, or SPAN 111 and 112.
A student may transfer at any point from 101 to 112 in that language if available, but not vice versa. If 111 is chosen, the student must complete 112. The student who must take two courses 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 degree.

## III: Science, Mathematics, Computer Science

Each student must complete one course approved for laboratory credit listed in the College of Arts'and Sciences advising handbook and one other course elected from astronomy, biology, computer science, chemistry, geology, mathematics, physics or physical geography (including GEOG 125, 126, 127, 213, 404).

## IV: Social Science

Each student must complete three courses, one or more from economics, ethnic studies, geography, history, political science, psychology or sociology. Approved ethnic studies courses are listed in the College of Arts and Sciences advising handbook.

## V: Arts and Humanities

Each student is required to complete one course in literature (American, English, or foreign), and two additional courses from the literature area, American studies, ethnic studies, music, philosophy, popular culture, speech communication or women's studies. B.F.A. students are encouraged to elect a course in aesthetics, art criticism, or film criticism, and will count two required art history courses will also count in this area. Approved courses are listed in the College of Arts and Sciences advising handbook.

## Art Majors

120 Fine Arts Building, 372-2786
The School of Art offers studio majors in the areas of two-dimensional studies, threedimensional studies and design studies. Each major requires completion of the art core, a 15 -hour specialization, a 9 -hour art minor (except for design) and 12 hours of support courses ( 15 for design). A student should consult each semester with the B.F.A. adviser in the School of Art concerning progress and course sequence. Courses taken as part of the art core may not be considered part of a specialization.
Art Core (48 hours)
Foundations: ART 102, 103, 112 (9)
Art History: ARTH 145, 146, two 400-level ARTH electives (12)
Design: ARTD 211, 212, or 213 (3)
Studio: ART 205, 261; three from ART 277,
$325,371,373$; three from ART 263, 365 or
366,267 or 315,320 or 321 (24)

## Two-Dimensional Studies

Specializations (15)
Drawing: ART 206, 305, 405, 405, elective
Painting: ART 372, 372, 471, 471, elective; or ART 374, 374, 473, 473, elective
Photography: ART 325, 425, 425, 470, elective
Printmaking: ART 277, 377, 377, 477, elective
Minor (9 hours, 3 courses in one area)
Support Courses (12)
Senior Project/Portiolio (3)

## Three-Dimensional Studies

## Specializations (15)

Ceramics: ART 263, 363, 463, 463, elective
Crafts: ART 321, 363, 366; two of 267, 315, 320, 322, 365
Glass: ART 267, 315, 415, 415, elective
Jewelry/Metalsmithing: ART 320, 321, 322. 421, elective
Sculpture: ART 361, 361, 461, 461, elective
Minor ( 9 hours, three courses from one area)
Support Courses (12)
Senior Project/Portfolio (3)

## Design Studies

Specializations ( 15 hours plus 8 hours of design core)
Graphic Design: ARTD 211, 419 (5); ARTD
13, 312, 411, 412, 413 (15); (212 or 213 in Art Core -3)
Environmental Design: ARTD 213, 419 (5); ARTD. $313,417,417,418$, ARTD elective (15); (211 or 212 in Art Core - 3)

Support Courses: A minimum of 15 hours must be elected from an approved list of. courses in consultation with the School of Art Design Advisor.
Senior Seminar: ARTD 414 (3)
Related design programs-A product design specialization is available in the School of Technology in cooperation with the School of Art. A major in design technology is also available through the School of Technology. A major in interior design is available through the College of Arts and'Sciences.

## B.F.A. teacher preparation

The teacher preparation program is available as a combined arts and sciences/education curriculum which leads to the Bachelor of Fine Arts degree with certification to teach in the public schools. If offers in-depth experiences in the studio component of the art education content specialization. Students in the B.F.A. program may qualify for teacher certification through successful. completion of the teacher educational certification requirements. This combined program will generally require an additional senester to complete. Though it is possible to complete, the education requirements in a fifth year of study, it is recommended that B.F.A. students desiring Ohio teacher certification attend to these requirements earlier in their programs.

A student who follows'this curriculum registers.in both the Colleges of Arts and Sciences and Education and has the program approved by the School of Art B.F.A. teacher preparation adviser.

In addition to the art core, the completion of a specialization in one area and the senior project/portfolio course, the following courses are required for teacher certification:
ARTE 252, 352, 353, 487; 2-3 hours of ARTE 470, 482, 483, 495; 10 hours of ARTE 492 and/or 497
Two crafts (ART) electives
SOC 101, PSYCH 201, two social science èlectives, PHIL 204, a POPC elective, EDFI 302, 402 and 408, EDFI/EDCI 202, EDSE 311, SPCH 102

## Related Degree Programs

The School of Art sponsors a Bachelor of Arts program in Art History and Art through the College of Arts and Sciences. The School also offers a Bachelor of Science degree in Visual Arts Education in conjunction with the College of Education, and a Bachelor of Science degree in Art Therapy through the College of Health and Human Services.

## Special Topics Offerings

Periodically the School of Art offers experimental courses in a variety of areas to enhance the established curricula of the var= ious degree programs. These workshops (ART 395; ART 495), taught by both School faculty and invited artists and scholars, have included: computer art, papermaking, illustration, textile printing, photo/print techniques and mural painting. Individual Study (ART 470) is also available for students who have completed available course offerings in an area and have exhibited a marked degree of proficiency and independence in regular course work.

# School of Mass Communication 

Department of Journalism, 304 West Hall, 372-2076
Department of Radio-Television-Film, 322 West Hall, 372-2224

## The field of mass communication

The study of mass communication encompasses all of the modern mass communication media - newspapers, consumer magazines, business and industrial publications, technical periodicals, books, trade and professional publications, radio, television, photography, motion pictures, cable television, teletext, videotext, corporate video and satellite transmissions. As a diversified profession, mass communication requires highly trained news reporters and editors for claily newspapers, weeklies, the wire services, radio and television; specialists in photojournalism; public relations practitioners; editors for a wide range of magazines; producers, directors and editors for television and film; writers in special fields such as science, business, economics, education, medicine and politics; radio announcers and production experts; broadcast salespersons; audience researchers; and competent administrators to manage the editorial, advertising and business functions of publications, broadcast stations and other mass communication services.
The student who plans a career in mass communication must have a broad education based on the social sciences, humanities and natural sciences; understand the social, political and economic roles of the mass media in a democratic society; be able to read intelligently the scholarly mass communication literature; have superb writing and thinking skills, and be proficient in the professional techniques demanded by employers.

## Majors

Students can major in one of the programs in the Department of Journalism or in one of the progams in the Department of Radio-Television-Film. Those choosing to major in one of the journalism programs may not also major in a radio-television-film program, unless they are willing to extend their education beyond the 122 hours normally required for graduation.

Students planning careers as news writers, reporters, feature writers, sports writers, magazine and newspaper editors, television and radio news directors, photojournalists and public relations specialists usually major in the Department of Journalism

Students planning careers as television and film producers, directors, and editors; broadcast salespersons; radio announcers and production experts; programming researchers; scriptwriters; and on-air personalities usually major in the Department of Radio-Television-Film.

## Campus Media

The BG News, the four-times weekly campus newspaper (214 West Hall, 372-2601), provides opportunities to gain experience in reporting, editing, advertising and management. In addition, students have the opportunity to work on the Key, BGSU's yearbook ( 28 West Hall, 372-0086). Other publications include a student magazine, Miscellany, and The Obsidian and The Gavel, newspapers aimed at special interests. All these publications are under the supervision of a board of student publications.

Located on south campus, the University Television Center contains public television station WBGU-TV and closed-circuit instructional television production and distribution facilities.

The center's staff of 30 full-time professional broadcasters is assisted by graduate assistants, doctoral fellows and more than 50 undergraduate employees.

WBGU-TV, a regional public television station serving northwestern Ohio and northeastern Indiana, 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 local program production schedule provides student opportunities for professional production experience in television.

The Closed-Circuit Instructional Television Office provides the campus community with telecourses and a variety of other educational television and film materials used by academic departments. A campus-wide dual television cable system carries commercial station programs and educational programming to all residence halls. The system also provides opportunity for intra-University communications.

The center's television staff contracts with state and other agencies for production projects, some of which attain nationwide distribution.

Students interested in gaining professional radio experience while studying at Bowing Green have two stations at their disposal. WBGU, the University FM radio station (West Hall 120, 372-2826), broadcasts on 88.1 megahertz with 1350 watts. Programming consists of rock, jazz, classical and ethnic music, plus news, sporls and public affairs programs. This noncommercial radio station is operated by student volunteers who work with a faculty adviser.

Carrier-current WFAL (West Hall 120, 372-2195) is a student-operated commercial AM radio station broadcasting to residence halls on campus.. The station provides communication to and among students while offering commercial programming designed to meet students interests. The station is heard in the residence hallis on 680 AM .

Both WBGU and WFAL are organized and operated according to professional radio station practices and provide students with a wide range of experiences including on-air announcing, news and sports, broadcast sales and promotion, writing and production, audience research and station management.

Students interested in electronic journalism may participate in the Bowling Green Radio News Organization, which supplies news, sports, features and documentaries for the campus radio station WFAL and the University's FM station, WBGU. They may also participate in the feature and documentary productions of WBGU-TV.

Participation in student publications and in campus-related radio and television stations is not limited to mass communication students.

## Training and Facilities

The School of Mass Communication occupies West Hall on campus. West Hall has recently undergone a two-million dollar renovation designed to turn it into a modern mass communication laboratory. Each area of West Hall has been specifically designed to aid in the education of a particular segment of mass communication professionals. For example, the lower floor of the building consists of laboratories and classrooms dedicated to the teaching of film. The lower floor contains still photography developing labs, printing labs and color labs, and the student yearbook. It also contains super 8 and $16-\mathrm{mm}$ motion picture labs. The first floor houses two radio stations, a complete television studio, video editing facilities and a property storage area. The second floor contains modern writing laboratories, a video display terminal laboratory, a broadcast studio, a student-operated newspaper, and audio-visual classroom, and numerous newspapers and magazine paste-up and layout areas. The mass communication faculty is housed on the third floor, and that floor also contains several specially designed classrooms. Modern typesetting, broadcasting, photography, film, audio and video equipment is provided in the various laboratories.

Laboratory fees are charged in many of the skills courses utilizing equipment. A field practice (internship) provides majors with professional training and experience on the staff of a daily or weekly newspaper, magazine, radio or television station, cable television system, college news bureau or public relations department of a business or governmental agency.

## Student Organizations

The School has chapters of five national organizations dedicated to professional interest in mass communication fields: Society of Professional Journalists/Sigma Delta Chi, a society of journalists open to students wishing a professional association; Women in Communications, Inc., an organization dedicated to the professional advancement of women working in the media; Public Relations Student Society of America, an organization affiliated with the national Public Relations Society of America; the International Association of Business Communicators, an association for those service in communication roles in the business world; and the International Television Association, an organization of non-broadcast video practitioners.

The Department of Journalism also has a chapter of Kappa Tau Alpha, the national journalism honorary society. Two campus groups, the Benjamin Franklin Society and the Radio/Television News Association, are for students interested in magazine publishing and broadcast journalism, respectively.

## Department of Journalism

The Department of Journalism is accredited by the Accrediting Council on Education in Journalism and Mass Communication. The department is a recipient of Reader's Digest Foundation funds, which pay travel and other expenses for students researching stories away from campus. Contacts with numerous professional organizations are maintained through individual faculty memberships. The Department of Journalism serves as secretariat for the Great Lakes Interscholastic Press Association (GLIPA), the high school press association serving portions of Ohio, Michigan and Indiana. The department also holds membership in the Association of Schools of Journalism and Mass Communication.

## Bachelor of Science in Journalism

A candidate for the degree of bachelor of science in journalism must meet the following requirements in addition to those listed on page 8.

1. Be proficient in typewriting skills by successfully completing a typing course in high school or college.
2. Complete approximately 55 semester hours of general education requirements, including 3 to 6 hours of English composition; 2 hours of physical education; demonstration of proficiency in a foreign language; 3 hours of a natural science laboratory course; 18 hours of social science courses including history, political science and economics; 12 hours of humanities and arts courses including English literature and philosophy; 6 hours of computation and mathematics including computer science and a course in either college mathematics, statistics or accounting; and a 3 -hour course in speaking and listening. Courses fultilling the general education requirement are listed in the Department of Journalism Requirements Sheet provided to incoming freshman and transfer students each year and available from the departmental office in 304 West Hall.
Foreign Language Requirement - Each student is required to demonstrate a proficiency in a language or language area by one of the options listed below: a. having been graduated from a high school where all instruction was conducted in a language other than English; or b. passing a proficiency examination in the language on the 202-course level; or c. having completed four years of one language in high school; or d. having completed one of the departmental options listed below (14 hours minimum in the same language area, or fewer by advanced placement.)

GERMAN, RUSSIAN, EAST ASIAN LANGUAGES (CHINESE, JAPANESE)
Completion of GERM 101 and 102 plus a minimum of six additional hours from: GERM $100,117,118,201,202,217,231,331$ and/or GERM 260, 315, 316; or Completion of CHIN 101, 102, 201, 202; or Completion of JAPN 101, 102, 201, 202; or Completion of RUSN 101 and 102 plus a minimum of six additional hours from: RUSN $100,201,202,303,315,316,317,319,331$ and/or 311, 312.
ROMANCE LANGUAGES (FRENCH, ITALIAN, LATIN, SPANISH)
Option 1
FREN 101, 102, 201 and 202; or
ITAL 101, 102, 201 and 202; or
LAT 101, 102, 201 and 202; or
SPAN 101, 102, 201 and 202
Option II: one of the following:
FREN 111, 112, 211 and 212; or LAT 101, 102 and two of LAT 141, 142 or 201
SPAN 111, 112, 211 and 212.
A student may transfer at any point from option I to option II but not vice versa. If a student selects option II, all courses in that sequence must be completed subsequent to the first course in which the student is placed. Course 202 is required for admission to 300 -level courses.

Credit toward a degree is not granted for foreign language courses which duplicate more than one unit of high school study. 3. Complete between 32 and 34 semester hours of journalism/mass communication courses, 11 hours of which are core jounalism courses and the remainder of which are specific sequence courses and journalism electives. No more than 34 semester hours of journalism/mass communication courses may be counted towards a Bachelor of Science in Journalism degree. (Note: Courses taken in programs other than journalism, such as the radio-television-film program or the visual communications technology program, may count as part of the 34 semester hours allowed. Students should not enroll in mass communication courses in programs outside of the Department of Journalism without first checking with their journalism adviser.)
4. Earn a grade of " C " or better in all journalism courses and maintain a 2.5 grade point average in journalism courses. All journalism courses must be taken for a grade. A student is allowed to repeat a journalism course only once.
5. Complete a minor of at least 20 semester hours in a field other than journalism/mass communication or complete an interdepartmental minor of 20 hours that clusters courses in two or more fields other than journalism/mass communication. Twelve of the 20 hours required for a minor must be in 300 - or 400 -level courses. Minors are declared in consultation with the student's adviser. All courses taken for minor credit must be taken for a grade.

Nete: Resources may limit class enrollment in upper-division journalism courses, beginning with JOUR 300 . Total hours earned and grade point average determine which journalism students are given preference. Sudents not majoring in journalism may find it difficult to gain admittance into many upper-division journalism courses, including JOUR 300 . Non-majors may wish to consider enrolling in JOUR 301. Journalism Techniques for Non-Majors.

## Core courses in journalism required of all majors

( 11 hours minimum)
JOUR 103, 300 and 402 (9)
JOUR 412 (2-3); 2 hours required, one of which must be with a campus medium

## Groadcast journalism

(23 hours)
JOUR 206 (3)
RTVF 262 (4)
RTVF 263 (4)
JOUR $312,330,331,430$ (12)
Note: Listed prerequisites for the above RTVF courses may not apply to School of Journalism students who have completed JOUR 300. Students should check with their adviser before enrolling in RTVF courses tisted as prerequisites for the above courses.

## Magazine journalism

(21-23 hours)
JOUR 303, 304, 404, 416 (12)
JOUF electives (9-11)
Heweedional
(21-23 hours)
JOUR 302, 311, 312, 315 (12)
JOUR electives (9-11)

## PHotaioumalism

(21-23 hours)
JOUR 206, 307, 407 (9)
JOUR 302 or 303 (3)
JOUR electives (9-11)
Note: JOUR 304 and JOUR 305 are recommended as electives.

## Puthit Relations

(21-23 hours of journalism courses and 9 hours of business courses)
JOUR 303, 340, 380, 440 (12)
MKT 300 and 410 (6)
MGMT 305 (3)
JOUR electives (9-11)
Note: Two of the above three business courses may be applied to certain minors, in consultation with the student's adviser.
Any change in program requirements or course prerequisites must have approval of the director of the School of Mass Commurication.

## Non-journalism elective courses

After completing their approximately 55 hours of required general education courses, their 32-34 hours of required journalism/mass communication courses and their 20 -hour required minor, most students will have approximately 15 semester hours remaining to complete the 122 semester hours required for graduation. Students must use these hours as general electives, taking courses outside the field of journalism/mass communication. Students are encouraged to select these general electives carefully with the advice of their journalism adviser. General electives should be chosen with the goal of enhancing the student's overall education.

## Bachelor of Arts in Communication Radio-Television-Film

A candiate for the degree of bachelor of arts in communication with an emphasis in radio-television-film must meet the following requirements in addition to those listed on p. 8:

1. Complete the general education requirements for the Bachelor of Arts in Communication explained below.

## General education requirements

## Group I: Communication

Students are required to complete ENG 112 or to demonstrate by examination that they have proficiency in written expression equivalent to that attained by the student who completes that course. (A penalty is imposed if ENG 112 is not completed within the first 60 hours. See page 10.) SPCH 102, THEA 202 and IPCO 305 are also required.

## Group I: Foreign language or cultural experience

Each student is required to demonstrate a proficiency in a language or language area by one of the options listed below:

1. having been graduated from a high school where all instruction was conducted in a language other than English; or
2. passing a proficiency examination in the language on the 202 course level; or
3. having completed four years of one language in high school; or
4. having completed one of the departmental options listed below ( 14 hours minimum in the same language area, or fewer by advanced placement).
GERMAN, RUSSIAN, EAST ASIAN LANGUAGES (CHINESE, JAPANESE) Completion of GERM 101 and 102 plus a minimum of six additional hours from: GERM 100, 117, 118, 201, 202, 217, 231, 331 and/or GERM 260, 315, 316; or Completion of CHIN 101, 102, 201, 202; or Completion of JAPN 101, 102, 201, 202; or Completion of RUSN 101 and 102 plus a minimum of six additional hours from: RUSN $100,201,202,303,315,316,317,319,331$ and/or 311, 312.

ROMANCE LANGUAGES (FRENCH, ITALIAN, LATIN, SPANISH)
Option 1
FREN 101, 102, 201 and 202; or
ITAL 101, 102, 201 and 202; or
LAT 101, 102, 201 and 202; or
SPAN 101, 102, 201 and 202
Option II: one of the following:
FREN 111, 112, 211 and 212; or LAT 101, 102 and two of LAT 141, 142 or 201
SPAN 111, 112, 211 and 212.
A student may transfer at any point from option I to option II but not vice versa. If a student selects option ll, all courses in that sequence must be completed subsequent to the first course in which the student is placed. Course 202 is required for admission to 300 -level courses.

Credil toward a degree is not granted for foreign language courses which duplicate more than one unit of high school study.

## CULTURAL EXPERIENCE

Those studenis who have completed two years of one foreign language in high school may select a planned program of at least four courses involving study of foreign or ethnic cultures drawn from an approved list printed in the Communication Handbook.

Group III: Mathematics and science
Each student must complete at least two courses elected from astronomy, biological sciences, computer science, chemistry, geology, mathematics, physics or physical geography (including GEOG 125, 126, 127, 213,404 ), including at least one course approved for laboratory credit from a list of approved courses printed in the College of Arts and Sciences Handbook.
Group IV: Social sciences; economics, ethnic studies, geography, history, political science, psychology, sociology
Each student must complete three courses in two of these areas. Students may count two courses from their specialized program/support field in this group as appropriate. A list of approved ethnic studies courses is printed in the College of Arts and Sciences Handbook.

Group V: Arts and humanities: art, literature, (American, English, or foreign), tim, music, philosophy, popular culture, theatre Each student must complete three courses in at least two of these areas from an approved list of courses. Students may count one course from their specialized program/support field in this group as appropriate. A list of courses approved for group. $V$ requirements is printed in the College of Arts and Sciences Handbook.

Group Vi: Cognate studies experience
Students rnust complete, as specified by the
nature of their specialized programs, six
dditional.courses from at least two of the
above groups
2. Complete at least 30 hours in radio-Television-film courses, 20 of which are core requirements.
3. Earn a grade of "C". or better in all RTVF courses after RTVF 255 and 260 are completed.
4. Complete a support field of at least nine hours. A support field should be picked in consultation with a student's adviser.

## Specialization: five sequences

In addition to other requirements, each radio-television-film major chooses one-of five areas of specialization. In the television production sequence, students are exposed to theory and practice in the techinical, electronic, artistic and logistical aspects of tele*vision production: Classes are divided into' two parts: the theoretical basis through lectures and demonstrations, and laboratory sessions including hands-on experience. The radio production sequence is organized in a similar fashion, with a béginning course and an advanced course for individual and small-group endeavor. Students in the advanced course use the Universitylicenised station, WBGU-FM, as their workshop. In the film sequence, students study a combination of history and criticism, as well as super- 8 and 16 mm . production. In the nanagement and sales sequence, students Combine classroom instruction with actual sales experience under the auspices of WFAL, the campus commercial radio station: In the audience and programming research sequence, students learn to carry out the kind of research on which broadcast stations and other program suppliers, depend to aid their decision-making.

## Matriculation into Radio-

## Television-Film Sequences

Before being clasșified as a radio-televisionfilm major :a student must:

1. Complete at least 30 hours of coursewórk. consisting of general education requirements and RTVF 255 and 260.
2.'Earn an overall grade point average in the above mentioned general education, course work of at least 2.5, and earn at least a 2.5: in RTVF 255 and 260.
To remain a radio-television-film major; a student must receive a grade of " C " or better in all RTVF course work. (Students are required to take all RTVF courses for a -grade.)

- Students transferring into the Department of Radio-Television-Film must have a 2.5 grade point average in both radio-televisionfilm and overall course work. No more than 12 semester hours of course work in radio-television-film will be accepted for transfer rom juniór colleges. No more than 15 emester hours of,course work in radio-television-film will-be accepted for transter from any four-year institution.

Core Courses in
Radio-Television-Film
RTVF 255, 260, 262, 263, 365,366

## Areas of Specialization

## Television

RTVF 360, 460, 364, 468 (12)

## Radio

RTVF 360, 460, 368, 469 (10)

## Film

RTVF 261, 264, 464, 466 (12)

## Audience Research

RTVF 360, 460, Soc. 369, 370 (12)

## Sales/Management

RTVF 360, 460, 469 (Mgmt.), $469{ }^{\prime}$ (Promo-tion) (12)



# COLLEGE OF BUSINESS ADMINISTRATION 

Robert A. Patton, Ph.D:, dean, 371 Business Administration Building, 372-2747
Peter M. Hutchinsón Ph.D., associate dean, 371 Business Administration Building, 372-2747
Kathleen Steiger,M.B.A., program advisement director, 371 Business Administration Building, 372-2747
James S. West, Ph:D., director, Graduate Studies in Business, 367 Business Administration:Building, 372-2488
George J. Howick; B.S., director, Management Center, 369 Business Administration Building, 372-2807
Charles R"Chittle, Ph.D., director of International Business Programs, 312 Business

- Administration Büilding, 372-0180

Depártment of Accounting and Management Information Systems, Park E. Leathers, Ph.D., acting chair, 332 Business Administration Building; 372:2767
Department of Applied Statistics and Operations Research, James A. Sullivani, Ph:D., chair, 344 Business Administration Building, 372-2363
Department of Business Education, David J. Hyslop, Ph.D., chair, 242 Business Administration Building, 372-2901
Department of Economics, J. David. Reed, Ph.D.; chair, 301 Business Administration Building, 372-2646
Department of Finance and insürance, Dar:win B. Close, chair, 201 Business Administration Building, 372-2520
Department of Legal Studies, Lynn Ward, J.D., chair, 253 Business Administration Building, 372-2376
Department of Management, Chan Hahn, Ph.D., chair, 264 Business Administration Building, 372-2946
Department of Marketing, Stephen A. Goodwin, Ph.D., chair, 234 Business Administration Building, 372-2401
Department of Aerospace Studies, Lt: Col. Clarence J. Landon; M:A, chair, 164 Memorial Hali, 372-21.76
Department of Military Science, Lt. Col Carl Chaboudy, MA., chair, 151 Memorial Hall, 372-2476

## Academic Objectives

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. Programs in business aḍministration are designed to help stuidents acquire the competencies, understandings and attitudes necessary for the assumption - of leadership and decision making roles. Instruction in business administration emphasizes development of critical thinking skills and problem solving capabilities.

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

Each curriculum provides the student with an opportunity for developing an acceptablè level of competency in the field. Finally, a substantial amount of latitude is provided in all curricuia to permit the student to elect additional courses to round out the total educational experience.

Thus, the curricula in business administration provide the student with a total educational experience, a breadth of understanding of the büsiness world and a depth. of knowledge in a particular business field. The degree in business administration serves as preparation not only for assuming a position of 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 Collegeof Business Administration requires high . standards of performance. Programs are 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 - Assembly of Collegiate Schools of Business. Degrees granted by such accredited colleges are widely recognized by majór busînesses and graduate schools.
Students of outstanding achievement in buisiness and management may be recognized by Beta Gamma Sigma, the national scholastic honor society. The purposes of. Beta Gamma Sigma are to encourage and reward scholarship and accomplishment, to promote the advancement of education in the art and science of business, and to foster integrity in the conduct. of business operations

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. How-ever,-should transfer students think they - have sufficient background in the subject : matter of a course, they may take an examination for credit in these, a CLEP test, or *; successfully complete an advanced course with a grade of C or higher. Such validation. techniques result in=transfer credit for the course being accepted.

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

## Organization of the College

The College of Business Administration consists of eight departments of instruction in business administration. The eight departments - accounting and management information systems, applied statistics and operations research, business education, economics, finance and insurance, legal studies, management, and marketing - offer 20 undergraduate areas of specialization and a comprehensive graduate program covering the major phases of business activity.
The following degrees and areas of specialization are offered:
College of Business Administration
Bachelor of Science in Business
Administration
Accounting
Administrative management
Business pre-law
Economics
Finance
General business
Health care administration
Hospitality management
Human resources management
Industrial and labor relations insurance
International business
Management information systems Marketing
Operations research
Procurement and materials management
Production and operations management
Public and institutional administration
Secretarial administration Statistics
Bachelor of Science in Economics Economics
Associate in applied business
Two-year executive secretarial
Business administration-Education

## Siudy Abroad

The College of Business Administration offers an opportunity to enroll in a five-week summer session at a business school in Nantes, France. Courses are taught in English and carry nine hours credit. Special courses in the French language are optional The program is contingent upon enroilments. See page 16 for additional information.

## Academic Advising

Each student is assigned a faculty adviser in his or her area of specialization. Undecided pre-business students and those in general business are not assigned a specific adviser; they are advised by the college advising staff in the office of the dean ( 371 BA ). The adviser can help the student select courses most suitable for his or her specialization and can discuss program requirements, Ca reer and educational goals and job opportunities.

The student is responsible for meeting all graduate requirements. After earning 75 hours, the student should request a degree audit from the office of the dean. An adviser will prepare an audit report of the student's academic progress, indicating all unfulfilled graduation requirements.

## BACHELOR OF SCIENCE IN BUSINESS <br> ADMINISTRATION

All students who wish to pursue the bachelor of science in business administration degree will enroll in the pre-professional core (ordinarily during the sophomore year) prior to formal entry into the BSBA program. Admission to the BSBA program requires completion of the pre-professional core courses with a minimum grade point average of 2.25 in these eight pre-professional courses. Courses comprising the pre-professional core are ACCT 221-222, BA 203, ECON 202-203, MIS 200, and STAT 211-212. Ordinarily students apply for degree candidacy and select an area of specialization during the second semester of the sophomore year.

In addition to successful completion of the pre-professional core with a minimum grade point average of 2.25 , a candidate for the degree of bachelor of science in business administration must complete the general requirements for graduation listed on page 8 and the following:

1. meet the articulation requirements of the University;
2. meet the University, college, general education and electives requirements listed below;
3. meet the professional core requirements and specific requirements for an area of specialization.

## University <br> Requirements

## English

Each student is required to complete ENG 112. ENG 110 and/or 111 also may be required depending on a student's placement, but only six hours from ENG 110/111/112 count toward graduation. If a student is required to complete only three hours of English based on placement (ENG 112), three additional hours of non-business electives are required. Additional hours will be required for graduation if ENG 112 is not completed within the first 60 hours. See page 10.

## Physical education

Generally each student is required to complete two hours of physical education activities courses (PEG 100), preferably during the freshman year. See page 8 for exemptions to this general University requirement.

## College Requirements

## Mathematics

Each student is required to complete a sequence of courses in calculus. Unless stated otherwise in the area of specialization, this consists of MATH 124 and 125 or MATH 131. Refer to specific areas of specialization for any differences in this mathematics requirement. MATH 095 or 096 also may be required depending on a student's placement. Credit for these courses do not count toward graduation. If a student is required to complete only five hours of mathematics based on placement (MATH 131), three additional hours of non-business electives are required.

## Communications

Each student is required to complete three hours of communications electives. An approved list of communications electives is available in the College of Business Administration office.

## General Education Requirements

## Science/Mathematics/Computer Science

Each student is required to complete six hours of science, mathematics or computer science (not CS 100) beyond the college mathematics requirements. At least three hours must be a natural science. An approved list of courses satisfying these requirements is available in the College of Business Administration office.
Social and Behavioral Sciences
Each student is required to complete six hours from the social and behavioral sciences. An approved list of courses satisfying these requirements is available in the College of Business Administration office.

## Humanities

Fach stuidents is required to complete six ours of humanities electives. An approved list of courses satisfying these requirements is available in the College of Business Ad- . ministration office.

## Multicultural Studies

Each student is required to complete three hours of electives from the area of multicultural studies. An approved list of courses satisfying these requirements is available in the College of Business Administration office.

## Non-business Electives

Each student is required to complete four to ten additional hours in non-business fields depending on ENG and MATH placement. An academic adviser assists each student in selecting courses which broaden or deepen the student's general education. Courses chosen must not be in business administration.

## Pre-professional Core

Each student is required to complete the following 24 hours of pre-professional courses: ACCT 221 and 222; ECON. 202 and 203; STAT. 211 and 212; MIS 200; and BA 203. Ordinarily a student would enroll in these courses during the sophomore year. A grade point average of 2.25 in these eight pre-professional core courses is required to be admitted to the BSBA program.

## Professional Requirements

## Professional Core

Each student is required to complete a common core of professional courses. For most areas of specialization these courses are FIN 300, MGMT 300 and 360, MKT 300, LEGS 301, OR 380, ECON 302 or 304 and ECON 303 or 311 , and BA 405 . However, some areas of specialization have slight vari ations in these requirements. See specific areas of specialization for these variations.

Since BA 405 is considered as a capstone course for all students in the BSBA program; the following courses must be successfully completed before enrolling in BA 405: MGMT 300 and 360 ; FIN 300; MKT 300 and OR 380

## Areas of Specialization

Each student must complete the requirements for one area of specialization. Requirements for these areas of specialization are listed on the following pages.

## Free Electives

The remainder of the academic program consists of electives to meet the student's specific educational objectives. These elecives should be selected in consultation with the student's adviser. Some areas of specialization specify certain courses to be taken as electives. Generally a student may take academic work in any department of the University in meeting this requirement.

## THE CURRICULA

The pages which follow describe the specific requirements in various areas of specialization. Whenever possible, 100-level courses should be taken during the freshman year; 200-level courses during the sophomore year; 300-level courses during the junior year; and 400-level courses during the senior year. Following these levels is particularly important for core courses.
A typical program for a student in the BSBA degree program would appear as follows:
First year (32 hours)
ENG 111 and/or 1.12.(3-6)
MATH 124 and 125 (8)
or
MATH 131 (5)
PEG 100 (2)
General education courses and/or electives (16-22)
Second year ( 30 hours)
MIS 200 (3)
STAT 211 and 212 (6)
ACCT 221 and 222 (6)
ECON 202 and 203 (6)
BA 203 (3)
General education courses and/or electives (6)
Third and fourth years ( 60 hours)
ÉCON 302 or 304 (3)
ECON 303 or 311 (3)
FIN 300 (3)
LEGS 301 (3)
MGMT 300 and 360 (6)
MKT 300 (3)
OR 380 (3)
BA 405 (3) (following successful completion of FIN 300, MKT 300, MGMT 300 and 360, and OR 380)
Area of specialization (15-18)
Electives (15-18).
Although this represents the program for a typical student, some areas of specialization have slightly different or more precise requirements. Refer to specific areas of specialization in the following pages for the precise requirements in each area.

## Accounting

332 Business Administration Building, 372-2767

The curriculum in accounting is designed for the student who wishes to prepare for a career as a professional accountant with industry, government, nonprofit organizations or for public accouinting practice as a CPA. Opportunities exist to work in such specialized areas as auditing, managerial reporting, cost, governmental systems and management advisory services. Students interested in specializing should consult their academic advisers for proper course selection.

## CPA Examination and Licensing Requirements

To qualify as a candidate for the CPA examination in the State of Ohio: one musi hold at least a bachelor's degree (not necessarily in accounting or business) and have a minimum of 24 semester hours of accounting, whicth may include 3 hours of computer-related training. Graduation
from BGSU with an area of specialization in accounting fulfills these requirements, but additional elective courses in accounting may be desirable. Students may sit for the CPA examination (given in May and November) if they are within 80 days of graduation.

To receive the CPA certificate and license to practice in Ohio, a candidate also must complete two years in public accounting or four years in another accounting-related position: One half the work experience may be waived if the candidate has a master's degree. Education and experience requirements differ in other states; contact the appropriate state board of accountancy to determine its requirements.

For more information regarding the application for the examination, contact the CPA Examination Processing Center, 545. Fifth Avenue, Suite 405, New York, NY 10017 (telephone 1-800-CPA-EXAM). First-time applications must be mailed to the processing center by March 1 for the May examination and September 1 for the November examination:

Two other certification examinations are sponsored by private agencies. Information on the Certified Management Accountant (CMA) examination is available from the Institute of Management Accounting, 215 City Center Building, Ann Arbor, MI 48104. Information on the Certified Internal Auditor (CIA) examination is available from the Institute of Internal Auditors, P.O. Box 1119, Altamonte Springs, FL 32701.

## Matriculation into the Accounting Area of Specialization

Students who plan to obtain the bachelor of science in business administration degree with an area of specialization in ac"counting should enroll in the preaccounting program within the College of Business Administration. To be admitted as a candidate for the bachelor of science in business administration degree program with an area of specialization in accounting, a student must:

1. attain an all-university accumulative grade point average of 2.6 or better.
2. complete a minimum of 51 șemester hours of University credit.
3. complete ACCT 221 and 222 with a grade of $C$ or better in each: :
4. complete ACCT 221, 222, MIS 200, STAT 211,212, ECON 202, 203, and BA 203 with a composite grade point average of 2.25 or better.

The specific requirements for an area of specialization in accounting are as follows:

Third year - ACCT 321, 322, 331, 332, 360 (MIS 360 may be substituted for ACCT 360 by students who also have MIS as an area of specialization).
Fourth year - ACCT 441, 451
Attain a grade of $C$ or better in all of the courses specifically required for the area - of specialization.

Take ECON 302 as part of the professional core rather than ECON 304.

## Administrative Management

242 Business Administration Building, 372-2901
This program is designed for the student who wishes to specialize in the planning, organizing and controlling of office work. This curriculum introduces the student to the administrative functions of office systems and procedures, records management, data processing and office organization and management. Graduates of this program may obtain employment in a variety of office occupations involved in information processing or management.
The specific requirements for an area of specialization in administrative management are as follows:
First year - BUSE 111
Second year - BUSE 202
Third year - BUSE 302, 335
Fourth year - SUSE 455, MGMT 361
A student with one or more years of typing credit will have the typewriting requirement (BUSE 111) waived in place of the typewriting course, the student musi take MGMT 461.

## Adveriising

234 Business Administration Building, 372-2041
Sudents interested in specializing in advertising should refer to the marketing area of specialization.

## Business Pre-law

253 Business Administration Building, 372-2376
The program's intent is to provide the student with a broad foundation in business and economics with a major concentration designed to enhance one's communication skills and critical thinking abilities. Emphasis on writing, research and a legal approach to problem solving provide the framework of be major concentration.

This combination of experiences should enrich a student's understanding of the interaction of business, government and sociely. Such experience would be appropriate for law school candidates or any student seeking a lim foundation in business and economic concepts but does not desire a more narrow area of specialization.

Specific requirements for the area of specialization in business pre-law are as follows:
Second year - ENG 207
Third year - LEGS 305
Fourth year - LEGS 421, 491, and three additional hours in LEGS at the 300 or 400 level.
ENG 200 or 261 or 262 must be chosen as part of the humanities general education requirement; PHIL 103 is suggested as part of the humanities general education requirement.
HIST 205 and/or POLS 201 are suggested as part of the social and behavioral sciences general education requirement.
IPCO 204 is suggested as a free or non-business elective.

## Economics

301 Business Administration Building, 372-2646.
The student specializing in economics selects an area of concentration within the discipline. Areas of concentration (see below) are programs of related courses designed to provide the student with those occupational skills in each specialized field sufficient to analyze its unique, technical economic problems; a foundation upon which the future executive can develop capacities to formulate and analyze policy; and a background ideally suited for advanced professional training in law, administration or business, or for graduate studies in economics. Students are encouraged, in consultation with their academic advisers, to select an area of concentration related to their individual career goals.
Specific requirements for an area of specialization in economics are as follows:
Each student must complete a 15 -hour concentration in economics; examples of possible concentrations are listed below. ECON 302 and 303 must be taken in the professional core.
ECON 400 or 401 or 402 must be taken in the professional core instead of OR 380 .
ECON 304 cannot be counted toward the area of specialization in economics without permission from the student's adviser.
Areas of concentration ( 15 hours)
The concentration may include one approved course from outside the Economics Department. In addition to the following list, students may, with their adviser's approval, design under the general economics area a program tailored to individual career needs.
The following sequences are recommended:
Business economics
ECON 402*, 404, 471 and ECON electives (12-15)
BA 406, ACCT 331, or LEGS 417 (0-3)
Quantitative economics and forecasting
ECON $401^{*}, 402^{*}, 404,414$ and/or ECON elective ( $15-12$ )
STAT 315 or 404 (0-3)
Urban real estate
ECON 311, 332, 436, 441, and/or 462 (15-12)
FIN 342, INS 465, or LEGS 415 (0-3)
Urban/regional planning
ECON 332, 436, 460 and 462 (12)
GEOG 402, 426; POLS 421, 430; SOC 413; and/or HIST 403 or ECON elective (3)

Monetary economics and financial insititutions
ECON $311,351,414$, and 452 (12)
FIN 360 or 461, or ECON elective (3)

## Government finance

ECON $331,332,414$ and 436 ( 12 )
POLS 331, 332, 459, or ACCT 423, or ECON elective (3)
International trade and development
BA 390, LEGS 406, MGMT 471, BA 450, or
ACCT 424, or ECON elective (3)
ECON 351, 451, 452 and 454 (12)
Comparative economic development
ECON 351, 454, 460, 472 (12)
LEGS 305; POLS 423, 460; and/or SOC 419, or ECON elective (3)
Labor economics and relations
ECON 321, 323, 422, 423, and/or 424 (15-12)
LEGS 419, MGMT 361, HIST 405, or PSYC 452 (0-3)
Industrial regulation
ECON 422, 425, 435, 447, and/or 471 (15-12)
BA 403 and/or LEGS 421 ( $0-3$ )
General economics
ECON 473 and ECON electives (15)

## Other programs

The College of Business also offers the bachelor of science in economics. Programs in economics also are available through the College of Arts and Sciences and the College of Education.
*May not count as part of 15 hour area of concentration il taken to satisfy the professional core requirement.

## Finance

201 Business Administration Building, 372-2520
This is a curriculum for a student who is interested in the financial management of a business firm, or a financial institution such as a commercial bank or savings and loan association or in investment analysis and management.
The specific requirements for an area of specialization in finance are as follows:
Third year
FIN 330, 360
Two accounting courses to be used as free electives: ACCT 321 and 322, or ACCT 331 and 332 , or ACCT 327 and 337.
Fourth year
FNN 450
Any three of FIN 342, 433, 436, 461
FIN 300 is a prerequisite for FIN 330,$342 ; 425$, and 461.
FIN 330 is a prerequisite for FIN 433.
FIN 433 is a prerequisite for FIN 436.

## General Business

371 Business Administration Building, 372-2747
This is a curriculum for students who desire a broad business background with a minimum of specialization, or who desire a program tailored to specific needs.
The specific requirements for an area of specialization in general business are as follows:

The student must select 18 hours from an 'approved list of courses in ACCT, BUSE, ECON, FIN, INS, MGMT, MIS, MKT; OR and/or STAT with no more than nine hours in any"one area. A list of approved courses for the area of specialization is available in the College of Business Administration office.
General business may not be combined with any other area of specialization to form a double area of specialization

## Health Care <br> Administration

This is an area of undergraduate studies which will provide a variety of career opportunities in community hospitals, extended care facilities, state and federal agencies, voluntary health agencies and in various services found in health care organizations
The specific requirements for an area of specialization in health care administration are as follows:
Third year - BA 325
Fourth'year -LEGS 425, FIN 425, BA 429*
In addition to the area of specializâtion, the stüdent must complete a management concentration (a minimum of 12 semester hours) in selected areas of business mañagement, such as staff planning and re-
*search, personnel administration, accountancy:and controllership, and general supervision: (These courses are taken in the junior and senior years:)

The inferriship component of the program (BA 429) will provide students with practical experience and participation in the particular health caare institutions and agencies in which they máy be professionally interested
$\therefore$ The student must complete a minimum of two courses in man agement:concentration before the internship (BA:429) may be taken.

## Hospitality <br> Management

371 Business Adminisistration Building, 372-2747.
Hospitality mannagement is a multidisciplinary àrea of specialization designed to prepare students for managerial poșitions in - the hospitality industry. Primary attention is focused on the restaurant, food service and hotel motel'sectors. The program combines a sound education in the principles of business administration with specialized busiñess courses in hospitality management and elective courses in home economics.
Each student also completes a significant practicum experieñce in a variety of settings: within the hospitality-industry as a required part of the program- Study in a foreign language is particularly rec̣omimended to fulfill the general education humanities requirement

Students interested in this program should contact the Office of the Dean, College ofBusiness Administration, 372-27,47:

## Human Resource Management

264 Business Administration Building, 372-2946
This curriculum prepares a student to enter the field of human resources management in either a staff position in personnel administration or a line position in management Foundation courses examine theories of individual behavior, motivation, leadership, group formation and development, and organizational structure and processes. Within this area"of specialization, a student elects one of two human resource management concentrations personnel management or organizational development Area concentrations develop advanced knowledge in such areas ass staffing; performance measurement, job evaluation, compensation, training, group development, organizational diagnosis, and organizational change and development Area electives are used to develop a supporting field that complements the chosen area of concentration. -After choosing an area of concentration, a student selects either the remaining area of concentration the supporting field or chooses between production management' and purchasing manägement for the sup:porting field. In some cases, students may be permitted to substitute courses in legal studies,: economics or industrial psychology for the area electives after receiving appro= val from their individual: advisers.
Students are encouraged to enroll in the human resource management program as freshmen. However, to be admitted officially to the programi, students must have completed the equivalent of 60 credit hours with a cumulative grade point average of 2.5 (C+) or better: Students not meeting this requirement may petition the management department for conditional acceptance to the program.
The specific requirements for an area of specialization in human resource management are as follows:-
Third year - MG̈MT 461
Fourth year - MGMT 463
Area of concentration: MGMT 450 and 451 or 465 and 468 .
Area electives: MGMT 330 and 430 , or 442 and 445 , or 450 and 451 , or 465 and 468 , or electives approved in advance by the faculty ädviser:
See your academic àdviser for more detailed information about the requirements.

## Industrial and Labor Relations

301 Business Administration Buildińg, 372-2646
This is an interdisciplinary program designed to prepare a stüdent for work in industrial relations departments in corporations, government agencies and other organizations. This program will provide the student with a series of courses in the three areas of personnel, labor relations and the legal aspects of industrial relations.

Specific requirements for an area of specialization in industrial and lavor relations are:

## Third year

ECON 321
MGMT 361 or 450 (students who take MGMT 36. cannot take MGMT 450 and/or 451).

Fourth year
Three courses chosen from the following, but no more than two courses in any one field: ECON 323, 422, 423; LEGS 414, 429; MGMT 365, 451, 461
LEGS 419

## Insurance

201 Business Administration Büilding, 372-2520
This is a curriculum for a student interested in the area of the management of risk. Opportunities for employment are not limited to the insurance companies but also include individual agency ownership as well as jobs in the risk management departments of larger corporations.
Specific requirements for an area of specialization in insurance are as follows:

## Third year

INS 300,.465, 467
One of the following courses under the free electives areá: LEGS.413, 4, 4, 415 or FIN 330.

Fourth year
INS 466, 469, 470
INS 300 is a prerequisite for the advanced insurance courses.

## International Business

## 312 Business Administration Building, 372-0180/372-2646

This is a curriculum designed to provide students with an international perspective in preparation for a career with a:multinational company or other organizations concerned with international activities.
The specific requirements for an area of specialization in international businéss are as fölows:
Third and fouth years - ECON 351 , POLS 372. BA-390.

An area of concentratiọn (9 hours) also must be chosen from one of the following areas: ACCT, ECON, FIN, INS:MGMT; MIS, MKT or a selection specifically'apprōved by . the student's adviser. These courses may be taken during the third or fourth year.
A foreign language is strongly suggested but is not required.

## Management Information Systems

332 Business Administration Building, 372-2767
The curriculum in management information systems is designed for the student who is interested in a position as a systems analyst or a position requiring the application of computers to business problems. Emphasis is placed on the use of the computer in a business environment. Students are encouraged to use their free electives to strengthen their lechnical background and to strengthen their understanding of a business field such as accounting, economics, finance, management, marketing, operations research or statistics.

## Matriculation into the MIS area of specialization

Students who plan to obtain the bachelor of science in business administration with an area of specialization in management information systems must be admitted to the program. The department will receive applications for admission to the MIS program during the last month of each semester. All applicants must satisfy the following criteria to be considered for admission.

1. Complete at least 51 semester hours by the end of the semester in which the application is processed.
2. Complete the English requirements ( 111 and/or 112), the math requirements (124 and 125, or 131) and CS 260.
3. Complete ACCT 221, 222, MIS 200, STAT 211, 212, ECON 202, 203, and BA 203 with a composite grade point average of 2.25 or better.
4. Earn at least a C in MIS 200 and CS 260, and average at least a 2.5 in these two courses.
5. Achieve an overall GPA of at least 2.5 for all courses (taken at Bowling Green State University and transferred to Bowling Green State University).

To ensure that the admitted students will obtain quality instruction, admission will be on a space-available basis. The available space in the program will be filled by automatically admitting first all applicants with a GPA of 3.5 or higher. If space is still available, then all remaining applicants will be admitted in order of their overall averages (starting with the highest), until space is no longer available. If not admitted, a denied applicant may apply in a later semester (and then will again be ranked using his/her current GPA).
The specific requirements for an area of specialization in management information systems are listed below. A grade of C or better must be earned in each of them.
Third year - CS 360, MIS 360, 371
Fourth year - MIS 472, 479

## Marketing

234 Business Administration Building, 372-2041
Marketing consists of a wide spectrum of activities that involve the movement of products and services from producers to intermediaries to final customers. Not surprisingly, therefore, career opportunities in marketing are numerous as well as diverse, including such areas as advertising, brand management, industrial marketing, international marketing, marketing research, retailing, professional selling, sales management and wholesaling/distribution management.
One of the key objectives sought by faculty in the Department of Marketing is to prepare students for entry and subsequent leadership positions in these and other related career areas. Accordingly, the curriculum offered by the marketing department is designed to acquaint the student thoroughly with the broad field of marketing and to allow focused study in one or more narrower subfields, depending on the student's interests.

Each BSBA student selecting marketing as an area of specialization is required to take MKT 300, 402 and 420, normally in the junior year.
Additionally, each student selecting marketing as an area of specialization must take three more MKT courses (normally in the senior year) which he or she selects from the following list: MKT 400, 410, 411, 412, $421,430,436,442$ and 460.
The three specific selections would ordinarily be consistent with and contribute to the attainment of the student's career objectives. Accordingly, each student should meet and maintain contact with a marketing faculty adviser. For example, students interested in career opportunities in advertising might be advised to select MKT 410, MKT 411 and MKT 412. Or, students interested in career opportunities in retailing might be advised to select MKT 410, MKT 430 and MKT 436. Furthermore, students interested in career opportunities in professional selling/ sales management might wish to select MKT 400, MKT 430 and MKT 442. Another example: students interested in pursuing career opportunities in marketing research might want to select MKT 400, MKT 421 and MKT 460. The possibilities are numerous. See course descriptions at the end of this catalog; for further information, contact the Department of Marketing, 234 Business Administration Building, BGSU, Bowling Green, Ohio 43403, telephone (419) 372-2041.

## Marketing Research

234 Business Administration Building, 372-2041
Students interested in specializing in marketing research should refer to the marketing area of specialization.

## Operations Research

344 Business Administration Building, 372-2363
This is a curriculum for the student with a good mathematical background who wishes to prepare for a career in which mathematical and scientific techniques will be used to help solve business, social and other problems. This curriculum will also provide an excellent preparation for graduate study in operations research, management science and related disciplines.
Operations research, mathematics and statistics requirements for the area of specialization in operations research are:
Operations Research: OR 480, 482, 485 and one course selected from OR 487, 488, 489 Mathematics: MATH 131, 232 and 332 Statistics: STAT 315 and one course from STAT 402, 404, 406, 410, 412, 414
Note that MATH 131 must be taken to satsify the College of Business Administration mathematics requirement.

## Procurement and Materials Management

264 Business Administration Building, 372-2946
This is a curriculum for the student who is interested in the field of procurement (or purchasing) and materials management. The courses of study include an integrated approach to the movement of goods from the supplier (vendor) to the final customer. The procurement/purchasing department in a typical organization is responsible for securing necessary materials, supplies, capital equipment and services at the best possible terms. The materials management function typically coordinates the major activities contributing to material costs and availability including purchasing, production control and physical distribution.

Students are encouraged to enroll in the procurement and materials management program as freshmen. However, to be admitted officially to the program, the student must complete the equivalent of 60 credit hours or more with an accumulative grade point average of $2.5(\mathrm{C}+)$ or better. Students not meeting this requirement may petition the management department for conditional acceptance into the program.
The specific requirements for an area of specialization in procurement and materials management are as follows:
Third year - MGMT 330
Fourth year - MGMT 430, 439, 442, 445
MKT 402 or LEGS 420 or MGMT 462 or DESN 104
*See your academic adviser for more detailed information about requirements.

## Production and Operations Management

264 Business Administration Building, 372-2946
This is a curriculum for students interested in a field of production and operations management. This curriculum deals with methodologies for developing the most economical mix of materials, energy, human resources and capital equipment inputs to create desired goods and services. This function in a typical manufacturing or service organization is responsible for designing, operating and controlling a productive system.

Students are encouraged to enroll in the production and operations management program as freshmen. However, to be admitted officially to the program, the student must complete the equivalent of 60 credit hours or more with an accumulative grade point average of $2.5(\mathrm{C}+$ ) or better. Students not meeting this requirement may petition the management department for conditional acceptance into the program.
The specific requirements for an area of specialization in production and operations management are as follows:
Fourth year-MGMT 441, 442, 445, 449
MGMT 330 and 430 or
MGMT 361 and $461^{\circ}$ or
Two courses ( 6 hours) from ACCT and MIS or CS with prior approval from the academic adviser
See your academic adviser for more detailed information about requirements.

## Public and Institutional Administration

## 323 Business Administration Building, 372-0221

This program has an interdisciplinary curriculum keyed to management and administration in public and non-profit institutions. In addition to the general business courses taken by all candidates for the BSBA degree, the student takes courses in advanced management and courses that will provide an understanding of important public policy problems and the environment of decisionmaking in the public and non-profit sectors. The program is interdisciplinary and allows development of a student's particular skills and interests through courses taken in optional study areas. For those students who are unclear about their career objectives, this.program exposes students to a full rangé of managerial options: The program also provides a suitable pre-professional program for students interested in professional degrees in law, business or public administration.
The specific requirements for the area of specialization in public and institutional administration are as follows:

First or second year
It is recommended that students who have not had a strong course in government in high school take a political science course such as POLS 201 as one of their social and behavioral science general education courses.
Third and fourth years
POLS 221
MGMT 463
Two of the following:
ECON 331 (spring)
ECON 336 (fall)
ECON $436^{\circ}$
One 300 or higher level course selected from courses in the optional study areas or approved by adviser from courses in business, economics or political science.
Optional study areas'(3-12 hours)
Each student will select at least one course from the following options to complete the area of specialization. Additional courses can be taken as elective courses.
Administration
MGMT 330, 361
POLS 422
ÉCON 423
ACCT 423 (ACCT 321 and 322 pre-requisities)
Policy Analysis
POLS 302, 431
ECON 321, 447
LEGS 425, 431
Criminal Justice,
LEGS 340
SOC 341, 441, 442
Urban Studies
ECON 460, 462
POLS 330, 331
Mass Media and Public Opinion
JOUR 103, 340, 433. 435
POLS 341, 342
RTVF 260

## Retailing

234 Business Administration Building, 372-2041
Students interested in specializing in retailing should refer to the marketing area of specialization.

## Secretarial Administration

242 Business Administration Building, 372-2901
This is 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, word pro-* cessing, data processing, communication and decision making.
The specific requirements for an area of specialization in secretarial administration are as follows:
Second year - BUSE 202, 210
Third year - BUSE 302, 311, 314
Fourth year - BUSE 335, 401
A student with insufficient or no preparation in shorthand or typewriting must elect the beginning or intermediate course.

## Selling and Sales Management

234 Business Administration Building, 372-2041
Students interested in specializing in selling and sales management should refer to the marketing area of specialization.

## Statistics

344 Business Administration Building, 372-2363
This curriculum is for the student who is interested in a career in statistical analysis and research in government or business. It is an excellent preparation for graduate study in statistics or any discipline that utilizes a quantitative componént.
Statistics and mathematics requirements for the area of specialization in statistics are:
Statistics: STAT 315, STAT-402, and three statis. tics courses selected from STAT 404, 406, $410,412,414$ with at least one of the three béing STAT 406 or STAT 410
Mathematics: MATH 131, MATH 232, añ MATH 233 or MATH 332
Note that MATH 131 must be taken to satisfy the College of Business Administration mathematics requirement.
Recommended electives: CS 101, MATH 441, . 442 and 432, ECON 402, OR 480, 482, 485, 487, 488 and 489. For further information, a student should consult an adviser.
Other Programs
Two program in statistics are offered by the College of Arts and Sciences.

## BACHELOR OF SCIENCE IN ECONOMICS

301 Business Administration Building, 372-2646
This flexible program is especially suited for the student who wishes to combine a major in economics with concentrated study in one or, more other disciplines. The program can easily be adapted to accommodate a major in economics and in a cognate field and hence it is ideally suited for those seeking a dual major in such disciplines as education, geography, sociology, political science, history, mathematics or psychology. Because economics is the science of business, students who wish to combine a major in economics with one in such functional fields of business as accounting, finance, marketing or management will find that the bachelor of science in economics also permits maximum freedom for the individual's study of bușiness applications. This program is designed to provide students with a meaningful educational experience that stresses professional training in economics, but which recognizes the multidimensional demands placed upon practicing economists in a constantly changing society. It seeks, through an adaptable structure, to provide the student with the, necessary training for employment in a
wide variety of occupations in business or government in which the skills of the economist are especially useful, or for continued study in professional schools or at the graduate level in economics or business.

A candidate for the bachelor of science in economics must complete the general requirements for graduation listed on page 8 and meet the requirements listed below.

## General Education Recuirements

## Communication

Each student is required to complete ENG 112. ENG 110 and/or 111 also may be required depending on a student's placement, but only six hours from ENG 110/111/112 count toward graduation. If a student is required to complete only three hours of English based on placement (ENG 112), three additional hours of electives are required. Additional hours will be required for graduation if ENG 112 is not completed within the first 60 hours. See page 10. SPCH 102 is recommended but not required.

## Multicultural Studies

Each student is required to complete three hours from the area of multicultural studies. An approved list of courses satisfying these requirements is available in the College of Business Administration Office.

## Mathematics, Science and Quanthative Measurements

Each student is required to complete MATH 124 and 125 or MATH 131, STAT 211 and 212 and a three-hour course in natural sciences plus $3-6$ hours from MATH (except 241,242 or 243), CS, MIS or the biological and physical sciences.

## Social and Behavioral Sciences

Each student is required to complete ECON 202 and 203 plus 6 hours of social or behavioral sciences outside ECON. An approved list of courses satisfying these requirements is available in the College of Business Administration Office.

## Humanities

Each student is urged to complete PHIL 103 or 303. Eight hours of credit must be earned in the areas of ART, foreign languages, literature, music, PHIL and THEA. A list of acceptable courses is available in the Department of Economics office.

## Major and Cognate Concentration

Each student is required to complete a major in economics consisting of ECON $302,303,473$, three hours of quantitative economics (ECON 400, 401 or 402) and 15 additional hours of ECON or approved, related courses. ECON 304 cannot be counted toward the requirements for the economics major without permission from the student's adviser. To complete the professional area of study a cognate concentration of 15 hours must be selected from the areas of business administration, arts and sciences or education, after consultation with and approval of the program adviser.

## Electives

The remainder of the academic program is completed with electives selected by the student in consultation with the program adviser. Depending upon interests and career objectives, a student may select courses from any area of the University in meeting this requirement.

## Other Programs

An area of specialization in economics also is offered as part of the bachelor of science in business administration degree. In addition, programs in economics are offered by the College of Arts and Sciences and the College of Education.

## ASSOCIATE IN APPLIED BUSINESS

242 Business Administration Building, 372-2901
A student interested in secretarial adminisfration may prefer a shorter program than the four-year curriculum leading to the bachelor of science in business administration. Upon completion of this two-year executive secretarial program, the student receives the associate in applied business degree. If students should decide to continue their education after completing one or two years of this program, they may apply full credit for all courses satisfactorily completed toward the four-year degree program in secretarial administration.

A candidate for an associate in applied business degree must complete the general requirements listed on page 11 and com-
plete, at Bowling Green immediately before graduation, at least 30 of the 62 hours required.
First year ( 32 hours)
ENG 111 and/or 112 (3-6)
PEG 100 (2)
BUSE 101, 111, 210, 202, 213, 215, 220 (19)*
Electives (5-8)
Second year ( 30 hours)
BUSE 240, 302, 311, 314, 321, 335, 401 (18)
ACCT 220 or 221 (3)
ECON 200 or 202 (3)
LEGS 301 (3)
BA 203 (3)

Suggested electives include ECON 203, HOEC 105, POLS 201, SPCH 102, humanities, MATH and sciences
*A student with two semesters of high school typewriting and/or shorthand should enroll in BUSE 210 and/or BUSE 215. Those who choose to enroll in lower level courses will not receive credit toward graduation. A student who enrolls in the advanced courses in typewriting or shorthand must substitute electives for the beginning courses to complete a minimum of 62 hours for graduation.

## Other Programs

A four-year program in secretarial administration is offered by the College of Business Administration leading to the bachelor of science in business administration degree. Other two-year degree programs are offered by Firelands College.

## BUSINESS

## ADMINISTRATIONEDUCATION

242 Business Administration Building, 372-2901
A candidate who has met all the requirements for the degree of bachelor of science in business administration also may qualify for the degree of bachelor of science in education and for an Ohio teaching certificate by completing a combined curriculum including the general and specific graduation requirements for each college.
The student who desires to pursue the combined progam must:

1. Petition the board of appeals of the $\mathrm{Col}-$ lege of Education and the College of Business Administration to request registration in both colleges.
2. Complete a minimum of 20 credit hours beyond the 122 hours required for graduation with a bachelor's degree in one college.
3. Complete the comprehensive major in business education or the distributive education major.
4. Complete the appropriate professional education courses, meet the general education requirements of the College of Education and participate in a semester of professional concentration which includes student teaching (BUSE 497).

A student interested in teaching business or distributive education in high school should consult with the Department of Business Education in planning the program.


## cOLLEGE OF EDUCATION

## Office of the Dean.

Gerald L. Säddlemire, Ed.D:, acting dean, 444' Education Building, 372.0151
Dónald Chase; Ph.D., associate dean, 444 Education Búlding, 372-0151
Rita Keefe, Ph.D., assistant dean, 444 Education Building, 372-0151

## Office of Field Experiences

Margaret Ishler, Ed.D:, director of field experience and standards compliance, 318 Education Building, 372-0151 .
Chery! Didhaṃ, M.Ed., coordinator of logistical services, 318 Éducation Building, 372-0151

## Office of 'Stüdent Services

Larry D. Wills; Ph.D., assistant to the dean for student services and international studies, 455 Education Building, 372-0151

## Office of Program Advisement

 and Teacher CertificationJane Wood, M.S:, director, 365 Education Building, 372-0151
Office of Advanced Programs
Leigh 'Chiarelott, Ph.D.; Director of Graduate. Studies, 455 Education Building, 372-0151

## Office of Research and Evaluation

Fred L. Pigge, Ph.D., director of educational research, 330 Eduçation Building, .372-0151

## Departments and Schools

Department of College Student Personnel, Carney Strange, Ph.D., chair, 332 Education Building, 372-0151
Department of Educational Administration and Supervision, Leslie Chamberlin, Ed.D., chair, 513 Education Building, 372-0151
Department of Educational Curriculum and - Instruction, Verlin W. Lee, Ph.D., chair, 529 Education Building, 372-0151
Department of Educational Foundations and Inquiry, Robert L. Reed, Ph.D., chair, 550 Education Building, 372-0151
Department of Home Economics, Elsa - McMullen; Ph.D., chair, 210 Johnston Hall, 372-2026
Department of Special Education, Ediward Fiscus, PhiD., chair, 451 Education. Building, 372-0151
School of Health, Physical Education, and Recreation, Betty vạn der Smissen, Re.D:, director; 220 Memorial Hall, 372-2876.

## Aims and Pürposes

The College of Education has two primary purposess: to provide course work that contributes to the general education program of the University and to provide programs that lead to careers in the fields of edication, sports management, recreation, child and family development, restaurant management-institutional food service and dietetics.

The college believes that quality career programs must include:

1. A progam of general education designed to provide a broad and liberating educational experience for life-long learning.
2. Advanced study in one or more areas of specialized interest.
3. A program of on-campus and fieldbased professional experiences.

- The College of Education maintains close working relationships with other colleges in the University, with elementary and secondary schools in northern Ohio for field-based experiences, with vocational schools and technical and branch colleges and with the State Department of Education for teacher cerifification.

The bachelor of science in education and the bachelor of science in technology are offered by the College of Education. Toqualify for either of these degrees, a candidate must complete the requirements. listed on page 9 , complete 42 hours of general education as indicated on page 73, complete all of the specified major and professional requirements and complete any other published graduation requirements of the College or the program area.

## Programs Offered

The following programs are available in the College of Education. Both majors and minors are available in all areas unless other wise noted:
Art.
Athletic Coaching (minor only)
Athletic Training (minor only)
Bookkeeping and Basic 'Business (minor only)
Business Education (major only)
'Child.and Family Dévelopment.
Danice
Dietetics
Distributive Education.
Early Childhood Education
Elementary Education (major only)
Environmental Education

Family Life Educ̣ation (minor only)
French ${ }^{\prime}$
German
Health
Home Economics
Industrial Education
Italian (minor orily)
Latin:
Library Educational Media
Music.
Philosophy (minor only)
Physical Education
Reading Language Arts (minor only)
Recreation (three options available)
Restaurant Management (major only) Russian
Sales Communications (minor only)
Secondary Edücation
American Studies (major only)
Biological Sciences.
Chemistry
Communcations (major only)
Computer Science
Earth Science
Economics
English
Environmental Science (màjor only)
Geography
History
International Studies (major only)
Journalism
Mathematics
Phyṡics
Pólitical Science
Psychology
Science Comprehensive (major only).
Social Studies (major only)
Sociology (minor only)
Speech Communication Spanish
Special Education
Educable Mentally Retarded (major only)
Hearing Impaired (major only)
Learning Disabilities and/or Behavior Disorders (major only)
Moderately, Severely and.Profoundly. Handicapped (major only)
Special Education (minor only)
Speech and Hearing Therapy (major only)
Sport Management (major only, five options available)
Stenography and Typing (minor only)

## Endorsements Offered in the College of Education

Astronomy
Driver Education
Philosophy
School Nurse
Work Experience

## College Admission

Students accepted by Bowling Green State University may register in the College of Education when they have:

1. formally declared their intent to major within the College;
-2 registered with the College Office of Program Advisement as a member of a program or as an undecided major,
2. conferred with an adviser assigned by the College of Education; and
3. have earned at least a 2.0 grade point average if iransterring from another BGSU college.

## College Retention

## Education Programs (non-certification)

Students will be considered full members of the College when they have:

1. completed ENG 112;
2. completed SPCH 102 with a C or better; and
3. attained a 2.0 BGSU accumulative grade point average.

## Education Programs (teacher certification)

Studenis will be considered full members of the College when they have:

1. completed ENG 112;
2. completed SPCH 102 with a C or better:
3. completed EDCI/FI 202 or a program alternative accepted by the College with a C or better.
4. compleied a speech and hearing diagnostic test and been advised of the results; and
5. atilained a 20 BGSU acculumulative grade point average.
A teacher education student who fails to met the above criteria upon attaining junior status will be labeled "pre-education" and will not be permitted to enroll in the methods courses indicated on program area checklists.

Teacher education students will be readmifted to their major program upon completion of the above criteria and a meeting with their adviser.

Niany programs in the College have established matriculation/retention criteria in addition to the College criteria specified above. These additional requirements and/or application procedures are indicated on each program area checksheet and on pagos $82-83$ of this catalog.

## Due process for academic decisions

The College of Education has established specific requirements for admission, retention, student teaching eligibility, graduation, and certification eligibility; some program areas have also established full admission requirements. There are also established University policies regarding academic dismissal, deadline dates, etc.
Students who do not meet the specified requirements or who have not met established deadlines may file an academic appeal. Academic appeals must be initiated in the Program Advisement Office where appeal forms are available. Only written appeals are considered. A rationale for the appeal is required and documentation or other evidence may be attached. The written materials constituting the appeal are then reviewed by an appeals board, which serves in an advisory capacity to the dean. Examples of academic appeals include: appeals for reinstatement after being dropped for academic reasons, appeals regarding the denial of admission to either the college or a program, and appeals to drop and/or change classes to or from S/U beyond the specified deadline. The dean of the college reserves the right of final decision.

Appeals regarding the issuance of a grade are not referred to the college office. These appeals are processed through the instructor. Each department follows its own appeals procedures which are consistent with the recommendations of the Faculty Senate.
In cases related to academic honesty or other disciplinary action, a student is referred to the Student Code.

## Advising

Two types of advising are available to students enrolled in the College of Educationfaculty advising and college office advising.
Upon enrolling in the College of Education, each student is assigned to a faculty adviser in the major fieid. Faculty advisers assist their advisees in career-decision making, selecting appropriate classes to take, checking progress toward a degree, and long-range program planning.
To supplement faculty advising, the College of Education maintains a staff of program counselors in the Program Advisement and Teacher Certification Office, which is located in 365 Education Building. This staff provides initial advisement for all students entering the college, and supplements the advising at the faculty/departmental level. This staff can also explain certification and appeals procedures, and assist students with exploring career options.

The responsibility of contacting a faculty or college office adviser rests with the student. Students are given a general orientation to the College upon their initial enrollment in the College, are assigned a faculty adviser, are introduced to the services of the Program Advisement and Teacher Certification Office, and are periodically sent communications from the College. It is each stu= dent's responsibility, however, to seek advice to become familiar with the academic information available in the University and college offices, and to meet the established graduation and/or certification requirements. Program revision, certification changes and shifts in the demands of the marketplace support close adviser/student relationship.

## Degree Audit

All juniors should request a degree audit by filing a checksheet with the Program Advisement and Teacher Certification Office. To file a checksheet, students should report to the Program Advisement and Teacher Certification Office, request checksheets for the major(s) and minor(s) they are pursuing, indicate on the checksheets(s) the courses they have completed and the ones they are currently taking, and submit the checksheet(s). Once a checksheet is submitted, a degree audit is completed and a student is sent a listing of remaining unfulfilled graduation requirements. Completion of this audit will assist student in planning their senior year course selections.

## Certification

Successful completion of a Bowling Green teacher education program with at least a 2.20 accumulative GPA usually results in one or more of the five types of Ohio certificates described below. The only times that certification does not result are 1) when a student elects to graduate on Planned Program (see page 73), or 2) when a student is following a set of degree requirements that no longer meets Ohio teacher certification standards. Since the State Department of Education has the authority to change certification requirements at any time, students may be required to complete additional requirements for certification.

Students may qualify for certification in more than one teaching field by completing a second teaching major or by completing one or more teaching minors. Being certified to teach in more than one area increases marketability, so students are encouraged to consider at least two teaching fields. Combinations to consider include elementary/and on area of special education, math/computer science, science/math, physical education or health/science. Listings of requirements in each certifiable major and minor are available in the Program Advisement and Teacher Certification Office, 365 Education Building.

Persons who hold degrees from accredited four-year universities may pursue certification in one or more teaching fields without completing all the requirements for another undergraduate degree. Persons in this category who desire teacher certification should obtain copies of their undergraduate transcripts and make an appointment with an adviser in the Program Advisement and Teacher Certification Office by calling 3720151 , extension 220 . During the appointment the necessary requirements will be shared, the candidate's transcript will be reviewed and program planning will be done.
All candidates seeking Ohio teacher certification must complete an Application(s) for Certification. These applications and directions for completing them are available from student teaching supervisors and/or the Program Advisement and Teacher Cerlification Office. Completed applications and money orders should be submitted to 365 Education Building by the end of the second week of the final semester.
Ohio teaching certificates are not transferable to other states, but Ohio participates in the interstate Agreement of Qualifications of Educational Personnel and has entered into an implementation contract with 28 states. Preliminary information on certification in other states is available in 365 Education Building.
Descriptions of the five types of Ohio Four-year Provisional Teaching Certificates for which a candidate can be recommended by Bowling Green State University follow.

## Elementary

A graduate completing the elementary education major is eligible for an elementary teaching certificate, valid for teaching grades one to eight. An elementary education major who completes EDFI 342 and EDCl 357 is eligible for a kindergartenelementary certificate, valid for teaching grades kindergarten to eight. Students pursuing a kindergarten-elementary certificate must student teach in kindergarten, first, second or third grade.

## High School

A graduate completing a degree program with a major and/or minor in a secondary field is eligible for a high school teaching certificate valid for teaching the major and/or minor subject area in grades seven through twelve. Majors and/or minors leading to junior and high school teaching include art, biology, bookkeeping and basic business, business education with shorthand, business education without shorthand, chemistry, communications, computer science, earth science, economics, English, family life education, French, general science, geography, German, health, history, home economics, Italian, journalism, Latin, library educational media, mathematics, music, physical education, physics, political science, psychology, Russian, sales communication, science comprehensive, social studies, sociology, Spanish, speech communication, stenography and typing. Elementary education majors desiring high
school certification must complete the subject area major or minor and a secondary methods course.

## Special

A graduate completing one of the following major programs - art, educational media, foreign language, health, industrial arts, music, or physical education-is eligible for a special teaching certificate, valid for teaching the subject from kindergarten through the twelfith grade.

## Special Exceptional Children

A graduate completing one of the following majors-deaf and hard of hearing, educable mentally retarded, learning disabilities and behavior disorders; moderately, severely, or profoundly handicapped; or speech and hearing therapy-is eligible for a special exceptional children teaching certificate valid for teaching the major area in all grades, kindergarten through twelve.

## Vocational

A graduate completing either a distributive education or home economics major or a graduate completing the OWE/OWA certification pattern is eligible for a vocational teaching certificate.

## Planned Program

## (Graduation without certification)

Some students in the College of Education decide late in the four-year sequence that they do not wish to teach or obtain teacher certification; others are counseled out of the teaching profession by advisers and professional education faculty. To accommodate this type of student, the college has a plan whereby a sludent can graduate from the College of Education without student teaching and without certification provided the following stipulations are met:

1. All major, minor, group and professional requirements for graduation must be met, except for student teaching.
2. Students desiring to graduate under the planned program must complete a Planned Program Form, obtainable from and̉ returnable to the Program Advisement and Teacher Certification Office, 365 Education Building. Information requested on the form includes reasons for requesting the planned program and a listing of the 10 hours of course work offered within the College of Education to be taken in lieu of student teaching. Once received, the request is reviewed and forwarded to the Dean for approval.
3. If a planned program is approved, the student is not eligible for certification, and the official transcript in the Registrar's Office is stamped "Not Eligible for Teacher Certification." Furthermore, if a candidate decides to pursue certification after a planned program has been approved, an appeal to be removed from the planned program must be filed. If approved, the candidate must meet the requirements for student teaching and certification eligibility in effect at the time of the desired student teaching and/or recommendation for certification.

## Intercollege Curricula

A candidate for a degree from the College of Education who desires a second degree from the College of Health and Community Services, College of Arts and Sciences, or College of Business Administration may take work in that college after graduation to complete degree requiiements or qualify for the dual degree program prior to graduation. Students desiring a dual degree must:

1. secure permission of the deans of both colleges before the end of the junior year.
2. complete the requirements of both colleges for the degree sought.
3. complete at least 20 hours of credit beyond the hours required for a single degree.

## General Education

The College of Education has a strong commitment to general education and consequently requires all candidates for baccalaureate degrees to demonstrate, through satisfactory completion of a minimum of 42 semester hours of general education credit (which includes a minimum of eight courses from the University general education core), that they have:

1. developed skills in listening, speaking, reading, writing, mathematics computation, critical thinking and conflict resolution.
2. achieved an understanding of the humanities and arts, the natural sciences, the social and behavioral sciences, and cultural studies; and
3. experienced personal development through integration of physical development with the understanding of self and relationships to others.
It is expected that the final outcome of each student's general education will be the ability to integrate the skills developed with the understandings achieved and that this integration will be incorporated in the student's personal development.
Of the 42 hours of general education required, 36 must be completed from the five categories indicated below, the minimum number of hours in each category is also specified. The remaining six hours may be selected from course work offered in any of the departments listed in any of the five categories and/or from courses approved by the College of Education. To date the additionally approved courses are TECH 152, RED 226 and RED 210. It should be noted that no single course can be used to meet requirements in more than one category and that some programs may require more than the minimum number of hours in any given category.
The following categories and minimum hours are required:

## I. Communications and Physical Education

-Minimum total: 8 semester hours
A. Each student must satisfactorily complete ENG 112 (3); a penalty is imposed if ENG 112 is not completed before the junior year. (See page 10 ).
R. Each student must complete SPCH 102 (3).
C. Each student must complete two physical education activities courses (PEG 100). (See page 8).

## II: Nahual Science/Mathematics

-Minimum fotal: 9 semester hours
A. Each student must meet the University's mathematics matriculation requirement of having completed three years of high school mathematics or passing the mathematics proficiency examination before the beginning of the junior year.
B. Each student must complete one of the following natural science courses: ASTR 201, 212; BIOL 101, 104, 204, 205; CHEM $100,115,116,125,126,135,136$; GEOG 125; GEOL 100, 104, 105, 205; PHYS 101, $201,202,211,212$; or any other natural science course that is approved for the core at a later date.
C. Each student must also complete two more courses from the areas of natural science or mathematics or computer science. Acceptable mathematics courses are $115,116,124,125,127,128,130,131$, 232, 247. Acceptable computer science courses are 100,101 . Acceptable natural sciences include any course listed in II-B above or any other course from $\mathrm{BIO}, \mathrm{CHEM}$, GEOL, PHYS, ASTR, or BUSE 101, TECH 121 or PEP 230.

## 1ㅔㅇ. Secial and Behavioral Sciences

--Minimum total: 9 semester hours
A. Each student must complete PSYC 201 (4).
B. Each student must complete two additional courses: ECON 100, 200, 202, 203; ENVS 101: ETHN 101; GEOG 121, 122, 230; HIST 151, 152, 205, 206, 280; POLS 101, 201, 250, 271; HOEC 107: SOC 101, 202, 231; CAO-H 101; LEGS 200; or any other social or behavioral science courses that are approved for the core at a later date.

## IV. Humanities and Arts

-Minimum total: 5 semester hours
A. Each student must complete one of the following literature courses: ENG 150,200 , 261, 262, 264, 265, 266, 267; ETHN 220; FREN 284; GERM 260; RUSN 211, 213; or any other lierature course that is approved for the core at a later date.
B. Each siudent must fulfill the remaining hours required by completing a course from the following: AMST 220, 230; ART 101, 102, 145, 146; A\&S 100; ETHN 101 (if not used in Area III): foreign languages (CHIN, FREN, GERM, GRK, ITAL, LAT, JAPN, SPAN) 101, 102, 201, 202; FREN or SPAN 111, 112, 211 212; FREN 284; GERM 117, 131; MUCH 101, 125, 221; PHIL 101, 102, 103, 107, 204, 211, 212, 230; POPC 160, 165, 220; RTVF 261; THEA 141, 202; WS 200, or any other humanities or arts courses that are approved for the core at a later date.

## V. Cultural Studies

-Minimurn total: 5 semester hours
A. Each student must complete one course from the following: ETHN 101 (if not used as a social or behavioral science); ETHN 220 (if not used as a humanities or arts); foreign languages-CHIN, FREN, GERM, GRK, ITAL, LAT, JAPN and SPAN $101,102,201,202$ or FREN or SPAN 111, $112,211,212$ or French 284 or GERM 117 , 113-(if not used as a humanities or arts; SOC 231; GEOG 121, 122, 230 (if not used as a social or behavioral science); POLS 271 (if not used as a social or behavioral science); HOEC 107 (if not used as a social or behavioral science); or any other cultural studies course that is approved for the core at a later date.
B. Each teacher education student must also completed EDFI 408; each non-teacher education student must complete an addltional course in this area.

## Professional Requirements

In addition to general education requirements, all students pursuing programs leading to teaching certification must complete a sequence of courses in professional education. This course work is integrated with directed observation and participation in school settings (field experiences) and is accompanied by on-campus clinical experiences. Professional education course work required in each of the teacher education program areas is shown below.
Business education: BUSE 497; EDCI 202 or EDFI 202; EDSE 311, EDCI 360; EDFI 302, 402. and 408; EDAS 409; and BUSE 352, 354. 356 (comprehensive with shorthand only), 358 and 468.

Educable mentally retarded: EDSE 492 and 497; EDCI 202 or EDFI 202; L\&EM 301 ; EDCl 355; EDFI 302; EDFI 402 or EDFI 429, and 408; EDAS 409; ART 482; PEP 433; and EDSE 431, 433, 437, $442,443,447,448,451$, and 453.
Elementary education: $\operatorname{EDCI} 492 ; E D C I 202$ or EDF 202; L\&EM 301; EDSE 311; EDFI 302, 402, and 408; EDAS 409; MUED 349; PEP 342; ARTE 343 ; and EDCI $351,352,353,355$, and 356 .
Foreign languages: $\operatorname{EDCl} 497 ; E D C I 202$ or EDFI 202: L\&EM 301; EDSE 311; EDFI 302, 402, and 408; EDAS 409; and EDCl 373 and EDCI 429
Healh: HED 497; L\&EM 301; EDCI 202 or EDFI 202; EDSE 311, EDCI 360; EDFI 402 and 408; EDAS 409; and HED 230, 348, 393, 409 and 481.
Hearing impaired: EDSE 497; EDCI 202 or EDFI 202; L\&EM 301; EDCI 355; EDFI 302, 402, or 429 and 408; EDAS 409; EDSE 431, 442, 451, 461, $462,463,464$, and 465 ; CDIS 434 and 436.
Home economics: HOEC 497; EDCI 202 or EDFI 202: L\&EM 301; EDSE 311; EDCI 360; EDFI 302, 402, 408; EDAS 409; and HOEC 250, 352, 353, and 354 .
Industrial arts: IE 497; EDCI 202 or EDFI 202; VCT 203; EDFI 302, 402, and 408; EDAS 409; and IE 252, 352, 447, 449, and 462.
Learning and/or behavior disorders: EDSE 492 and 497; EDCI 202 or EDFI 202; EDFI 302, 402 or 429, 408; L\&EM 301; EDCI 355; EDAS 409; ART 482; PEP 433; and EDSE 431, 433, 437, 442, 443, $447,448,451$ and 453.

Media speciallst/librarian: L\&EM 497, EDCI 202 or EDFI 202; EDSE 311; EDCI 360 ; EDFI 302,
402, and 408; EDAS 409; and LEM 301, 407, 411, 428,430 and 450.
Moderate, severe and profoundly handicapper EDSE 492 and 497; EDCI 202 or EDFI 202; L\&EM 301; EDCl 355; EDF1 302, 402 or 429 and 408 ; EDAS 409; ART 482; PEP 433; and EDSE 431, $433,437,440,442,443,445,451$ and 470 .
Music education: MUED 497; EDFI 302, 402, and 408; EDAS 409; MUED 240 and 340. Music education is a major within the College of Musical Arts. See page 97 for content and general education requirements.
Physical education, plan I: PEP 497; PEP 233; L\&EM 301 or VCT 203; PEP 433 or EDSE 311; EDFI 302 and 408 ; PEP 402 or EDFI 402; EDAS 409; and PEP 238, 241, 332, 337, 428, and 438.
Physical education, plan II: PEP 497; PEP 247 or EDCI 202 or EDFI 202; PEP 402 or EDF 402 ; EDFI 302 and 408; EDAS 409; LEM 301 ; PEP 433 or EDSE 311 ; and PEP 241, 256, 332, 356, 362 and 412.
Physical education, plan III: PEP 497; PEP 247 or EDCl 202 or EDFI 202; EDFI 302 and 408; EDAS 409; L\&EM 301; HED 348 and 409; PEP 433 or EDSE 311 ; PEP 402 or EDFI 402; and PEP $256,362,392$, and 412.
Secondary education: EDCI 202 or EDFI 202; LEM 301; EDFI 302, 402 and 408; EDAS 409; EDCI 370; and completion of the Secondary Professional Semester comprising the following courses: EDSE 311; EDCI 360; EDCl 497; and one of the following: $\operatorname{EDCl} 371,372,374,375$, 376 or 378 . During the first six-week period of the Secondary Professional Semester, students are required to spend one week at Camp Storer, Jackson, Michigan, for an outdoor education experience.
Speech and hearing therapy: CDIS 497; EDCl 202 or EDFI 202; EDFI 302, 402, and 408; EDAS 409; EDCI 355; L\&EM 301; EDSE 431, 433, and 451; and CDIS 401, 411, 421, 431, 434, and 481. Visual aris: ARTE 497: EDCl 202 or EDFI 202; EDSE 311; EDFI 302, 402, and 408; EDAS 409; and ARTE 252, 352, 353, 487; and one of the following: ARTE 482, 483, or 495.

## Student Teaching

Student teaching is the culminating field experience in the student's teacher education program. During student teaching, the student devotes full-time to teaching and to participation in the school's activities under the guidance of a cooperating teacher and campus field supervisor. The student is assigned to one situation and progresses from observation and directed participation to responsibility for full-time teaching. The student is guided in studies of child development, specific teaching skills, and the planning of a balanced program of a learning situation, and 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 in vocal or instrumental experience.

The college attempts to place student teachers in the best available stations. While stüdent preferences are taken into consideration, they cannot be met in all cases. Stations must have both college and program approval Students are responsible for their own transportation to student teaching stations.

Student teaching in a major area can only be repeated once: Thus only two opportunities to complete-student teaching successfully in a major area are given.

All students who student teach in the spring șemester must follow the spring break calendar of the school system to which they have been assigned; the Univer: sity spring break is forfeited:
$\because$ Upon completion of student teaching, students receive a copy' of their student teaching evalüation report. Students should retain this'copy for their records and future reference since the University does not include/: retain this report/evaluation as part of the permanent record.

## Student Teaching Eligibility Requirements

To be eligible for assignment in student teaching, the student must have:

1. Filed an application for student teaching in the Field Experience Office, 318 Edu, cation Building, not later than the first week. of the semester preceding anticipated stu: dent teaching
-2 Be fully admitted into the College of: Education (see college retention, $p_{\text {, }}$ ).
2. Been fully accepted in a College of Education Teacher Certification Program either as an undergraduate or baccalaureate degree holder
3. Completed 90 hours of university credit, including:
a. EDCl 202 or EDFI 202 or a program
alternative accepted by the College with a C or better
b. ENG 112
c. SPCH 102 with a C or better
d. EDF 302
e. Methods course(s) required for the

## program

5. Completed any additional program speceific requirements listed on the official program check sheet available from the Program Advisement and Teacher Certificatión Office:
6. Earned an accumulative grade point average of 2.20 by the end of the semester prior to student teaching.

Stüdents who are declared ineligible for student teaching have the right to appeal the decision via a letter to the Field Experience Advisory Cömmittee.
Student teaching may be deferred or denied by the dean upon the recommendation of the Field Experience Advisory Committee of the College of Education

## International Teacher Education Programs

The College of Education offers interested edućation majors an opportunity to complete the educational component of student teachan international setting.

Selected individuals will be placed in American bi-national schools in Bogota, Co Iombia; Campinas, Brazil; Toronto, Ontario; or Montreal, Quebec, for a. 10 -week student teaching program: Most students are. housed by host national families for an increased intercultural experience. Student teaching abroad enables individuals to understand the educational, cultural and political effect another country has on the United States and the world.

Interested students should direct inquiries and applications to the Director of Interinational Teacher Education Programs, 455 Education Building, Bowling Green State Uñiversity, Bowling Green; Ohio 43403.

## Majors/Minors/Content/ Endorsements Area Requirements

Following is an alphabetical listing of the -majors/minors/endorsements by the College of Education. Offerings in the School of Health, Physical Educ̣ation and Recreation, the School of Technology and in the Department of Home Economics are grouped by unit with.selective cross-referençing in this list. Degree requirements for any of the majors and minors must also include the specified general education requirements; those majors and minors leading to Ohio. teacher certification must be accompanied by specified professional education course work as well. The course work indicated has been approved by the College of Education and, in'the case of teacher certification, has been based upon the Revised Code of Ohio Statutes and Regulations of the State of Ohio Department of Education and approved by that body.

Checksheets indicating all required course work (content, professional, general): for each major and/or minor are available in the Program Advisement and Teacher Certification Office, 365 Education Building. These checksheets allso indicate College retention requirements and, when appropriate, student teaching eligibility requirements; program arèa admission/retention requirements; and certification eligibility `. requirements.

## American Studies

214 University Hall, 372-0110
Major (Option I) (meets high school certification in English, history, geography, political science or sociology, depending upon the student's area of concentration provided appropriate professional education course work is also completed)
(50-60 hours)
AMST 200 and 400 (6)
HIST 205 and 206 (6)
ENG 266 and 267 (6)
Select nine hours: ART 441, ART 442, PHIL 315, PHIL 415 (9)
Select three hours: POLS 201, 301, 304, 331,
$341,345,346,347,416,417,418,421 ; 422$, 430,440 (3)
Select one: SOC 101; GEOG 225, 230, 350 (3)
Select one of these if SOC 101 selected above
SOC 231, 311, 315, 316, 418 (3)
Select one of these if GEOG 225, 230 or 350 selected above: GEOG 325, 326, 333, 335, 337 351. 402, 425, 426, 436; 451 (3)

Electives in specialization, chosen in consultation with adviser and meeting cerification requirements (14-24)
Major (Option Ii) (meets high school certification in history and English provided appropriate professional education course work is also completed) (60 hours)
AMST 200, 400 (6)
HIST 205 and 206 (6)
SOC 101 (3)
ENG 266 and 267 (6)
Select 9 hours from this group: PHiL 415, PHIL 315, ART 441, ART 442 (9)
Select 3 hours from this group: POLS 201, 301, '304. 331, 341, 345, 346, 347, 416; 417, 418; 421, 422, 430, 440 (3)
Select 3 hours: SOC 231, 311, 315, 316, 418 (3) History and English concentration, chosen in consultation with adviser and certification requirements (24)

## Other Programs

Programs in American Studies alsso are available through the Colllege of Arts and Sciences.

## Art

116B Fine Arts Building, 372-2786
Major (meets special certification,
kindergarten-twelfth grade) ( 50 hours)
ART 102, 103, 112, 145, 146, 205 (18)
ART 211 or 212 or 213 (3)
Select two of these: ART 261, 263; 267,320 or 321,265 or 365 (6)
Select two of these: ART 325; 371 or 373, 277 (6)
ART history elective (3)
ART electives (8)
ART sequence study in one area (6)
In addition to the forementioned courses offered by the School of Art art education majors must inclúde SOC 101, PHIL 204 and a POPC-elective in the general education portion of their programs.

## Minor*

(30 hourś)
ART 102, 103, 112, 145, 146, 205, ARTE 353
(21):ART. 211 or 212 or 213 (3): select one of : these-ART 261, 263, 267, 320, 321, 265, 365
(3); select one of these-ART 325, 371,373, . 277 (3)
'Minor (elementary majors only) ( 30 hours)
ART 102, 103, 112, 145, 146, 205 (18); ART 211. or 212 or 213 (3); select one of these-ART $261,263,267,320,321,265,365(3)$; select one of these-ART:325, 371, 373, 277. (3); ARTE 352 (3).
Minor (does not lead to certification)
(24 hours)
ART 102, 103.112, 145, 146:205 (18) select one of these-ART 261, 263, 267,320, 321, 265,
365 (3). select one of these-ART 211, 212 ,
213, 325, 371, 373, 277.(3)

## Other programs

Programs in art also are offered by the College of Arts and Sciences and its School of Art

## Astronomy

365 Education Building, 372-0151
Endorsement (leads to a strong background in astronomy, but does not lead to teacher certification) (8-9 hours)
ASTR 201 (3)
Two of these courses-AST.R 212, 305, 307, 403, 321 (5-6)

## Other programs

Programs in astronomy also are available through the College of Arts and Sciences.

## Athetic coaching

See School of Health, Physical Education, and Recreation, page 90.

## Athetic maining

See School of Health, Physical Education, and Aecreation, page 91.

## Riological sciences

365 Education Building, 372-0151
Maicr*
( 33 hours)
BIOL 204, 205, 301, 350, 352 (16)
OHEM 116 or 308/309 (4)
Thirteen hours of electives in BIOL which must include one of these-BIOL 321, 354, 412,
$420,422,425$ AND one of these-BIOL 407. $411,417,438,439,443$ (13)

## Mainer*

(23 hours)
BIOL 204, 205, 301, 350, 352 (16)
BIOL elective (3)
CHEM 115 (4)
Other prograns
Programs in biological sciences are also offered through the College of Arts and Sciences.
*meets high school certification provided appropriate professional education coursework is also complete.

## Rusiness Education

242 Business Administration Building, 372-2901
Malor - Comprehensive with shorthand (meels high school certiflcation in comprehensive business education and shorthand provided appropriate professional education course work is also completed. If the specified work experience pattern is demonstrated, vocational certification in Business and office Education, except for data processing, could also result). (45 hours)
BUSE 101, 202, 210, 240 (12)
ACCT 221 (3)
ECON 202 (3)
ACCT 222 or ECON 203 or LEGS 302 (3)
BA 203 (3)
BUSE 311, 321, 302, 314 (9)
LEGS 301 (3)
MKT 300 (3)
BUSE 335 and 401 (6)
This major could also lead to Comprehensive Vocational BOE with data processing if BUSE 220, CS 100 or MIS 200, CS 260 and CS 360 are completed.
Major - comprehensive without shorthand (meets high school centification in comprehensive business education provided appropriate professional education course work is also completed. If the specified work experience pattern is demonstrated, vocational certification in Business and Office Education, except for shorthand and data processing, could also result.) (42 hours)
BUSE 101, 202, 210, 240 (t2)
ACCT 221 (3)
ECON 202 (3)
ACCT 222. or ECON 203 or LEGS 302 (3)
BA 203 (3)
BUSE 302, 314, 321, 335 (9)
LEGS 301 (3)
MKT 300 (3)
NKT 402 or 410 or 430 (3)

This major could also lead to Vocational BOE with data processing if BUSE 220, CS 100 or MIS 200, CS 260 and CS 360 are completed.
Minor*-bookkeeping and basic business (24

## hours)

ACCT 221 and 222 (6)
BUSE 240, 321, 352, 354 (9)
ECON 202 and 203 (6)
Elective in ACCT, LEGS or economic geography (3)

Minor*-sales communication (22 hours)
BUSE 240, 321, 364 (8)
BA 203 (3)
MKT 300. 402, and 442 (9)
Approved elective in advertising, accounting, office procedures, office machines, typing, economic geography, retailing or per-
sonal selling (2)
Minor*-stenography and typing ( 23 hours)
BUSE 210, 202, 302, $311 ; 335$ or 455 (15)
BA 203 (3)
BUSE 401, 356, 358 (5)

## Chemistry

365 Education Building, 372-0151

## Major*

(28-29 hours)
CHEM 125, 126 (10) or CHEM 135, 136 (10)
CHEM 201 (for those having taken CHEM 125, 126) (3)

CHEM 341 and 342 (10)
CHEM 352 (3) or CHEM 405 and 407 (6)
CHEM electives selected from CHEM 321,442 , $413,463,308 / 309,406,408,445(0-5)$

## Minor*

(20 hours)
CHEM 125, 126 (10) or CHEM 135, 136 (10)

CHEM 201 (for those having taken CHEM 125, 126) (3)
CHEM 306 (4) or CHEM 341, 342 (10)
CHEM electives at $300-400$ level (0-6)

## Other programs

Programs in chemistry also are offered through the College of Arts and Sciences.

## Child and Family development

See Department of Home Economics, page 85 .

## Communications

365 Education Building, 372-0151
Major* (59-62 hours plus EDCI 420 and 359)

IPCO 306 (3)
ENG 201 or 205 and 206 (4)
Each student must complete Option I or Option II.

Option I (speech concentration) (55 hours)
THEA 202 and 241 (6)
CDIS 223 (3)
SPCH 351 (3)
ENG 301, 380, 381 (10)
JOUR 103, 300 or 301, 414 (9)
IPCO 204 (3)
RTVF 255 or RTVF 466 or VCT 203 or VCT 208 (3)
RTVF 262, 263, or 264 (3-4)
THEA 141, 340, 341 or 348 (3)
ENG 261 or 306 (3)
ENG 264, 265, 266 or 267 (3)
ENG 320, 323, 325, 330, 333, 335, 419, 420
(3)

IPCO 203 or 205 (3)
Option II (English concentration) (52 hours)
THEA 202 and 241 (6)
IPCO 203, 205 (6)
CDIS 223 (3)
ENG 301, 380, 381, 483 (13)
JOUR 103, 300 or 301,414 (9)
ENG 320,323, 325, 330, 333, 335, 419 or 420 (3)
ENG 261 or 300 (3)
ENG 264, 265, 266, 267 (3)
ENG 300, 343, 423, 481 or 428 (3)
RTVF 255 or RTVF 466 or VCT 203 or VCT 208 (3)

## Computer Science

365 Education Building, 372-0151

## Major*

(30 hours)
CS 101 (3)
CS 201, 202, 205, 305, 306, 307 (18)
Three CS electives at the 400 level, excluding CS 490 (9)
MATH 131 and 222 (8)
MATH 247 or 313 (3)
Students electing this major will be designated pre-computer science and will not be permitted to declare a computer science major until after completing CS 101, CS 201, CS 205, MATH 131 or 222, and ENG 112 with satisfactory grades. See the College of Education for details.

Students with a minor or joint major in MATH need not complete the listed MATH courses.

## Minor*

(21 hours)
CS 101 (3)
CS 201 and 205 (6)
CS electives ( 12 )
The following courses may not be applied to the 21 -hour minor requirement: CS 100 , 130, 180, 260, 281, 282, 390, 490.

## Other programs

Programs in computer science also are of-
fered through the College of Arts and
Sciences.

## Dietetics

See Department of Home Economics, page 85.

## Distributive Education

284 Business Administration Building,
372-0051

Major (meets vocational certification in distributive education) (33-36 hours) BUSE 101, 240, 364, 461, 462 (13)
BUSE 314.(1:2)
BUSE 470, (1-3)
BUSE 463 or' 465 (3)
ECON 200 or 202 (3)
MKT $300,402,410,430^{\circ}(12)$
Minor vocational certification pending) (19 hours)
BUSE 364\% 461', 462 (7)
BUSE 463 OFBUSE 465(3)
MKT 300, 402 (6)
MKT 410 or 430 (3)

## Vocational work experience

Seework experience

## Driver Education

See School of Health,"Physical Education and Recreation page 87

## Early Childhood Education

See Department of Home Economics, page 84

## Earth Science

365 Education Building, $372-0151$
Major* (32.hours)
GEOL $104105^{\circ}(8)$
GEOG: 25; 213 (6)
GEOL $304,305,306$ (12)
GEOE 493(6)
Minor* (22 hoürs)
GEOL 104 105, 304 (12)
GEO 305 or 306 (4)
GEOG-1 25:213 (6)

## Economics

455 Education Building, $372-0151$
Major* (30 hours)
ECON 100 (3)
ECON*202 (3)
ECON203:Or.200 (3)
ECON 400 (except for students who have
completed MATH. 124 or 131) (3)
ECON 302,303 and 3111 (9)
Select two ECON 351 ; 454, 472 (6)
Electives in ECON (3-6) (Students who plan to do graduate work: ECON should take
ECON 401)

## Minor*

(21 hours):
ECON 100 and 202 (6)
ECON 203 200 (3)
ECON 302, or 304,311 (6)
Select two EGON $351.454,472$ (6)

## Other programs

Programs in economics also are offered. through the College-of Artssand Sciences and the College inistration
meets high school certification provided apspropriate professional èducation coursework" allso complete

## Educable Mentally Retarded

451 Educâtion Building, 3720151
Major (meets special exceptional child certification for teaching the educable mentally retarded child, K-12. See full admissioñ, retention and student eligibility requirements, page 83. The following four-year plan indicates all of the general education, content and professional education course work specifically required for graduation as an educable mentally retarded major The four year plan indicates one way the course work can be sequenced:)
First year (30-31 hour's)
ART 101 (3)
ENG 112 (3)
PEG 100 (2)
HIST 151 or 152 (3)
PSYC 201 (4)
BIOL 104 (4)
GEOG 121 and 122 (6)
SPCH 102 (3)
Physical science élective (2-3)
Second year (32 hours)
HIST 205 and 206 (6)
EDFI 302 (3)
Literature elective (2-3).
EDCI 202-or EDF:202 (2)
MATH 241 and 242 (6) 5
EDSE 431, 451, and $4333^{\circ}(8)$
MUED 249 (2)
Physical. science elective (3)
Third year (33-35 hours)
EDAS 409 (3)
PEP. 433 (3)
ENG $342^{\circ}$ (3)
HED 356 (3)
EDCI 355 (3)
ART 482 (3)
EDSE 437 and 456 (6)
EDFI 408 (3)
Social science elective (1-3)
LEM 301 (2)
EDFI 402 or 429 (3)
Fouith year ( 31 hours)
EDSE 442, 447, 448 (9)
EDSE 492 (10/8)
MUED 349 (2)
EDSE 457, 443, 453, (7)
CDIS 451 or 471. (3-4):
If a student majoring in the educable mentally retarded program also desires certification for teaching in a regular-elementary clàssroom, à spẻcial dual certification program is available. Requirements for the dual certification program are available in the Program Advisement and Teacher Certification Office, 365 Education Building.

## Elementary Education <br> 365 Edúcation Building, $372-0151$

Major (meets elementáry education, cerifification, grades 1-8) See full admission, reténtion, and student teaching éligibility requirements on page
(The following four-year plan indicates all of the general education, content and professional education course work specifically required fôr graduation as an elementary education major: The four-year plan indi cates one way the course work can be sequenced):

First year ( $30^{\circ}$ hours).
ENG 112 (3)
PEG 100 (2)
GEOG.121(3)
SPCH 102 (3)
BIOL 101' (3)
EDCI 202 or EDFI 202 (2)
HIST 151 or 152 (3)
PHYS 104 (2)
CHEM 104 (2)
GEOLTO1 (3)
Electives or minor (4)
Second year (29-30hours).
MATH 241 and $242^{\circ}$ (6):
MUED 249 (2):
Literature elective (2-3)
HIST'205 and 206 (6)
PSYC 201 (4)
EDFI 302 (3)
ART:101 (3)
GEOG $122 \cdot(3)$
Third year (31 hours):
ARTE 343 (3)
EDCL $351,352,353 ; 355^{\circ}$ and 356 ( 15 )
PEP. 342(3).
ENG 342 (3)
MUED 349 (2)
LE\&EM $30{ }^{\prime \prime}$ (2)
HED 346 (3)
Fourth year (31-32-hours)
EDCl 492 (1.0)
EDAS $409^{\circ}(3)$ with student teaching.
EDFF402 and 408 (6)
EDSE 311 (2) with student teaching
CDIS 471 (3):
Eleçives or minor (4:5)
EDCL 365 (3)
Completion of EDFI 342, EDCI 357 and student teaching in a kindergarten through third grade setting will meet certification for grades kindergarten through eight

If an elementary edưcation major also desires educable mentally retarded certification and/or learning disabbilities/behavior. disorders certification; a special dual certification program is available Requirements for the dual or triplecertification program are available in the Program Advisement and:
Teacher Centification Office, 365 Education Building.

## English

216 University Hall 372-2576.
Major* ( 39 hours beyond Englishh 112, plus EDCI 420)
Group 1.
Select one ENG 201 (or $205^{\circ}$ and 206) (4)
ENG $190=(\%)^{-3}$
Group II:
ENG 301; 343 (6)
Select one: ENG 261 or 306: (3)
Select two:ENG 264, 265, 266 or 267 (6)
Select one: ENG $320,323,325,330,333$ or 335 (3).

Select one: ENG 300 or if topic is appropriate 423.470 or $480(3)$

Students are urged to take also at leastone British (other than Shakespeare) and atleast one Americanlliterature coursé A sècond majorau thor Course is also recommended.
Group III
ENG 380**. $381^{1 * *} 483$ (10)
Select one: ENG 481, or 482 or 484 (3)
ENG 207, 208, 251 and 388 are also recommended
*Prerequisites for EDCO 371 . Students should also cómplete Groups landil before taking $\mathrm{EDCl}^{3}$ 371

Ahtyont (26 hours of English beyond ENG 112 plus EDCl 420)
Group 1
Select one: ENG 201 (or 205 and 206) (4)
ENG 190 is also recommended.
Group II
ENO 301 (3)
Select one: ENG 261 or 306 (3)
Select one: ENG 264, 265, 266 or 267 (3)
Seleci one: ENG $320,323,325,330,333$ or 335 (3)

ENG 300 and 343 are also recommended.
Group 11
ENG 380, 381,483 (10)
One of the following courses is also recommended - ENG 207, 208, 251, 388, 481, 482, 484.

## Enyironmental Education

550 Education Building, 372-0151
124 Hayes Hall, 372-0207
Majer (three separate tracks are individually designed to supplement existing certifiable majors, including elementary education, most science majors, and recreation majors)
Winor (does not lead to certification)
(21-22 hours)
EIOL 101 (3)
Select two of these-EDFI 415, 490, 416 (6) Select four of these-BIOL 104, GEOG 331,
GEOG 442. HIST 338, ECON 435, POLS 335,
POLS 336, PHIL 332, ENVR 421 (12-13)

## Environmental Science

529 Education Building, 372-0151
Major (meets high school certification in biological sciences, general science and health provided appropriate professional education course work is also completed.) (6061 hours)
BIOL 101, 204, 205, 301, 321, 322, 332, 490 (26)
HED 209, 313, 340 (9)
Math (3)
PHITS 100 (3)
GEOL 322 (3)
CS elective or statistics elective (3-4)
CHEM 115, 116 (8)
Select two of these-PEP 443, HED 338, HED
346. BIOL 313, BIOL 406, BIOL 421, HOEC

105 HOEC 120, HOEC 207. HOEC 302. HOEC 407, PSYC 305 (5-7)

## Olher programs

Environmental programs are also offered through the College of Arts and Sciences and the College of Health and Community Services. Contact the Center for Environmental Programs, 124 Hayes Hall, for additional information.

## Family Life Education

See Department of Home Economics, pege 85.

## French

365 Education Building, 372-0151
Major (meets special certification, in French kindergarten-iwelth grade provided appropriate professional course work is also completec.) (24 hours of French beyond 202) FREN 351, 352, 353, 361, 371,372 (18) FREN electives at $400-$ level (6)

Minor (meets high school certification and validation of elementary certificate for French provided appropriate professional education course work is also completed.) (24 hours)
FREN 361, 351, 352, 353, 371, 372 (18)
EDCl 373 and 429 (6)

## Other programs

Programs in French also are available through the College of Arts and Sciences.

## Geography

455 Education Building, 372-0151
Major* (32 hours)
Select two from this group: GEOG 125, 126, 127. 213, 404, 405, 427, 433, 460, 471 (5-6)
Select two from this group: GEOG 225, 230, 337. 325, 327, 326, 331, 333, 334, 335, 402, 425, 426, 436, 442, 451, 452 (6)
Select two from this group: GEOG $341,342,343$, $344,345,346,347,349,350,351$ (4-6)
Geography electives (14-17)
Minor* (21 hours)
Select two from this group: GEOG 125, 126, 127, $213,404,405,427,433,460,471(5-6)$
Select two from this group: GEOG 225, 230, 337. $325,327,326,331,333,334,335,402,425$. 426, 436, 442, 451, 452 (6)
Select two from this group: GEOG $341,342,343$. $344,345,346,347,349,350,351$ (6)
Geography electives (3-6)

## Other programs

Programs in geography also are offered through the College of Arts and Sciences.

## German

365 Education Building, 372-0151
Major (meets special certification, in German kindergarten-twelfth grade provided appropriate professional education course work is also completed.) ( 23 hours of German beyond 202)
GERM 317, 318, 417 (9)
GERM electives beyond 202 (GERM 260 and
360 may not be counted toward the major) (14)
Minor (meets high school certification and validation of elementary certificate for German provided appropriate professional education course work is also completed.) (23 hours)
GERM 317, 318, 417 (9)
GERM electives beyond 202 (GERM 260 and
360 may not be counted) (8)
EDCl 373 and EDCI 429 (6)

## Other programs

Other programs in German also are available through the College of Arts and Sciences.

## Health

See School of Health, Physical Education, and Recreation, page 87.

## Hearing impaired

451 Education Building, 372-0151
Major (meets special exceptional child for teaching the deaf and hard-of-hearing child, $\mathrm{K}-12)$. Also see full admission, retention and student teaching eligibility requirements, page 83. The following four-year plan indicates all of the general education, content, and professional education course work specifically required for graduation as a hearing impaired major. The four-year plan indicates one way the course work can be sequenced).
First year ( 32 hours)
BIOL 101 (3)
CDIS 223/224 (5)
PEG 100 (2)
HIST 151 or 152 (3)
HIST 205 or 206 (3)
SPCH 102 (3)
ENG 112 (3)
PSYC 201 (4)
GEOG 121 (3)
ART 101 (3)
Second year (36 hours)
LEM 301 (2)
PSYC 324 (3)
Physical science elective (6)
CDIS 301 (4)
HED 346 (3)
EDCI/FI 202 (2)
GEOG 122 (3)
MUSIC 249/349 (4)
MATH $241 / 242$ (6)
EDCI 355 (3)
Third year (33 hours)
ENG 342 (3)
EDSE 431 (3)
EDSE 457 (3)
EDSE 451 (3)
EDSE 442 (3)
EDFI 402 or 429 (3)
EDFI 302 (3)
EDFI 408 (3)
CDIS 361 (3)
ENG 380 (4)
Literature elective (2-3)
Fourth year ( 32 hours)
EDSE 461 (3)
EDSE 462/463 (6)
EDSE 464/465 (6)
CDIS 434/436 (4)
EDAS 409 (3)
EDSE 497 (10)

## History

442 Education Building, 372-0151

## Major*

(33 hours)
Select three: HIST 151, 152, 205, 206, 280 (9)
Select one: HIST 301, 302, 303, 306, 307, 320
$323,325,326,338,419,420,421,422,425$,
$426,427,428,429,430,433,436,437,438$ (3)
Select one: HIST 357, 363, 367, 377, 415, 444, $448,454,458,459,464,469,470,471$ (3)
Select one: HIST 304, 305, 309, 310, 311, 315 ,
$316,340,360,381,382,386,401,411,413$,
$414,441,442,462,481,483,486$ (3)
HIST electives, at least four of which must be at 400 level (15)

Minor (does not lead to certification) (21
hours)
Select three:HIST. 151, 152, 205, 206, 280 (9)
Select one: HIST 301, 302, 303, 306, 307, 320,
$323,325,326,338,419,420,421,422,425$
$426,427,428,429,430,433,436,437,438$ (3)
Select one: $357,363,367,377,415,444,448$ $454,458,459,464,469,470,471$ (3)
Select one $304,305,309,310,311,315,316$, 340, 360, 381, 382, 386, 401, 411, 413, 414, $441,442,462,481,483,486$ (3)
HIST.eléctive (3):
At least one-history course must be at 400 level:

## Other programs

Programs in history are also offered through the College of Arts and Sciences.

## Home Economics

See Department of Home Economics, page 84.

## Industrial Education and Technology

SeeCollege of Technology, page124

## International Studies

442 Eduucation Building, 372-0151
Major (meets high school certification in social studies providing the student fulfills the requirements outlined under the social-studies comprehensive major and the appropriate professional education courses) (66. hours)
HIST 152; 454; 205 and 206 OR 437 and 438 - (12)

ECON 202, 203. 351 (9)
POLS 201, 301; 371, 372 (12)
SOC 101, 202, 231 (9)
GEOG 452; 121 and 122 OR 230 (6-9)
Social sciençe electives (11-12)
Modern foreigñ language beyond 202 (6)

## Other programs

A program in international studies also is offered by the College of Arts and Sciences.

## Italian

365 Education Building, 372-0151
Minor (meets high school certification and validation of elementary certificate in Italian provided appropriate professional education course work is also completed).
(24 hours)
ITAL 351, 352, 36́1, 371, 372 (15)
ITAL elective at 300 or 400 level. (3)
EDCI 373.and 429:(6)

## Other programs

A program in Italian also is offered by the
College of Arts and Sciences

## Journalism

365 Education Building, 372-0151
Major* (27 hours)
JOUR $103,300,414$ (9)
Select one JOUR, $304,311,312,330,331,380$ 403, 404 (3)
JOUR electives (15).
Minor* (21 hours)
JOUR 103, 300, 414 (9)
Select one: JOUR 304, 311, 312, 330, 331, 380, 403, 404 (3)
UOUR electives (9)

## Other programs

Other programs in journalism are offered through the School of Journalism in the Coliege of Business Administratión.

## Languages

365 Education Building, 372-0151 Elementary education majors may have certificates validated for French, German, Italian, Russiañ or Spanish if they complete a minor in one of these areas. See specific languages for further information.

## Latin

365 Education Building, 372-0151

## Major*

(21 hours beyond 202)
Courses in LAT beyond 202 (2.1) (up to 8 hours may be taken from $480,481,485,486$ )

## Minor*

(18 hours)
Courses in LAT beyond 202 (12)
EDCI 373 and 429 (6)

## Other programs

Programs in Latin also are offered by the College of Arts and Sciences.

## Learning Disabilities and/or Behavioral Disorders

451 Education Building, 372-0151
Major (meets special exceptional children certification for teaching the learning disabled child K-12 IF another certifiable major is completed: Also see full admission; retention and student teaching eligibility requirements, page : The following fouryear plan indicates all of the general education, content and professional education course work specifically required for graduation as a learning disabilities/ behavior disorders major. The four-year plan indicates one way the course work can be sequenced).
First year (30-31 hours)
ART 101 (3)
ENG 112 (3)
PEG 100 (2)
HIST, 151 or 152 (3)
PSYC 201 (4)
BIOL 104 (4)
GEOG 121 and 122 (6)
SPCH 102 (3)
Physical science elécitive (2-3)
Second year (32 hours)
EDFI 302 (3)
HIST 205 and 206 (6)
Literature elective (2-3)
EDCI 202 or EDFI 202 (2)
EDSE 431, 433, and 451. (8)
MATH 241 and 242 (6).
MUED 249 (2)
Physical science elective (3)

Third year (33-35 hours)
LEM 301 (2)
ARTE 482 (3)
ENG 342 (3)
EDFI 402 or 429 (3)
EDSE 437 and 456 (6)
EDCI 355 (3)
PEP 433 (3)
EDFI 408 and EDAS 409 (6)
HED 346 (3)
Social Science elective (1-3)
Fourth year ( 31 hours)
EDSE 442, 447.448 (9)
CDIS 451 or 471 (3-4)
EDSE 492 (10)
MUED 349 (2)
EDSE 443, 453 and 457 (7)
If a student majoring in the learning disabilities/behavior disorders program also desires certification for teaching in a regular elementary classroom, a special dual certification is available: Requirements for the dual certification program are available in the Program Advisement and Teacher Certification Office, 365 Education Building.

## Librarian

See Media Specialist, this page.

## Mathematics

365 Education Building; 372-0151

## Major*

(35 hours)
MATH 131, 232, 233, 3222, 332, 339, 421, 441 (29)
MATH elective at $300 / 400$ level, excluding 395 ,
$414,490,495$ (3)
MATH 402 or 405 (3).
Minor*
(22 hours)
MATH 131, 232, 332, 339 (16)
MATH 402 or 405 (3)
MATH 233 or MATH elective at $300 / 400$ level (excluding 395, 414, 490, 495) (3).
Minor (elementary education majors only does not lead to validation or certification)
(22-25 hours)
MATH 131 (5) or MATH 124 (4)
MATH 241 (3) and MATH 242 (3) or MATH 243 (4)
MATH 247 (3) or MATH 115 (3)
MATH 414 (5)
CS 101 (3) or CS 100 (3)
EDCI 423 (3)

## Other programs

Programs in mathematics also are offered by the College of Arts and Sciences

## Media <br> Specialist/ Librarian

216 Hayes Hall, 372-2461
Major (meets special certification, kinder-garten-twelfth grade in educational media/library) (29 hours)
LEM 203, 403, 407, 408, 411, 428, 430, 450 (24)
ENG 342 (3)
Select two hours from this group-LEM 404, 405, $438431,433,434,441,455,490$ (2)
Minor* (24 hours)
LEM 203, 403, 407, 408, 411, 428, 430, 450 (24)

Minor (meets certification for validation of an elementary certificate for educational
media/library; availabie for elementary education majors onty) (24 hours)
LEM 203, 403, 407, 408, 428, 430, 450 (21) ENG 342 (3)
This major and these minors aiso prepare students for library/media information positions in industry, business, government and public tibraries.

## Other programs

A minor in library and educational media also is offered through the College of Arts and Sciences. Special programs can be arranged for individual students in any college.

## Moderakely, Severely and Profoundly <br> Handicapped Children

451 Education Building, 372-0151
界dior (meets special exceptional children cerification for teaching the moderately, severely and profoundly handicapped child, K-12. See full admission, retention and student teaching eligibility requirements, page 83. The following four-year plan indicates all of the general education, content and professional education course work specifically required for graduation as an MSPH major. The four-year plan indicates one way the course work can be sequenced).
First year (32 hours)
ART 101 (3)
ENG 112 (3)
PEG 100 (2)
HIST 151 or 152; HIST 205 (6)
PSYC 201 (4)
EDCI 202 or EDFI 202 (2)
BIOL 104 (4)
GEOG 121 and 122 (6)
Physical science elecive (2-3)
Second year (30 hours)
HIST 206 (3)
EDFI 302 (3)
MATH 241 and 242 (6)
SPCH 102 (3)
EDSE 431, 433 and 451 ( 8 )
Literature elective (2-3)
Physical science elective (3)
MUED 249 (2)
Third year (32 hours)
ART 482 (3)
ENG 342 (3)
PEP 433 (3)
CDIS 471 or 451 (3-4)
EDSE 437 and 456 (6)
MUED 349 (2)
EDF 402 or 429 (3)
Social science elective (1-3)
HED 346 (3)
EDCl 355 (3)
LEM 301 (2)
Fourth year (31 hours)
EDF 408 (3)
EDAS 4.09 (3)
EDSE 492 (10)
EDSE 442 and 457 (6)
EDSE 440, 443, 445, 470 ( 9 )

## 䡒usic

1031 Musical Arts Building, 372-2181
 page 104)

All prospective music minors must complete the music entrance examinations (see College of Musical Arts)
Minor*-secondary instrumental
(31-32 hours)
MUCH 131, 132, 231 (11)
MUCH 141, 142 (4)
MUED 150, 151 or 154 (1-2)
MUSP major instrument (3)
MUSP 305 and 306 (4)
MUED 340 (6)
MUSP large ensembles (2)
Minor*-secondary vocal (31-32 hours)
MUCH 131, 132, 232 (10)
MUCH 141, 142 (4)
MUED 150, 151 or 154 (1-2)
MUED 170, 177 or studio voice (4)
MUSP 305, 306 (4)
MUED 340 (6)
MUSP large ensembles (2)
Minor-(elementary education majors only; leads to validation of an elementary teaching certificate for teaching music at the
elementary level) ( $30-32$ hours)
MUCH 125, 131, 132, 231 (14)
MUCH 141, 142 (4)
MUSP 305 (2)
MUED 170 or studio voice (1)
MUED 150, 151 or 154 (1-2)
MUED 254 or $255(1-2)$
MUED 340 (5)
MUSP large ensembles (2)

## Other programs

Programs in music also are offered by the College of Musical Arts and the College of Arts and Sciences.

## OWE/OWA Work Experience Certification

See Work Experience, page 81.

## Philosophy

365 Education Building, 372-0151
Minor (does not lead to teacher certification)
( 25 hours)
PHIL 101, 103, 490 (7)
EDFI 408 (3)
PHIL electives (6)
Select one: PHIL 318, 245, 325, 327, 332, 342, 425 (3)
Select one: PHIL 102, 204, 107 (3)
Select one: PHIL 211, 311, 212, 313 (3)
The following endorsements lead to a strong background in philosophy, but do not lead to teacher certification:
Endorsement-teaching courses in
philosophy (15 hours)
PHIL 101, 103, 490 (9)
PHIL 102, 107 or 204 (3)
EDFI 408 (3)
Endorsement--Philosophy as a supple-
ment to major field of study ( 15 hours)
PHIL 101, 103 (6)
EDFI 408 (3)
PHIL electives (6)

## Other programs

Other programs in philosophy also are offered through the College of Arts and Sciences.

## Physics

529 Education Building, 372-0151
Major* (27 hours)
CHEM 125 or 135 (5)
PHYS 211 and 212 OR 201 and 202 (10)
PHYS 301, 305, 313 (5)
PHYS Electives (7)
Minor* (20 hours)
PHYS 211 and 212 OR 201 and 202 (10)
PHYS 301, 305, 313 (5)
CHEM 125 or 135 (5)
Other programs
Programs in physics also are offered
through the College of Arts and Sciences.

## Political science

442 Education Building, 372-0151
Major* (30 hours)
POLS 201 and 302 (6)
Electives ( 24 hours) in POLS including at least
one course from each of the following groups:
POLS $250,271,301,337,351,354,355,361$.
$366,368,402,403,423,454,460$
POLS 416, 417, 418, 419 or 420
POLS $330,331,421,422$ or 430
POLS 271, 337, 371, 372, 374, 473, 475
POLS 341, 434, 440. 443
POLS 304, 331, 333, 334, 335, 336, 345, 346, 347, 405, 421, 422
Minor* ( 21 hours)
POLS 201 (3)
Electives ( 18 hours) including at least one course from each of the following groups:
POLS 250, 271, 301, 337, 351, 354, 355, 361, $366,368,402,403,423,454,460$
POLS 416, 417, 418, 419 or 420
POLS 330, 331, 421, 422 or 430
POLS 271, 337, 371, 372, 374, 473, 475
POLS 341, 434, 440, 443
POLS 302, 304, 331, 333, 334, 335, 336, 342 ,
$345,346,347,405,421,422$

## Other programs

Programs in political science also are offered by the College of Arts and Sciences.

## Psychology

365 Education Building, 372-0151
Major* (36-37 hours)
PSYC 201 (4)
PSYC 270 and 290 (7)
PHIL 101, 102, 204, or 230 (3)
PSYC 301, 313, 320, 321, 322, 328,330 and/or 340 (8)
PSYC 311 (3)
PSYC 303 or 304 or 312 (2-3)
PSYC 403, 405, and 460 (9)
Minor* (32 hours)
PSYC 201 (4)
PHIL 101, 102, 204 or 230 (3)
PSYC 270 and 290 (7)
PSYC 301, 313, 320, 321, 322, 328, 330, or 340 (4)

PSYC 311 (3)
PSYC 303, 304, 305, or 403 (2-3)
PSYC 405 and 460 (6)
PSYC elective ( 3 )
Other programs
Programs in psychology are also offered by the College of Arts and Sciences.

## Physical Education

See School of Health, Physical Education,
sax

## Reading and Language Arts <br> 365 Education Building, 372-0151

Minor (does not lead to teacher certification) (26-27 hours)
EDCI 355, 356, 359, 365, 420 (15)
ENG 291 and 342 (6)
Select two-LEM 441, THEA 340, THEA W395, and ENG 442 (5-6)

## Recreation

See School of Health, Physical Education, and Recreation, page 89.

## Restaurant Management

See Department of Home Economics, page 86.

## Russian

314 or 365 Education Building, 372-0151
Major (meets special certification, kinder-garten-twelfth grade in Russian provided appropriate professional education course work is also completed). (21 hours of Russian beyond 202)
RUSN 317, 318, 319, 315 (11)
RUSN electives beyond 202 (10)
Minor (meets high school certification and validation of elementary certificate for Russian provided appropriate professional education course-
work is completed). (23 hours)
RUSN 317, 318, 315 (9)
RUSN electives beyond 202 (8)
EDCI 373 and 429 (6)

## Other programs

Programs in Russian also are offered by the
College of Arts and Sciences.

## Science Comprehensive

529 Education Building, 372-0151
Major* (meets high school certification for teaching all science subjects) (60 hours)
GEOL 104, 105 (8)
GEOG 125, 213 (6)
CHEM 125, 126 OR 135, 136 (10)
BIOL 204, 205 (10)
BIOL elective (3)
ASTR 212 (3)
Select two: GEOL 205, 304, 306, 322, 418, (6-8)
PHYS 201, 202 OR 211, 212, 301 (10-13)
Electives in BIOL, CHEM, PHYS (0-4)
Minor* (general science) (34-37 hours)
BIOL 204, 205 (10)
PHYS 201, 202 OR 211, 212, 301 (10-13)
CHEM 125, 126 OR 135, 136 (10)
GEOL 104 (4)

## Secondary Education

365 Education Building, 372-1051
Major (American Studies, Biological Sciences, Chemistry, Communications, Computer Science, Earth Science, Economics, English, Environmental Science, Geography, History, International Studies, Journalism, Latin-American Studies, Mathematics, Physics, Political Science, Psychology, Science Comprehensive, Social Studies, Speech Communication.) See individual heading for course work leading to certification in the above areas.
During the senior year, students are enrolled in the Secondary Professional Semester (SPS) which comprises the following courses: EDSE 311, EDCI 360 , one of the following advanced content methods courses ( $\operatorname{EDCl} 371,372,374,375$, 376, or 378) and student teaching EDC 497. During the first six weeks students spend three days on campus enrolled in the professional education courses and two days in the schools where their student teaching experience will be completed the last ten weeks of the semester. In addition, during one of the first six weeks students will participate in an outdoor education program at Camp Storer, Jackson, Michigan.

## Social Studies

422 Education Building, 372-0151
Major* (60 hours)
SOC 101, 202, 231 (9)
GEOG 121, 122 (6)
ECON electives (6)
HIST electives 300/400 level (3)
POLS 302 (3)
POLS 101 or 201 (3)
Select two from HIST 151, 152, 205, 206, 280 (6)
Electives in endorsement (24)
Students must consult an assigned social studies adviser and follow the checksheet given them. The checksheet indicates the courses appropriate for first and second endorsements in history, political science, geography, economics and sociology. Upon graduation a student is certified to teach any endorsements completed.

## Sociology

365 Education Building, 372-0151
Minor* (21 hours)
SOC 101 (3)
Select 6-7 hours: SOC 361 ; HOEC 105 or 302 , 107, 320, 321, 405, 406, 407, 408 (6-7)
Select 6-7 hours: SOC 231, 301, 302, 303, 311, $315,317,331,334,352,369,370,371,415$, $416(6-7)^{*}$
Select 6 hours: SOC 202, 316, 341, 418, 441, 442 (6)
*The sociology department recommends that SOC 301.369 and 370 be selected.

## Other programs

Programs in sociology also are offered by the College of Arts and Sciences.

## Spanish

314 or 365 Education Building, 372-0151
Major (meets special certification, kinder-garten-twelfth grade provided appropriate professional education coursework) (24
hours of Spanish beyond 202)
SPAN 351, 352, 367, 368, 371 (15)
SPAN 377 or 378 (3)
SPAN electives at 400 -level (6)
Minor (meets high school certification and validation of elementary certificate for Spanish provided appropriate professional education course work is also completed) (24 hours)
SPAN 351, 352, 371 (9)
SPAN elective at $300 / 400$ level (3)
SPAN 377 or 378 (3)
SPAN 367 or 368 (3)
EDCl 373 and 429 (6)

## Other programs

Programs in Spanish also are offered by the College of Arts and Sciences.

## Special Education

See communication disorders; hearing impaired children; educable mentally retarded; learning disabilities and/or behavior disorders; and moderately, severely and profoundly retarded. Also see adapted physical education in the School of Health, Physical Education, and Recreation.
Special Education Minor (does not lead to certification) ( 15 hours)
EDSE 431, 433, 451 (8)
Select 7 hours from this group-EDSE 311, 421, 432, 437, 438, 440, 441, 442, 443, 445, 447, 448
$453,456,457,461,462,463,464,465,470$ (7)

## Speech Communication

365 Education Building, 372-0151
Major* (42 hours)
SPCH 102, 351, (6)
THEA 141, 202, 241, 341 (12)
IPCO 305 (3)
CDIS 223 (3)
Select two: RTVF 255, 260, 263 (6)
Select one: IPCO 203 or 306 (3)
Select one: IPCO 204 or 205 (3)
Select one: THEA 243 or 347 or 348 (3-4)
Select one: IPCO 303 or 307 (3)
Minor* (35 hours)
SPCH 102 (3)
THEA 202, 241, 341, 141 (12)
Select two: RTVF 255, 260, 263 (6)
CDIS 471 (3)
Select one: IPCO 203 or 306 (3)
Select one: IPCO 204 or 205 (3)
Select one: THEA 243 or 347 or 348 (3-4)
Select one: RTVF 262 or IPCO 303 or THEA 340 or CDIS 224 or SPCH 351 (2-3)

## Other programs

Programs in speech communication also are offered through the College of Arts and Sciences.

## Speech and Hearing Therapy

109 South Hall, 372-2136
Malo (meets special kindergarten-twelfth grade exceptional children certification in
speech and hearing therapy)
Firsi year (30 hours)
BIOL 101 or 104 (3-4)
Science elective (3)
PEG 100 (2)
PSYC 201 (4)
ENG 112 (3)
SPCH 102 (3)
CDIS 223 and 224 (5)
EDCl 202 or EDFI 202 (2)
Science elective (2-3)
Social science elective (3)
Second year ( 37 hours)
EDFI 302 (3)
PSYC 270 and 305 (5)
IPCO 203 or 306 (3)
CDIS 301, 311,351 (11)
THEA 340 (3)
ENG 342 and 380 (7)
Sccial science elective (3)
Literature elective (2-3)
Third year ( 36 hours)
EDSE 431 and 433 (5)
EDFI 402 and 408 (6)
PSYC 303 or 304 (2-3)
L\&EM 301 (2)
CDIS 321, 331, 361, 401, 411, 421, 434 (18)
Humanities elective (2-3)
Fcurth year ( 35 hours)
EDCI 355 (3)
CDIS 497 (10)
EDSE 451 (3)
CDIS 341, 431, 461, 481 (11)
PSYC 405 (3)
EDAS 409 (3)
Cultural studies elective (2-3)

## Mork Experience

365 Education Building, 372-0151
Certification pastern (meets certification in Occupational Work Experience and Occupational Work Adjustment programs). Open to majors or minors in business
education, distributive education, educable mentally retarded, home economics and industrial education. See appropriate adviser.
Bequired methods sequence in major.
Partial student teaching in the work experience area.
One course in developmental reading by advisement.
EDF 412
BUSE 370,462 and 470
Equivalent of one year of gainful employment in business or industry.

## College of Education

## Retention/Full

Acceptance

## Pequirements

Several programs in the College of Education have established retention/full acceptance requirements in addition to those specified by the College on page 72 . Following is an alphabetical listing of these program areas and the additionally specified requirements.

## Elementary Education and Early Childhood Education

All students desiring full acceptance to the elementary education program must meet specific admission criteria. Prospective elementary education majors will be assigned an elementary education adviser, given an elementary education checksheet to follow, and advised to take courses required in the elementary education major. They will, however, need to be fully admitted in the program before enrollment in EDCI methods courses will be permitted.

Application forms for full acceptance are available in 529 Education Building and must be returned to 529 Education Building by the 20th class day of the semester in which the candidate wishes to be considered and have his/her eligibility determined. Applications received after that date will not be reviewed/processed until the following semester. Applicants will be notified In writing of their acceptance/denial of full acceptance. Application for full acceptance cannot be made until the candidate has earned at least 60 semester hours.

## Prerequisites For Full Acceptance

1. Completion of an application for full admission, available in 529 Education Building.
2. Completion of a minimum of 60 semester hours.
3. Completion of the following courses with a grade of C or better:

## ENG 112 <br> \section*{SPCH 102}

EDCI/EDFI 202
4. Completion of speech and hearing diagnostic test, with written evidence of results in PATCO file. Also, where appropriate, various opportunities for remediation have been identified.
5. Possession of a minimum GPA of 2.3 .
6. Proficiency in reading, as demonstrated by either a score above the 40th percentile on a reading compreherision test OR satisfactory completion of EDCI 100.
7. Proficiency in math, as demonstrated by a grade of $C$ or better in Math 241.
8. Completion of a minimum of 12 hours of elementary education course work. This coursework can be selected from two areas on the elementary checksheet-the Content for the Teaching Specialty section and the Professional Education section.
9. Completion of or current enrollment in EDFI 302.
10. Two letters of recommendation. These letters must be from professional education faculty, faculty from the Content for Teaching Specialty area or the student's faculty adviser.
11. Proficiency in written and oral communication skills as demonstrated by the following:

Spelling-must pass program area spelling test with 80 percent accuracy Writing-must satisfactorily pass program-selected writing test Oral-successful completion of SPCH 102 with a C or better.

A Candidacy Review Board determines admission or deferral of applicant to the elementary program; a personal interview with the Candidacy Review Board may also be necessary. The Review Board may prescribe remedial activities in a "concern conference." The concerns must be remediated before a student is fully admitted to the elementary program. Appeals will be processed through normal departmental processes.

Students who have not met the above criteria upon attaining junior status ( 60 semester hours) will be labeled pre-education and will not be permitted to enroll in methods courses. Readmission to the program requires an adviser's signature on the appropriate form and completion of the above criteria.

## Student Teaching Eligibility Requirements

1. Full acceptance into elementary program (this includes C or better in ENG 112, SPCH 102 and $\mathrm{EDCl} / \mathrm{Fl} 202$ ) and satisfactory performance in course-related field and clinical experiences.
2. 90 semester hours of college credits.
3. Completion of EDFI 302.
4. Completion of all methods courses ( 351 , $352,353,355$ and 356 ) with a grade of C or better.
a. Methods courses must be taken at BGSU unless consent of Review Board is given. Methods courses must also be completed within the five-year period immediately preceding student teaching.
b. No methods course in elementary education (EDCI prefix) may be taken more than twice without the permission of the Candidacy Review Board gained through the appeals procedure.
5. Recommendation of two EDCI methods faculty in written form.
6. Personal interview with field experiences coordinator/supervisor and on-site principal/teacher.
7. Application filed with elementary program coordinator and Office of Field Experiences before the end of the 1st week of the semester that PRECEDES the student teaching semester.
8. An accumulative grade point average of 2.3 (with no incompletes in courses designated as student teaching prerequisites) at the end of the semester prior to student teaching. 9. Possess a 2.5 major grade point average (professional education and content for the teaching specialty) at the end of the semester prior to student teaching.

Eligibility for student teaching can be revoked for such reasons as basic skills deficiency, poor interpersonal communication and unprofessional behavior by the written recommendation of two or more elementary teacher education faculty members, supported by the Candidacy Review Board.

## Foreign Language (French, German, Russian and Spanish Education Majors)

To be fully admitted to one of the above foreign language programs a candidate - must have a:2.5. accumulative grade point average, must have completed the 202 level of the language or equivalent, and must have completed a diagnostic test evaluating the four language skills of the candidate.

To.be éligible for graduation and certification as a foreign language major a candidate must have a 2.5 accumulative grade point average, must have a 2.75 major point must demonstrate to the foreign language education committee that serious deficiencies indicated by the diagnostic test (if añy) have been remedied, and must show a minimum of one semester of study abroad in a country in which the language is spoken or acceptable equivalency.
Industrial Education (see page 124 )
Physical Education (see page 88)

## Secondary Education

American Studies, Biology, Chemistry, Communications, Computer Science, Earth Science, Economics, English, Environmental Science, Geography, History, International Studies, Joumalism, Latin-American 'Studies, Mathematics, Phyșics, Political Science, Psychology, Science Comprehensive, Social Studies, Speech Communications majors

All students desiring full acceptance to one of the secondary education majors listed above must meet the following criteria:

1. Completion of a minimum of 60 semester hours:
2. Completion of the following courses with a grade of $C$ or better

## ENG 112 <br> SPCH 102 <br> EDCI/EDFI 202

3. Completion of speech and héaring diagnostic test, with written evidence of results in adviser's file, advisement of the results.
4. Attainment of a minimum BGSU GPA of 2.2
5. Completion of a minimum of 12 hours in the content for the teaching specialty with a minimum GPA of 22.
To be permitted to student teach, a secondary education major must meet the following student teaching eligibility requirements:
6. Füllacceptance into the secondary education program.
7. Completion of 90 șemester hours of University credits.
8. Completion of the following courses with a grade of C or better:

EDCI 370
EDCI $37 \times$ (Contents Methods Course)
EDCI 360
EDFI 302
4. No incompletes in courses that are prerequisites for student teaching.
5. Récommendations of conterit methods course instructor clinical supervisor and cooperating teacher(s).
6. Attainment of a minimum GPA of 2.2
7. Attainment of a minimum 2.2 GPA in content specialty area.
In addition to meeting all of the course and hour requirèments for graduation, all secondary education majors must meet the following additional graduation requirements:

1. Completion of all professional education courses with C or higher.
2. Attainment of a BGSU GPA of 2.2
3. Completion of the National Teachers Exam-Core Battery.

All appeals will be processed through the normal departmental and college processes.

## Special Education (Educable Mentally Retarded; Hearing Impaired; Learning Disabilities and Behavior Disorders; Moderately, Severely and Profoundly Handicapped).

All students desiring full admission to a special education program must meet specific admission criteria. Prospective EMR majors will bè. assigned a special education adviser, given an EMR checksheet to follow, and advised to take courses required in the EMR major. They will, however, need to be fully admitted in the program before enrolIment in EDSE methods courses will be permitted.
Application forms for full acceptance are available in 451. Education Building and must be returned to 451. Education Building by the 20th class day of the semester in which the candidate wishes to be considered and have his/her eligibility determined. Applications received after that date will not be reviewed/processed until the following semester. Applicants will be notified in writing of their acceptance/denial of full acceptance. Application for full acceptance cannot be made until the candidate has. earned at least 60 semester hours.

## Prerequisites for Full Acceptance

1. Completion of an application for full admission, available in 451 Education Building.
2. Completion of a minimum of 60 semester hours.
3. Completion of the following courses with a grade of C or better:

## ENG 11,2

SPCH 102
EDCI/EDFI 202
4. Completion of speech and hearing diagnostic test, with written evidence of results in PATCO file. Also, where appropriate, various opportunities for remediation have been identified.
5. Possession of a minimum GPA of 2.3
6. Proficiency in math, as demonstrated by a grade of $C$ or better in MATH, 241. (Please note: A grade of C or better in MATH 242 is also required fór graduation).
7. Completion of a minimum of six hours of special education (EDSE) course work selected from EDSE 431, 433, 451 with at least a 2.5 in the EDSE courses.
8. Completion of or current enrollment in EDFI 302

Students who have not met the above criteria upon attaining junior status ( 60 se-: mester hours) will be labeled pre-education and will not be permitted to enroll in the following methods courses - EDSE 437, 443, 447, 448, 453. Readmission to the program requires an adviser's signature on the appropriate form and completion of the above. criteria.
Student Teaching Eligibility Requirements

1. Full acceptance into EDSE program (this includes C or better in ENG 112, SPCH 102 and EDCI/EDFI 202) and satisfactory performance in course-related field and clinical, experiences.
2.90 semester hours of college credits.
2. Completion of EDFI 302 .
3. Completion of EDSE 431, 433;-437; 443, $.447,448,451,453$ with grades of C or better.
a. Methods courses (EDSE 437, 443, 447, 449,453 ) must be täken at BGSU unless consent by the EDSE department is given or unless the courses were taken at another 'institution prior to initial enroilment at BGSU.
b. No courses in special education
(EDSE prefix) may be taken more than twice without approval gained through the EDSE departmental appeals procedure:
4. Application filed with the .Office of Field Experiences no later than the end of the first week of the semester that PRECEDES the student teaching semiester. It is strongly recommended, however, that the application be filed TWO SEMESTERS in advance. 6. An accumulative grade point average of 2.3 with no incompletes (in courses designated as student teaching pre-requisites) at the end of the semester prior to student teaching. -7. A 2.5 major grade point average (EDSE courses) at the end of the semester prior'to student teaching.

Eligibility for student teaching. can be revoked for such reasons as bäsic skills deficienicy, poor interpersonal communication and unprofessional behavior by the written recommendation of two or more EDSE faculty members," supported by the department appeals committee.

## Department of Hone Economics

## 206. Johnston Hall, 372-2026

Degree programs offered by the Department of Home Economics address the several functions used by individuals in a family environment: clothing, shelter, nutrition, care of the elderly, development of young children, management of resources. Home economics is the only profession and field of study with the nucleus of the family as a social and economic insitituion. Degrees in home economics are offered through the colleges of education, arts and sciences, and health and community services. The department provides students with the opportunity to major or minor in foods and nutrition; home economics education; human development and family studies; resource management and consumer science; and textiles, clothing and interior design. There are 12 undergraduate majors, which are identified below by college and degree.

Individuals completing degree requirements within home economics must meet the general education requirements specifled by the college in which the program is housed. Advisers are available within the department to meet with students and to discuss admission standards, degree requirements, and employment opportunities related to cach of the major programs.

## SACHELOR OR GCAENGEIN FDUCATION

## Teacher Certification Progrms

(See introduction to College of Education for general education requirements.)

## Early childhood

## Erucation*

206 Johnston Hall, 372-2026
Major (meets elementary certification, kindergarten-eighth grade)
This program also prepares students to work with preschool programs, public and private day care centers, as well as other agencies serving children.

First year (35-36 hours)
ART 101 (3)
ENG 112 (3)
PEG 100 (2)
HIST 151 or 152 (3)
HOEC 123 (3)
EDCI 202 or EDFI 202 (2)
BIOL 101 or 104 (3-4)
GEOG 121 and 122 (6)
SPCH 102 (3)
CHEM 104 (2)
PHYS 104 (2)
GEOL 101 (3)
Second year (30-31 hours)
HIST 205 and 206 (6)
PSYC 201 (4)
HOEC 207 and 223 (5)
HED 346 (3)
L\&EM 301 (2)
MATH 241 and 242 (6)
EDCl 221 (3)
Approved literature elective (2-3)
Third year (42 hours)
EDFI 302 and 342 ; EDCl $351,352,353,355,356$ and 357 (24)
ART 343 or IE 316 (3)
PEP 342 (3)
EDCI 321 (2)
ENG 342 (3)
MUED 249 and 349 (4)
HOEC 224 (3)
Fourth year (37-38 hours)
HOEC 421 and 423 (6)
EDSE 421 or 311 or 431 (3)
EDCI 492 (10)
EDAS 409 (3)
CDIS 471 (3)
SOC 316 or 361 or HOEC 105 or 107 or 302 or 305 or 408 or ETHN 101 (3)
PSYC 321 or 322 or HOEC 422 (3-4)
EDFI 408 and 402 or 429 (6)
Plus current First Aid Certiticate
Minor (does not lead to teacher certification) (27 hours)
HOEC 123, 223, 224, 421, 422, and 423 (17)
EDSE 421 (3)
EDCl 221 and 321 (4)
HOEC 320 or 321 or EDFI 342 or PSYC 303 (3)

## Home Economics <br> Education

206 Johnston Hall, 372-2026
Major-homemaking and consumer education.
The program options in home economics education are designed to prepare those who wish to teach home economics from junior high school through adult education. The curricula are designed to meet the educational requirements necessary for one or more of the certification options available in vocational homemaking and consumer education, child care services job training, community and home services job training, fabric services job training, food services job training, multi-area job training, occupational work adjustment/occupational work experience, general home economics, and family life education.
First year ( 33 hours)
CHEM 115, 116 (8)
ENG 112 (3)
HOEC 101, 103, and 105 (9)
EDCI 202 or EDFI 202 (2)
SPCH 102 (3)
PEG 100 (2)
ART 101 (3)
General education elective (3)
Second year ( 32 hours)
HOEC 202, 205, 210, 212, 250, 303, and 307 (21)
PSYC 201 (4)
Approved literature elective (2-3)
EDFI 302 (3)
L\&EM 301 (2)
Third year (31 hours)
HOEC 206, 311, 321, 322, 352, and 353 (18)
ECON 200 (3)
EDCI 360 (2)
EDSE 311 (2)
SOC 101 (3)
Approved Science or Math elective (3)
Fourth year (33 hours)
HOEC 302, 354, 405, and 406 (12)
EDFI 402 (3)
HOEC 497 (10)
EDAS 409 (3)
EDFI 408 (3)
Cultural studies elective (2-3)
A home economics education major with the preceding program may prepare for an additional cerificate to teach job training in secondary vocational programs by com-
pleting the following additional course work
Child care services-job training (24 hours)
HOEC 389 (3) ${ }^{\star}$
ENG 342 (3)
MGMT 305 or ACCT 325 (3)
PEP 342 (3)
HOEC 320, 421, 422, 423 (12)

Community and home services-job training
(16 hours)
HOEC 389 (3)*
HED 109 (3)
MGMT 305 or ACCT 325 (3)
HED 313 (3)
BIOL 313 (4)
Fabric services-job training (24 hours)
HOEC 389 (3)*
HOEC $313,404,412,414$, and 417 (15)
ART 103 (3)
MGMT 305 or ACCT 325 (3)
Food services - job training ( 25 hours)
HOEC 389 (2)*
HOEC 331, 333, 431, and 433 (12)
DESN 301 (3)
BIOL 313 (4)
MGMT 305 or ACCT 325 (3)
*The early childhood education option is an interdepartmental program involving home economics, educationat curriculum and instruction. educational foundations and inquiry and special education.
Multi-area job training (6 hours)
HOEC 389 (3) ${ }^{\star}$
MGMT 305 or ACCT 325 (3)
OWA /OWE-job training (13 hours)
This program is designed to be compatible with and build upon majors in home economics education.
EDFI 412 (2)
BUSE 37(1, 462, 470 (8)
HOEC 389 (3)*
Family Life Certification (34 hours)
This program is designed to be compatible with and build upon a major in home economics education.
BIOL 104 and 331 (7)
HED 109 or 209 (3)
RED 190 (3)
HED 313. 338, and 409 (9)
HOEC 120 (3)
HOEC 407 (3)
Select one: SOC 301 or PSYC 311 (3)
Select one: HOEC 107 or 408 (3)
One year of acceptable on-the-job experience may be substituted, but no hours of credit are added to transcript. See a home economics adviser
Minor (meets high school certification provided appropriate professional education coursework has also been completed) (40 hours)
HOEC 101, 105, 202, 205, 207, 210, 212, 250, $302,303,321,352$, and 405
Minor (non-certifiable) (24 hours)
HOEC 101, 103, 105, 205, 207, 210, 303, 320
Minor - Resource Management and Consumer Science (non-certifiable) (24 hours) PENDING APPROVAL
HOEC 205, 311, 405, 480 (12)
Select 12 hours from HOEC 206, 406, 413, 415 ,
107, 408, 305; STAT 200; GEOG 325, 326;
MGMT 305; ECON 200, 203, 202; SOWK 225,
322: POLS 330 (12)

## BACHELOR OF SCIENCE IN EDUCATION

Other professional options

## Child and Family Development

206 Johnston Hall, 372-2026
The emphases of the program are on human development, social relationships and the family life cycle. Practical experience in the nursery school and other community facilities provides opportunities for supervised observation and experience with the various aspects of human development.

Careers in these fields are teaching in nursery schools or day care centers; working in government Headstart programs and community social services; working with youth groups, retirement homes, nursing nomes and vocations in which a knowledge of human relationships is required. This program may be combined with family life education or job training in child care services for teacher certification. A foundation is provided for graduate study and for professional careers in which additional work is required, such as child and family counseling, and the administering of programs for families and children.

## Major

First year (29-30 hours)
ART 101 (3)
ENG 112 (3)
PEG 100 (2)
SPCH 102 (3)
BIOL 104 (4)
SOC 101 (3)
HOEC Selections* (6)
Elective (3)
Approved science elective (2-3)
Second year (29-30 hours)
ENG 342 (3)
TECH 313 (3)
HOEC Selections* (15)
PSYC 201 (4)
Approved Social science electives (2-3)
Approved Literature elective (2-3)
Third year ( 32 hours)
EDFI 302 and 402 (6)
HOEC Selections* (15)
THEA 340 (3)
Approved cultural studies electives (5)
Approved Science elective (3)
Fourth year ( 32 hours)
EDFI 408 (3)
HOEC 489 (5-12)
HOEC Selections* (8)
Electives (9-16)
*44 hours must be elected from these courses: HOEC 105, 107, 408, 120, 205, 207, 302, 320 321, 322, 224, 407, 421, 422, 423, 435, 389;
HED 313.

Child care services (29 hours)
A child and family development major can prepare for a job training certificate in child care services by completing the following course work:
HOEC 250. 352, and 353 (9)
EDSE 431 (3)
ACCT 325 (3)
HOEC 497 (10)
PEP 342 (3)
HOEC 389 (1)
Minor (does not lead to certification) (33
hours)
(Select 33 hours from the following group of
14 courses)
HOEC 105, 120. 205, 207, 302, 320, 321, 322 .
389, 421, and 423
ENG 342
THEA 340
TECH 313
Family life certification-add on (64 hours)
This program is designed to be compatible with and build upon the child and family development major.
BIOL 331 (3)
ECON 200 (3)
HOEC 497 (10)
Select one: HOEC 103, 303, 406 (3)
HOEC 250 (3)
HOEC 352 (3)
HOEC 405 (4)
HED 109 (3)
HOEC 207 (3)
RED 190 (3)
HED 313 and 338 (6)
HED 409 (3)
EDCl or EDFI 202 (2)
LEM 301 (2)
EDSE 311 (2)
EDCI 360 (2)
EDAS 409 (3)
Select one: PSYC 311 or SOC 301 (3)

## BACHELOR OF SCIENCE IN TECHNOLOGY

The Department of Home Economics offers two programs which lead to the Bachelor of Science in Technology degree. For information on other programs leading to the Bachelor of Science in Technology, see College of Technology. Also see page 8 for degree requirements.

## Dietetics

206 Johnston Hall, 372-2026
A student who completes the course work below will qualify for an internship or preplanned work experience in an institution approved by the American Dietetic Association. Upon completion of this postgraduate training and passing an examination, the student will be eligible for membership in that professional association and for national registration.
First year (31 hours)
BIOL 205 (5)
ENG 112 (3)
MATH 124 (4)
SOC 101 (3)
CHEM 115 and 116 (8)
HOEC 210 (3)
PEG 100 (2)
SPCH 102 (3)

Second year (30 hours)
BHOL 313 (3)
ECON 200 (3)
HOEC 212, 307 (6)
MIS 200 OR CS 100 (3)
PSYC 201 (4)
EDF1 302 (3)
Approved literature elective (2-3)
ACCI 325 (3)
soc 231 (3)
Third year ( 31 hours)
BIOL 331 OR 332 (3)
HOEC 331, 333, 405, and 432 (13)
MGMT 360 and 361 (6)
DESN 301 or 104 (3)
Electives (MGT 300 and LEGS 301 recommended) (6)
Fourth year (30 hours)
HOEC 431, 433, 434, 435, and 480 (15)
Cultural studies elective (2)
Approved humanities elective (3)
Electives (HOEC 389 and 489 recommended) (10)

A dietetics program also is offered in the
College of Health and Human Services.

## Testaurant and Insititutional Food <br> Service Management

206 Johnston Hall, 372-2026
Students who complete this program are qualified to work in food production management. Industrial experience is gained through supervised field experiences in a job related to the student's goals.
First year ( 30 hours)
BIOL 104 or 205 (4-5)
CHEM 100 or 115 (3-4)
HOEC 210 (3)
MATH 115 or STAT 200 or STAT 211 (3)
MATH 124 or 127 or 131 (3-5)
SOC 101 (3)
SPCH 102 (3)
ENG 112 (3)
Two PEG 100 activities (2)
Cultural studies elective (3)
Second year (29 hours)
IPCO 203 (3)
ECON 200 (3)
DESN 104 (3)
Approved iferature elective (2-3)
LEGS 301 (3)
PSYC 201 (4)
MIS 200 or CS 130 (3)
Cultural studies elective (2-3)
Humanities elective (3)
HOEC 230 (3)
Third year (33 hours)
ACCT 221 and 222 (6)
HOEG 207, 331, and 333 (9)
MGMT 360 and 361 (6)
BA 203 (3)
Electives ( 6 )
HOEC 335 (3)
Fourth year ( 30 hours)
BIOL 313 (3)
HOEC 431, 433, and 480 (7-8)
Electives (12)
HOEC 489 recommended as an elective (5)
HOEC. 437 (3)

## Home Economics Programs In Other Colleges

## COLLEGE OF ARTS AND SCIENCES

Bachelor of arts degree.
Five programs in home economics are available through the College of Arts and Sciences. These are planned professional programs in fashion merchandising and interior design; major programs in food science and nutrition, and textiles and clothing; and a general home economics major with a concentration in foods and nutrition or textiles and clothing. No minor is required for the two planned professional programs. Fashion merchandising students may choose the option to study at the Fashion Institute of Technology, New York, for a year during the junior or senior year. Programs must be planned with the adviser no later than the second year. After the second year students may participate in a supervised field experience during the summer or academic year The following programs are available.

## Fashion Merchandising

206 Home Economics Building, 372-2026 This is a planned program designed to prepare students for careers in business and industry. These may include executive management positions; retail or wholesale merchandising: educational and/or sales representative for fabric, apparel and accessory firms. No minor is required. See page 40

## Food Science and Nutrition

206 Johnston Hall, 372-2026
A major program designed for the student who wishes to specialize in the food science field preparatory to graduate study or a career in business or industry. A minor is required. See page 40.

## Home Economics General

206 Johnston Hall, 372-2026
A major program designed for the student who desires a general home economics background with a concentration in foods and nutrition, textiles and clothing, or plans to continue in graduate school. A minor is required. See page 40

## Interior Design

209 Home Economics Building, 372-2026
The interior design program trains students in the planning and executing of residential and contract interiors. Course work is designed to help students evaluate problems and devise solutions for them. Students who complete the approved four-year program are eligible to apply for membership in the American Society of Interior Designers (ASID). See page 40.

## Textiles and Clothing

101 Home Economics Building, 372-2026 A major program designed for the student who wishes to specialize in the textiles and clothing field preparatory to graduate study or for a career in business and industry. A minor is required. See page 40.

## COLLEGE <br> OF HEALTH AND HUMAN SERVICES

## Child and Family Community Services

206 Johnston Hall, 372-2026
This is a multidisciplinary program for students who wish to concentrate in either children's services or family services. Specific courses of study are available for students who wish to pursue careers working with entire families, adolescents, infants and children or other specific groups of individuals. Career options in this program include: teaching and administration within preschools, infant centers, and a variety of human service agencies including hospital based developmental programs. See page 94 for details.

## Dietetics

206 Johnston Hall, 372-2026
A professional program leading to membership and registration in the American Dietetic Association is offered through the College of Health and Community Services See page 96 .

# School of Health, Physical Education and Recreation 

Betty van der Smissen, director, 200
Memorial Hall, 372-2876
The School of Health, Physical Education and Recreation is organized into the divisions of general physical education (PEG), health education (HED), physical educationprofessional (PEP), recreation and dance. (RED), sport management (SMD), and in-. tramurals and club sports (IM/CS).

Individuals completing designated requirements in health and physical education are prepared to begin careers as teachers of physical education for typical and/or a typical populations, health education, driver education, or as athlettic coaches and athletic trainers:

Concentrations in recreation or sport management programs are designed to prepare students for management, supervisory, and leadership positions in private enerprise, public agencies and community organizations. A program in dance prepares individuals in dance education or in daṇce as a performing art:
In"addition, the School of Health, Physical Education and Récreation provides opportunities for active participation in a broad spectrum of instructional physical education offerings and participation in intramural and club sports. as well' as performance 'opportunities in the University Performing Dancers.

Students seeking enrollment in any of the program offerings of the school are advised. to consult a specific program area adviser for current program admission stạndards and retention prócedures.

## General Physical Education

$\therefore$ PEG 100-General physical education Each freshman must fulfill the University requirement of two units in activities such as archery", badminton, bowling, curling, dance jogging, tennis, horseback riding, racquetball, skiing, swimming, ice skating; diving, and weight training. Most activities are coeducational, graded- $\mathrm{S} / \mathrm{U}$, and meet two hours per week.
PEG 200--General physical educatión.
lective prográm in diverse activities, open o any student who has completed the University requirement of two hour's of PEG 100. Two hours per week.

## Intramurals and Club Sports

Organized intramural and club sport competition is available through participation in:

1. coed activities-indoor, outdoor;
2. recreational sports for men;
3. recreationial sports for women;
4. club sports units and performance groups
in aquatics and dance.

## BACHELOR OF SCIENCE IN EDUCATION

All major programs in the School of Health, Physical-Education and Recreation lead to the Bachelor of Science in Education degree.

## Dance

202 Eppler North, 372-2395
(neither the dance major or the dance minor lead to teacher certification)

## Major

The major program gives a strong core in movement technique with a concentration in modern dance or ballet. An interdisciplinary curriculum leads to an emphasis in one of the following areas: performance, education, production, history, philosophy and criticism, and ethnographic or scientific research in dance.
General Education ( $42^{\prime}$ hirs.)
MUCH 101; PHIL 204 and HUM 101 must be included.
Core Requirements ( 55 hrs.)
RED 115-215 (4)
RED 120-220 (4)
RED 106 or 111 (2)
PEP 137 (1)
ARTH 145 or 146 (3)
RED 224 (1)
RED 226 (1)
PEP 230 (4)
MUCH 221 (2)
RED 315 or 320 (4)
RED 325 (1)
RED 326 (2)
RED 327 (1):
HED 313 (3)
RED 424 (3)
RED 426 (3)
RED 487 (1)
RED 488 (15)

Specialization emphasis (21. hrs. electives in consultation with adviser).
Electives (4 hrs:)

## Minor

(24 hrs:)
RED $115 / 215,120 / 220,326,424$ and 426
Select one of the following concentrations:
Dance education ( 12 hours)
RED 106, 111, 215/315, 325; and $387 / 487$
Dance performance ( 12 hoürs)
RED 220/320, 224, 215/315, 325 and $327^{\circ}$

## Driver Education

Certification pattern (6 hours)
HED 362 and HED 462 (6)

## Health Education

202 Eppler North 372-2525
Major (meets spécial certification, kindergarten through twelfth grade)
First year (30 hours)
HED 209 (3)
PSYC 201 (4)
SOC 101 (3)
BIOL 104 (4)
ENG 112 (3)
SPCH 102 (3)
EDCI/FI 202 (2)
PEG:100 (2)
General education elective (3)
Humanities elective (3)
Second year (30 hours)
HED 230, 348 (4)
HOEC 207 (3)
BIOL 331, 332 (6)
LEM. 301 (2)
Social science elective (2)
General educatioǹ èlective (2)
Approved literature elective (2-3)
Free electives (4)
EDFI 302 (3)
Cultural studies elective (2)
Third year (30-32 hours).
HED 313, 338, 340, 393, 409 (15)
EDSE 311 (2)
EDCI 360 (2)
Select 4 to 6 hours: HED $314,346,480$; PEP 360 ,
443; HOEC 105,302 ; PSYC 305; PHIL 319;
BIOL 313; ENVH 40t, 402, 403, 404
Electives (7-9):
Fourth year ( 32 hours)
HED 481 and 497 (12)
EDFI 402 and 408 (6)
EDAS 409 (3)
Electives (11).

To be fully admitted the student must have:

1. completed SPCH 102 and ENG 112 with a grade of C or better;
2. attained an accumulative grade point average at BGSU of 2.0 or higher;
3. completed EDCI 202 or EDFI 202 with a grade of C or better.
4. completed a speech and hearing test and been advised of results.
To be eligible for student teaching the student must have:
5. met college student teaching eligibility requirements (see page );
6. successfully completed EDCI 202 or EDF 202, HED 209, 230, 313, 338, 340 and HOEC 207;
7. received a C or better in HED 348 and 393.

While completing all of the above require-
ments, it is strongly recommended:

1. that the student see his or her adviser at teast twice per year;
2. that the student seriously consider working toward two (2) or three (3) additional certificates, e.g., physical education, driver education, general science, family life education or biology.
Whor (meets seven through twelve certification provided appropriate professional education course work is also
completed)
First year (3 hours)
HED 209 (3)
Second year (6 hours)
HED 348 (3)
BIOL 332 (3)
Thirc year (15 hours)
HED 313, 338, 409 (9)
Six hours from the following either during third or fourth year:
HED 230, 314, 340, 480, 481; PEP 360; HOEC
105, 207, 302; PSYC 305; PHIL 319; B1OL 313;
ENVH 401, 402, 403, 404.

## Scheol nurse

Cerificate pattern (with RN certificate and - bachelor's degree [20-21 hours]; without RN certificate and with bachelor's degree [45-46 hours])
The foliowing courses are required:
HED 348, 409, 492 [3], 497, [3] (12)
EDF 302,342 (6)
Select one: EDAS 409 or EDFI 408 (3)
in addition to the above stated course a student must possess a RN certification or complete the following courses at BGSU: NURS 305, 306,
307, 400, 401 (25)

## Physical Education

200 Eppler South, 372-2395

## Malor-plan I, elementary concentration

(meets speclal certification, in physical edu-
cation kindergarten-twelfth grade)
First year (31 hours)
PEP 116, 121, 124, 137, 138 and 203 (9)
RED dance elective (2)
ENG 112 (3)
BIOL 104 (4)
SPCH 102 (3)
Social/behavioral science electives (5)
Electives (5)

Second year (31-32 hours)
PEP 230, 233,241 and 238 (10)
LEM 301 (2)
BIOL 332 (3)
ENG literature (2-3)
Humanities and art electives (3)
PEP elective professional activity (1)
Electives (4)
PSYC 201 (4)
Cultural studies elective (2)
Third year (29 hours)
PEP 332, 337,340, 350 and 428 (16)
HED elective (3)
HED 313 (3)
EDFI 302 (3)
PEP elective professional activity (1)
Electives (3) (Student teaching or practicum (PEP 387) at secondary level suggested)

Fourth year ( 31 hours)
PEP 303, 402, 433 and 438 (10)
PEP 227 or 228 (1)
EDFI 408 (3)
EDAS 409 (3)
PEP 497 (14)
Students are encouraged to enroll in the elementary school physical education concentration as freshmen. However, to be admitted officially to the program, the student must have completed the equivalent of two semesters and the following:

1. completed ENG 112 and SPCH 102 with a grade of C or better;
2. earned a University accumulative point average of 2.3 and a 2.5 in all PEP, RED, HED or SMD courses;
3. completed PEP 137, 138, 233, 238 or 337, and 241 with a 3.0 grade point average; and
4. completed a minimum of three additional PEP 100 and/or 200 level activity courses.
5. completed speech and hearing screening test;
6. presented written recommendations from two faculty members; and
7. received affirmative action for admittance of $2 / 3$ of Plan I faculty.

In addition, the following traits are deemed essential for those expecting to contribute positively as a teacher and/or as a member of a community. The candidate must:

1. be capable of critical thinking, selfdirection and motivation for the purpose of selecting and attaining individual and professional goals;
2. demonstrate professional drive and commitment to education and teaching; and
3. develop a set of values which reflects a character worthy of working with young children.

To be eligible for student teaching the student must have:

1. been accepted into Plan I program;
2. completed 90 credit hours including:

ENG 112, SPCH 102, PEP 332 and 428;
PSYC 201, and EDFI 302;
3. achieved a 2.3 University accumulative grade point average; and
4. attained a major point average of 2.5 ; and
5. filed an application for student teaching with Plan I coordinator and College of Education Field Experiences Office.

Major-Plan II, secondary concentration
(meets special certification, in physical education kindergarten-twelth grade)
First year ( 31 hours)
PEP 137, 138, and 256 (4)
ENG 112 (3)
BIOL 104 (4)
PEP/RED activities ( 10 )
Social/behavioral science electives (5)
SPCH 102 (3)
Electives (2)
Second year (30 hours)
PEP 230 and 241 (6)
LEM 301 (2)
BIOL 332 (3)
PSYC 201 (4)
Approved literature elecive (3)
Humanities and ant electives (2-3)
Electives or minor (3)
PEP/RED activities (5)
Cultural studies elective (2)
Third year (32 hours)
PEP 247, 303, 332, 350, 356, 360, 362 and 402
(23)

HED 313 (3)
HED elective (3)
EDFI 302 (3)
Fourth year (29 hours)
PEP 412 and 433 (6)
PEP 497 (10)
EDFI 408 (3)
EDAS 409 (3)
Electives or minor (7) (Student teaching or practicum at elementary level suggested)
A candidate must apply for admission. To be admitted the student must have:

1. completed SPCH 102 and ENG 112 with a grade of C or better;
2. successfully completed PEP 137, 138, 241, and 256;
3. completed PEP 247 with a grade of C or better;
4. earned a 2.3 University accumulative grade point average;
5. have earned a PEP accumulative grade point average of 2.5 , including all HED /
PEP/RED courses which are Plan II program requirements;
6. have demonstrated attainment of minimal standards in four required ( 100 level) professional and one elective (200 level) professional competencies; and
7. have completed 10 PEP credit hours on the BGSU main campus.
8. completed speech and hearing test.

To be eligible for student teaching the student must have:

1. completed 90 credit hours including ENG 112, SPCH 102, PSYC 201, EDFI 302 and PEP 362;
2. been officially accepted into PEP Plan II program;
3. attained a University accumulative. grade point average of 2.3 ;
4. attained a major accumulative grade point average of 2.5;
5. successfully completed all professionat activity competencies (six required 100 -level and three elective 200-level activity
courses); and
6. filed an application for student leaching with PEP Division during second semester of year prior to year of anticipated student teaching (in addition to filing application in Field Experiences Office).

## Major-Plan III, secondary concentration

(meets high school certification in physical
education and health education)
First year (30-33 hours)
PEP 256 (2)
HED 209 (3)
PEP professional activities (12)
BIOL 104 (4)
ENG 112 (3)
SOC 101 (3)
SPCH 102 (3)
MATH (3) if high school deficient
Second year ( 31 hours)
Social/behavioral science elective (2-3)
PEP 230 and 247 (7)
PEP professional activities (3)
PSYC 201 (4)
BIOL 332 (3)
LEM 301 (2)
Approved literature elective (3)
HOEC 207 (3)
Humanities and arts elective (2)
Cultural studies elective (2)
Third year ( 34 hours)
PEP 303, 350, 360, 362, 392 and 402 (16)
HED 313, 338, and 348 (9)
EDFI 302 (3)
Approved sports elective (2)
Approved health elective (2)
SMD 310 (2)
Fourth year (27 hours)
PEP 433, 412 and 497 (16)
HED 409 (3)
SMD 429 (2)
EDFI 408 (3)
EDAS 409 (3)
To be admitted officially into the Plan III program, the student must have:

1. matriculated in the College of Education;
2. completed SPCH 102 and ENG 112 with a grade of C or better;
3. completed a speech and hearing screening test;
4. attained a University accumulative grade point average of 2.0 or higher; and
5. completed PEP 247 with a grade of $C$ or better.

To be eligible for student teaching the student must have met College of Education requirements for student teaching and must have:

1. completed PEP 362, 392 and HED 348;
2. earned an accumulative grade point average of 2.2; and
3. filed an application for student teaching with PEP division during second semester of year prior to year of anticipated student teaching (in addition to filing application in Field Experiences office).
Minor-physical education and recreation for special populations (does not lead to certification); open to physical education, special education and recreation majors.

A candidate must be interviewed by the area coordinator before declaring this minor. Minor program for physical education majors (24-26 hours)
EDSE 431, 433, 442 (8)
PEP 137, 138, 241, 340, 435, 387, 487 (14) Select one: PEP 230, 303, 350; PSYC 324, 405, 406; EDSE 441, 457; PHIL 319; or RED 260 (2-4)

Minor program for special education majors (22-27 hours)
PEP 137, 138, 230, 241, 340 or $350,433,435$, 387 or 487 (18-19)
Select two: PEP 303, 340 or 350; PSYC 324, 405, 406; EDSE 441, 457, 470; PHIL 319; or RED 260 (4-8)
Minor-elementary school (Open only to students pursuing a teaching major in education, health education, music education, physical education, or special education who will receive either elementary teaching certification or kindergarten-twelfth grade certification.)

Before enrolling in any of the courses listed below, students should check with the faculty in the elementary school physical education program. Students completing the following sequence of courses may have their elementary or special teaching certificates validated for teaching elementary school physical education.
PEP 137, 138, 233, 238, 241, 332, 337, and 428 (18)
PEP 230, 303, 340, and/or 350 (3-4)
PEP 387, 433, 438, and/or 487 (2)
PEP 492 or 497 (3)
PEP 402 or EDFI 402 (2-3)
HED 313 (3)
Minor-secondary school (meets secondary certification in physical education provided appropriate professional education coursework is also completed) (27 hours)
PEP 230, 303, 362, 412 (13)
SMD 310 (2)
PEP professional activities (9)
Selected electives (3)

## Recreation

All recreation majors must fulfill the College of Education general education requirements. There are three recreation options, each having a set of professional core classes and diverse career emphases. All majors are required to complete a semesterlong internship as part of their professional preparation.

## Recreation Administration

The recreation administration option prepares students for supervisory and management positions in public and voluntary organizations which are nonprofit in nature and also for positions in private and commercial employment settings which are profit motivated. Employment settings include governmental recreation services, community organizations such as YMCA's, Girl Scouts, services for special populations and the aging, and those agencies found in the private sector such as resorts, convention centers and the travel/tourism industry. The student enrolled in the recreation administration option focuses on business skills such as financial management, marketing and promotion, public relations and personnel management. Career emphases are commercial recreation, public/voluntary services, leisure/wellness and performing arts/entertainment.

First year (30 hours)
ENG 112 (3)
SPCH 102 (3)
PEG 100 (2)
Natural science/mathematics elective (3)
RED 190 and 210 (6)
PSYC 201 (4)
Approved literature elective (3)
Cultural studies elective (3)
Other general education elective (3)
Second year ( 31 hours)
Natural science/mathematics electives (6)
Social and behavioral science electives (5)
Humanities and arts elective (2)
Cultural studies elective (2)
Other general education elective (3)
SMD 250 (3)
HED 313 (3)
RED 384, 385 and 387 (7)
Third year ( 31 hours)
SMD 390 (3)
PEP 433 (3)
RED 386, 487 (2)
Career-focus electives (20)
Electives (3)
Fourth year ( 30 hours)
RED 482, 483 and 488 (21)
Career-focus electives (3)
Electives (6)

## Recreation Programming

The recreation programming option is designed to prepare students for programming and leadership positions in public and voluntary organizations which are nonprofit in nature and also for positions in private and commercial employment settings which are profit motivated. Employment settings include governmental recreation services, community organizations such as YMCAs, Girl Scouts, services for special populations and the aging, and those agencies found in the private sector such as resorts, convention centers and the travel/tourism industry. Students enrolled in the recreation programming option focus on the development of face-to-face leadership techniques, programming methods and activity skill acquisition. Career emphases are public/voluntary services, teisure wellness, special populations and leisure aging.
First year (30 hours)
ENG 112 (3)
SPCH 102 (3)
PEG 100 (2)
Natural science/mathematics elective (3)
RED 190 and 210 (6)
PSYC 201 (4)
Approved ilterature elective (3)
Cultural studies elective (3)
Other general education elective (3)
Second year ( 31 hours)
Natural science/mathematics electives (6)
Social and behavioral electives (5)
Humanities and arts elective (2)
Cultural studies elective (2)
Other general education elective (3)
SMD 250 (3)
HED 313 (3)
RED 384, 385 and 387 (7)
Third year ( 31 hours)
SMD 390 (3)
PEP 433 (3)
RED 260, 386 and 487 (4)
Career-focus electives (18)
Electives (3)
Fourth year ( 30 hours)
RED 482, 483 and 488 (21)
Career-focus electives (3)
Electives (6)

## Outdoor Recreation

The outdoor recreation program prepares students for programming and administrative positions in profil and nomprofit organizations which focus on the use of the natural environment for recreation experiences. Students may prepare for one of the following career emphases: adventure programming, organized camping, interpretive-naturalist historical-cultural interpretation and outdoor recreation management.
First year (30 hours)
ENG 112 (3)
SPCH-102 (3)
PEG 100 (2)
Natural science/mathematics elective (3)
RED 210 (3)
PSYC 201 (4)
Approved literature elective (3)
Cultural studies elective (3)
Other general education electives (6)
Second year (31 hours)
Natural science/mathematics electives (6)
Social and behavioral science electives (5)
Humanities and arts elective (2)
Cullural studies elective ( 2 )
Career-focus elective (3)
SMD 250 (3)
HED 313 (3)
BIOL 101, 204 or 301 (3-5)
RED 304 and 387 (4)
Thiro year (30 hours)
RED $380,384,386$ and 387 (9)
PEP 433 (3)
SMD 390 (3)
Career-focus electives (12)
Electives (3)
Fourth year (31 hours)
RED 482.483 and 488 (21)
Career-focus electives (8)
Electives (2)

## Ferreation Winor (20 hours)

A candidate must be interviewed by the area coordinator before declaring this minor.
RED. 190, 210, 384 and 385 (12)
RED 482 or 483 (3)
Select iwo hours from RED 387 and/or 487 (2)

Select 3 hours from this group-RED 260 , RED 294, RED 304, RED 323, RED 380, RED 482, RED 483, RED 484, PEP 433 , SMD 390 (3)

## Spor Management

201 Memorial Hall, 372-2876
The spot management major is offered through the sport management division (SMD) of the School of Health, Physical Education and Recreation (HPER).
In the SMD program, one major (with five options) and two minors are available. Some of the curricula are currently underoing revision. The Program Advisement and Teacher Certification Office, 365 Education Building, and the SMD Office, 201 Memorial Hall, have listings of all updated requirements.

To be formally accepted into the sport managernent major a candidate must meet the following criteria:

1. Completion of 30 semester hours including a C or better in ENG 112 and SPCH 102; 6 hours of PEP/RED activity courses (Option I and $V$ students must see their advisers concerning activity courses); and 18 hours in additional College of Education general studies courses.
2. University GPA of 2.3 .
3. Formal application and acceptance into the sport management program (see Division Office, 201 Memorial Hall, for appropriate form).

To be retained in the sport management major, a candidate must meet the following pre-requisites for enrollment in SMD 387 and SMD 489.

1. SMD 387 -Formal acceptance into the sport management program.
2. SMD 489-52 hours in major field, satisfactory completion of SMD 387, GPA of 2.5 and major GPA of 2.7. Option I majors must also satisfactorily complete HED 313.

## Major-Option I, physical fitness specialist

Option I represents a first step in preparation for taking the Fitness Instructor Certification Examination offered by the American College of Sports Medicine. Graduates of this area of concentration might seek careers in clinical (hospital, rehabilitation) settings, in which case they would need to earn advanced degrees, or in less sophisticated settings such as YM-YWCA's, fitness centers, health clubs and/or community exercise programs.

Major requirements (96-100 hours)
SMD 250, 390, 421, 489 and 490 (24)
SMD 387/487 (4-8)
PEP 412 or RED 384 (3)
SMD 310, 361, 423, 429 and 440 (13)
HED 209 and 313 (6)
PEP 230, 303 and 360 (10)
ACCT 325 (3)
BIOL 331 (3)
BUSE 101 (3)
CHEM 115 and 116 (8)
HOEC 307 (3)
IPCO 203 or 205 or 304 or 306 (3)
SOC 300 or 341 or 352 or 404 (3)
Activity requirement (10)

## Major-Option II, sports information, marketing and promotion

Students concentrating in this area may seek careers in sport marketing in the commercial sector or as sports writers, sports broadcasters, sports information directors, sports promotion directors or ticket sales agents.
Major Requirements (77-82 hours)
SMD 250, 390, 421, 489 and 490 (24)
SMD 387/487 (4-8)
PEP 412 or RED 384 (3)
SMD 328 and 425 (6)
JOUR 103 and 300 (6)
Select 12 hours from JOUR 304, 306, 307, 311
$315,330,340,380,404$ (12)
Select 9 hours from MKT 300, 402, 410, 412, 430 (9)

RTVF 260 or 262 or 366 (3-4)
Activity requirement (10)

## Major-Option III, sport adminisiration and management

This program, with a strong business component, provides opportunities for students to develop skills applicable to managementlevel positions in sport. Examples of such positions are public relations director, corporate administrator of sporting events, contraci adviser, tournament director or promoter, college athletic director, manager or owner of sports franchise and fund-raising director.
Major Requirements (81-85 hours)
SMD 250, 390, 421, 489 and 490 (24)
SMD 387/487 (4-8)
PEP 412 or RED 384 (3)
ACCT 221 and 222 (6)
FIN 300 (3)
MGMT 305 (3)
MKT 300 (3)
SOC 300,317 and 352 (9)
SMD 328 and 429 (5)
Select 11 hours from BUSE 335, ECON 202,
LEGS 302, LEGS 414, MGMT 361, MKT 402,
-MKT 412, MKT 430 (11)

## Activity requirements (10)

## Major-Option IV, sport speciallist

Option IV is designed to prepare students for leadership roles in programs related to intramurals, recreational sports, club sports, youth sports and other similar settings. Since entry-level positions usually require insiruction and/or coaching, the curriculum seeks to provide skill in these areas as well as in management.
Major Requirements (81-85 hours)
SMD 250, 390, 421, 489 and 490 (24)
SMD 387/487 (4-8)
PEP 412 or RED 384 (3)
SMD 306 (2)
SMD 328, 423,431 and 440 (12)
HED 313 (3)
PEP 303, 340, 360 (9)
RED 483 (3)
ACCT 325 (3)
BUSE 101 (3)
IPCO 203 or 205 or 304 or 306 (3)
SOC 300 or 341 or 352 or 404 (3)
Activity requirements (9)

## Major-Option V, aquatics specialis!

This curriculum provides students with preparation in the primary skills and knowledge demanded by entry-level positions in aquatics: instruction, coaching, operations, organization, supervision and management. Stu-
denis pursuing this option should be
qualified to take various pool operators certification courses and examinations.
Major Requirements (85-89 hours)
SMD 250, 390, 421, 489 and 490 (24)
SMD 387/487 (4-8)
PEP 412 or RED 384 (3)
SMD 245, 306H, 336, 440 and 423 (13)
HED 313 (3)
PEP 230,322 and 360 (9)
RED 483 (3)
ACCT 325 (3)
BUSE 101 (3)
CHEM 115 (4)
IPCO 203 or 205 or 304 or 306 (3)
SOC 300 or 341 or 352 or 404 (3)
Activity requirement (10)

Minor-Athletic Coaching (may lead to coaching endorsement if certain criteria are met. See checksheet available in 365 Edutition Building). (32-35 hours)
SMD 310, 328, 391, 429 (9)
SMD 329 or 333 (2-3)
SMD 330, 332 or 334 (2-3)
SMD 331 or 336 (2)
Two from SMD 306A, B, C, D, E, F, G, H (2)
HED 313 (3)
PEP 230, 412, 360 (10)
SMD 391, 423, 425; PEP 303, 350, or SOC 300
(Soc. of Sport) (2-3)
Minor-Athletic Training (may lead to NATA Certification Examination). Specific criteria for selection and retention in this minor have been established. See checksheet available in 365 Education Building or 201 Memorial Hall. ( 32 hours and 800 hours of clinical experience)
SMD 291, $310,328,391,410,411,429$ (18)
HED 313, 314 (4)
PEP 230, 303, 360 (10)

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# COLLEGE OF HEALTH AND HUMAN SERVICES 

Clyde A Willis,PRD., dean, 100 Health Center, 372-0242
Jennifer A. Spielvógel, M.A., acting assistant dean and director of program advisement 102 Health Center, 372-0242

## Programs

Applied Micröbiölogy, William Hann, Ph:D.; director, 516 Life Sciences Building, 372-2833:
Ant Therapy, Nina Holtzman-Denninger,
M.A. AT R director, 107 Fine Arts Building; 372-2786
Child and Family Community Services, Sara Déricik, Ph.D., director, 206 Johnston Hall: 372-2026
Criminal Justice, Gerald Rigby, Ph.D., dirèctor, 120A Health Center; 372-2326
Dietetics, 206 Johnston Hall, 372-2026
Envirónmental Health, 102 Health Center; 372-0242
Gerontology, John Hiltner, PhD., director 120A Health Center, 372-2326
Medical Record Administration, Ellen Wachs M.A., R.R.A., diréctor, 120 A Health Center,

372-2326
Parasitology and Médical Entomology, Lée Rockett, Ph.D., director, 303 Life-Sciences Building, 372-2834

- Physical Therapy Robert Livengood, M.ST. P. T director; Medical Collége of Ohio, 381-3518 or Lee Meserve, Ph.D., coordinator, 503 B Life Sciences Building, 372-0361
Rehabilitation Counseling, Robert MacGuffie, Ph:D. directợ, 422 Education, 372-0151


## Departments

Communication Disorders, Herbert Greenberg Ph.D.r chair, 338 South Hall, 372-25,15
Medical Technology, 504 C Life Sciences Building, 3720109
Social Work, Evan Bertsche, MA., chair; 220
-Williams, 372-2441
School of Nursing, Grace Chickadonz, Ph.D., R:N, diréctor Medic̣al College of Ohio, $381-3418$ or Barbara Keeley, M.S.N. A.N. coordinator, 102 Health Center, 372-0760

## Philosophy

Human dignity; health and-safety are three of an individual's most prized possiessions and as such should be protected The pro tessional programs offered in this college were founded in response to the needs of: individuals. The education of students in this college embraces knowledge from diverse : sources, including a liberal general educa-: tion, as well as generating bodies of knowledge in the professional sphere. Students graduating from this college should be prepared to examine their roles and modify practice in response to new information. They should be able to act as catalysts in initiating and implementing new patterns of practice aimed at bettering the human condition: For these reasons, education is directed toward inspiring and developing problem-solving and creative capabilities in students. Additionally, preprofessional and; professional education must be regarded as preparation for alifetime of continued learning which enhances the process of selfactualization for the individuyal:

## Academic Advising

Each student is assigned a faculty adviser within the selected program. In addition, career information and advising services are provided for stüdents in the college office located in the Health Center. The responsibility for meeting graduation requirements lies with the student and not with the adviser the program director or the dean. Reading and following the information in the Undergraduate Catalog and the College Academic Handbook are essential

## Degrees Offered

The degrees awarded by the College of Health and Human Services and: its School of Nursing are:
Bachelor of science in applied microbiology
Bachelor of science in art therapy.
Bachelor of science in child and family community services
Bachelor of science, inicommunciation. disorders
Bachelor of science in criminal justice -
Baçhelor of sciénce in diêtetics
Bachelor of science in environmental health
Bachelor of science in gerontology
Bachelor of science in medicâl record administration

Bachelor of science in medical technology Bachelor of sceience in nursing
Bachelor of science in parasitology and medical entomology
Bachelor of science in physical therapy
Bachelor of science in:social work
A candidate for any degree in the College of Health and Human Services or School of Nursing must complete the general requirements for graduation listed on page 8 . In addition, all students must complete all major requirements. Required interñships, field work and clinical practicums completed during the last 30 hours will be considered in residence eveñ though taken off campus.

## General education requirements

The College of Health and Human Services requires a minimum of eight ( 8 ) courses from the approved list ot general education core courses. The requirement includes a minimum of two courses in each of:the functional understandings of natural sciences; social sciences, humanities ând arts, one coúrse in foreign language and méliticuitùral studies, plus one additional course in any of the functional understandings or skill areas of communications or computation and maith:

## Functional Understandings

Natural Sciences: ASTR 201,212 , BIOL 101, 104, 204, 205; CHEM 100; 115, 116 $125,126,135,136$ GEOL $100,104,105$ 205; PHYS 101, 201, 202, 211, 212
Social Sciences: ECON $100,200,202,203$; ENVS 101;ETHN 101 GEOG 121; 122, 230; HIST 151, 152, 205, 206, 280; HOEC 107, LEGS 200 ; POLS 101,201, 271, 250; PSYC 201: SOC 101:202,231
Humanities and Arts: AMST 200, 230; ART. 101, 102, 145, 146; A\&S 100, CAO H101; ENG.150, 200: 261, 262, 264, 265, 266;267; ETHN 220, FREN 284, MUS 101, 125, 221 PHIL 101, $102,103,204,207,211,212,230$ POPC $160 ; 165 ; 220 ;$ LAT 141, 142; RTVF 261. THEA 141, 202; WS 200.

Foreign Language and Multicultural Studies: Foreign Languages (Chinese, French, German, Italian, Latin, Japanese, Russian, Spanish) 101, 102, 201,202; EREN 111,112 $211,212,284$; GERM 117, 131,260; RUSN 211, 213,222;SPAN 111,-112, 113,211, 212, ETHN 101, 220, GEOG 121, 122,230; 'HIST151, 152, 280, HOEC 107;'MUS 125; POLS 271 SOC 231

## Sidit areas

Communications: SPCH 102; THEA 141, 202.

Computation and Math: CS 100, 101; MATH 115, 116, 124, 125, 127, 128, 129. $130,131,232,247$; STAT 200.
TOnly the courses specifted meet requirements; they need not be taken in the order listed.

## Grading option

A student may request the S/U grading option for as many as 16 credits in a baccalaureate degree program, in addition to courses universally graded on an S/U basis. (Please refer to grading system for University requirements regarding $S / U$ standards.) Students in the College of Health and Human Services may exercise the S/U grade option only for electives, general education group requirements or practicums. Directors may limit further the use of the S/U option in their programs.

## DEGREE <br> PROGRAMS

in most cases, the sequence of courses listed below must be completed in order to meet the requirements for the major or for professional certification. Upon the recommendation of the program director, and with final approval resting with the dean of the College of Health and Human Services, some courses may be substituted.

## Applied Microbiology

516 Life Sciences Building, 372-2833 or 372-0109
Microbiologists are employed by medical or clinical laboratories for detection and diagnosis of disease. Public health laboratories use microbiological procedures in testing water supplies for potability and in quantifying incidences of communicable diseases.

Microbiologists work as public health officials in consulting infected individuals to control the spread of diseases. They also work in the food, dairy or liquor industries to maintain product quality, and in pharmaceutical companies, which ferment microbes to produce anfibiotics. Sanitation laboratories employ microbiologists for the safe treatment of sewage.
Additionally, the small size and simple organization of microorganisms makes them the most effective subjects for studying life at its most fundarnental level. Research with microbes has made increasingly important contributions to the understanding of genetics and cancer. Genetic engineering, utilizing microorganisms, is developing into a major industry.

The course work required of students will allow them, after a year of employment, to take the qualifying examination of the National Registry of Microbiologists of the American Academy of Microbiology, or the microbiology specialization of the American Society of Clinical Pathology.
An individual with the bachelor of science in applied microbiology may pursue advanced degrees in medical schools or universities to specialize in medical microbiology, clinical microbiology, protozoology, virology, microbial genetics, microbial physiology, immunology, food science or other areas of microbiology. A few additional courses will satisfy the requirements for entrance into medical, dental or veterinary schools.

## Suggested program

First year
BIOL 205 (5)
MATH 130, 131, according to student's goals (5-10)
CHEM 125, 126 (10) or CHEM 135, 136 (10)
ENG 112 or equivalent (3-6)
PEG 100 (2)
Electives and general education requirements (2-6)
Second year
BIOL 313, 405 (8)
CHEM 201, 306 (7) or CHEM 341, 342 (10)
Electives and general education requirements (15-21)
Third year
BIOL 400, 426, 439 (8-12)
CHEM 308, 309 (4) or CHEM 445, 446, 447 (7)
Program seminar (1-2)
BIOL electives and general education requirements (15-21)
(BIOL 443, 447, PHYS 201 if internship is planned)
Fourth year
BIOL 400, 401, 421, 443, 447, 470 (3-15)
PHYS 201, 202 (10) or PHYS 211, 212 (10)
Program seminar (1-2)
General education requirements and electives (8-12)
(Optional-Internship experience 3-10)

## Other programs

Microbiology is also offered by the Department of Biological Sciences as a specialization under the biology major for the College of Arts and Sciences.

## Art Therapy

## 114 Fine Arts, 372-2786

A bachelor of science in art therapy is available through the College of Health and Human Services in cooperation with the School of Art. The program offers studio art courses, art therapy methodology requirements, supportive core requirements in the behavioral and social sciences and a cognate or specialization (psychology, special education, gerontology, criminal justice or social work).
The interdisciplinary nature of this preprofessional program prepares graduates for entry into activities or recreational programs in special schools, hospitals, institutions and residential centers. The program fulfills requirements for entry into master's degree training programs in art therapy approved by the American Art Therapy Association.

The role of the art therapist as a member of the health care team is gaining wide acceptance. In recent years, an increasing variety of clients has been served by art therapists. Changing practices in the field of mental health have created an even broader definition of the art therapy specialization. Art therapists may work with programs in educational institutions, orphanages, hospitals, community mental health and mental retardation centers, nursing homes and other social service agencies.

## Suggested program

First year
ENG 111 and/or 112 (6)
PEG 100 (2)
ART 102, 103, 112 (9)
PSYC 201 (4)
SOC 101 (3)
SOWK 110 (3)
General education requirements (6)
Second year
ART 145 or $146,205,230,252,261$ (14)
EDFI 302 (3)
EDSE 431 (3)
General education requirements (6)
Cognate or elective (3)
Third year
ART 263, 330, 331, 371, 373, 456 (18)
PSYC 403, 405 (6)
Cognate (6)
Fourth year
ART 488 (10)
General electives, art electives or cognate (21) Students may continue in this program only after taking ART 230 and receiving approval $\cdots$ from the director of the art therapy program. This program is subject to revision and may be modified to meet individual student needs.

## Child and Family Community Services

309 Johnston Hall, 372-2026
This is a multidisciplinary program for students who wish to concentrate in either children's or family services. In both areas emphasis is placed upon developing personal competencles necessary to provide human services for persons of all ages. Internships in a variety of agencies such as preschools, family courts, mental health and mental retardation clinics and hospitals complement the program.
Specific courses of study are available for students who wish to pursue careers working with entire families, adolescents, infants and children or other specific groups of individuals. In addition, a cognate in child life is available for students who wish to work with hospitalized children, adolescents and their families.

The child and family community services program also serves as a foundation for graduate work in related behavioral sciences and as a third and fourth year program for graduates of two-year colleges with a major in related disciplines. Graduates of this program receive a bachelor of science in child and family community services degree.

## Children's services option <br> \section*{Suggested program}

First year
ENG 112 or equivalent (3-6)
ART 101 (3)
HOEC 105, 120 and 205 (9)
SPCH 102 (3)
PEG 100 (2)
BIOL 101 or 104 (3) (4)
SOC 101 (4)
General education requirements and electives
Second year
PSYC 201 (4)
HOEC 207, 223, 224, 320, 321, 322 and 328 (21)
HOEC 107 or 480 (3)
HOEC 389 (1-5)
General education requirements

- Recommended professional electives

Third year
HOEC 302, 424 and 435 (8)
ENG 342 (3)
IPCO 203 or 306 (4)
HED 313 (4) or Multimedia First Aid Certificate

## Electives

Fourth year
HOEC 407, 421, 422, 423 and 425 (15)
HOEC 489 (5-12)
LEM 441 (3)
Recommended professional electives
This program may be modified to meet
student needs and interests.

## Family services option

## Suggested program

First year
ENG 112 or equivalent (3-6)
HOEC 105, 120 and 205 (9)
PEG 100 (2)
BIOL 101 or 104 (4)
SOC 101 (3)
General education requirements and electives
Second year
PSYC 201 (4)
HOEC 328.(3)
HOEC 405 (4)
General education requirements and electives
Third' year
HOEC 302, 424 and 426 (8)
PSYC 307 and 405 (6)
HOEC 389 (1-5)
Professional electives
Fourth year
HOEC 407, 425 and 426 (9)
HOEC 489 (5-12)
PSYC 440 (1-4)
Professional electives
This program may be modified to meet student needs.

## Other programs

Programs in related areas are offered through the Department of Home Economics in the College of Education.

## Communication Disorders

338 South Hall, 372-2515
The undergraduate major in communication disorders will prepare students in the basic speech and hearing sciences, theoretical and practical aspects of therapy, as well as affording the student the opportunity for a limited amount of observation, participation and direct clinical work under supervision: The student will also become familiar with other para-professionals' services and goals and the interrelationships of
hese with communication disorders.
Since this is a preprofessional program, students who wish to receive the Certificate of Clinical Competence from the American Speech-Language-Hearing Association are required to obtain a master's degree. The State of Ohio requires a master's degree, or its equivalent, for the licensing of a speech and hearing clinician.

## Suggested program

First year (29 hours)
BIOL 104 (4) recommended
ENG 112 or equivalent (3-6)
SOC 101 (3)
SPCH 102 (3)
PEG 100 (2)
PHYS 101 or 20.1 or MATH (3)
CDIS 223 and 224 (5)
Elective ( 3 of 6 hours to fill general education requirements)
Second year ( 31 hours)
EDFI 302 (3)
ENG 380 (4)
PSYC 311 or SOC 301 (3)
PSYC 201 and 270 (7)
CDIS 301, 311, 321 and 361 (12)
Third year ( 31 hours)
EDSE 431 (3)
CDIS 331, 341, 351, 401 and 411 (15)
PSYC 324 (3)
Electives (12)
Fourth year (31 hours)
EDSE 451 (3)
PSYC 305, 309 and 405 (8)
CDIS 421, 431 and 461 (8) (A 2.5 accumulative grade point average in the program core requirements is required to be eligible for enrolliment in CDIS 421 and 431 , clinical practicum.)
Electives (12)
This program may be subject to revision
and may be modified to meet student needs.

## Other programs

A program in speech and hearing therapy, is offered through the College of Education. Other programs in speech are offered through the College of Arts and Sciences.

## Criminal Justice

120-A Health Center, 372-2326
In preparation for careers in law enforcement, investigative units, private security organizations, penal institutions, probation and parole work and other agencies in the criminal justice system, the criminal justice program integrates course.work and interaction with professionals in various disciplines. The graduate of the program receives a bachelor of science in criminal justice degree. The program prepares students for entry into all types of agencies in the criminal justice system-law enforcement, corrections, investigative, forensic, security. (Students interested specifically in corrections should also consider the corrections cognate in the social work program.)

Admittance to the program is restricted to those applicants meeting these three requirements:

1. have CRJU 210 or its equivalent on the record with a C or better:
2. have a 2.5 GPA or higher on a total of at least 25 graded hours; and
3. rank in the top 30 applicants each year according to GPA. (Details may be obtained from the Criminal Justice Office, 120-A Health Center.)

The program places emphasis on superior academic attainment, ability to communicate verbally and in writing, and research potential. Every student must complete a major piece of original research (CRJU 480 Senior Seminar) as well as the field placement or practicum of 480 agency hours. It is anticipated that a large number of CRJU graduates will go on to graduate school, law school or enter the field of practice with a view to becoming supervisory-level

## personnel.

Criminal justice students may begin their studies at any of several technical or community colleges with which Bowling Green has formal agreements: Cooperative programs have been developed with Owens Technical College, Lima Technical College, Toledo Community Technical College, Lorain County Community College and North Central Technical College. Completion of a two-year associate degree in law enforcement may allow the student to enter the baccalaureate program in criminal justice with junior standing. Students may also choose to complete the entire four-year degree program at Bowling Green.

Students must complete, preferably during the senior year, a 480 -hour internship in an appropriate agency. The student is responsible for developing the internship site. However, all internships are subject to the approval and supervision of the program faculty.

## University and general education group requirements

ENG 112 or equivalent
PEG 100 (2)
Natural Science (2 courses)
Humanities and Arts (2 courses)
Foreign Language and Multicultural Studies ( 1 course)
Social Sciences: POLS 201, PSYC 201,
SOC 101
Core Courses ( 63 hours)
CRJU 210, 220, 230, 320 and 480
PHIL 327
POLS 221, 330, 347, 417
POLS 419 or PHIL 318
PSYC 405 and 454
SOC 301 or PSYC 311
SOC 316, 341, 342, 441 and 442
One computer science course
One statistics course
Internship (480 agency hours for 12 credit hours, CRJU 491)
Core Electives ( 14 -17 hours) - selected from the list of approved courses, and those for which special permission is granted; should be selected carefully to supplement and enrich the criminal justice core courses.

## Suggested Program

First year
CRJU 210
ENG 112 or equivalent
POLS 201
PEG 100
PSYC 201
SOC 101
Natural sciences
Foreign language and multicultural studies Humanities and arts

Second year
CRJU 220 and 230
Computer Science course
Statistics course
Completion of general education courses
Third year
CRJU 320
Core courses and core Electives
Fourth year
CRJU 491 (Internship - 12)
CRJU 480
Completion of core courses and core electives

## Dietetics

This program leads to membership in the American Dietetic Association and professional registration. The requirements for registration are an internship or a preplanned work experience, followed by the passing of a national examination, upon completion of this course of study.

A declaration of intent to pursue the dietetics program should be filed in the college office upon freshman registration or during the first year at BGSU. Admission to the program requires the completion of 30 hours of credit, approval by the dietetics faculty and a grade point average of at least 2.5 The graduate of this program will earn a Bachelor of Science in Dietetics degree.

- This curriculum meets the requirements of the generalist dietetics program, as outlined by the American Dietetic
Association. Upon completion of a professional practicum as described above and the Registered Dietitian (R.D.) certification, a graduate is competent to function as either a therapeutic or administrative dietitian in hospitals, extended care facilities, community services or restaurants.


## Suggested program

First year
BIOL 205 (5)
ENG 112 (3)
PEG 100 (2)
SOC 101 (3)
CHEM 115 (4)
HOEC 210 (3)
MATH 124 (4)
General education requirements (6)
Second year
BIOL 313 (3)
ECON 200 (3)
CHEM 116 (4)
PSYC 201 (4)
EDFI 302 (3)
HOEC 212, 307 and 326 (8)
Electives (6)

Third year
ACCT 325 (4)
HOEC 331, 333 , and 432 (9)
MIS 200 or CS (3)
MGMT 360, 361 (6)
BIOL 331 or 332 (3)
DESN 301 (3)
HOEC 480 (2)
Fourth year
HOEC 405, 431, 433, 434, and 436 (20)
HOEC 480 (2)
Selected professional electives such as HOEC
389, 489, 206, MRA 301, PHIL 342, ENG
488 (8-9)

## Other programs

A program in dietetics also is offered in the College of Education through the Department of Home Economics.

## Environmental Health

102 Health Center, 372-0242
Environmental health graduates are specialists in improving and protecting the quality of our environment. They are prepared to evaluate and provide solutions for problems in work, recreation, learning and living areas. They hold key positions insuring safe and high quality air, water, food and consumer products. They are equipped to apply governmental, industrial and professional standards insuring protection of the public's health and safety. Specific concerns include air, land and water pollution; occupational health and safety; food protection; health and safety in recreation areas; hazardous waste disposal; shelter and institutional environmental protection
Graduates are eligible to become Registered Sanitarians (R.S.) by the state of Ohio upon completion of employment experience requirements. Places of employment are in industry, government, environmental engineering firms, consulting firms, testing laboratories, insurance-risk management agencies, health care facilifies and educational institutions.
The curriculum emphasizes the biological, chemical, and physical sciences with additional requirements in the social sciences, computer science and statistics. Students learn investigation, sampling and analysis of indoor and outdoor environments to ensure compliance with occupational public health, safety and environmental laws. An internship in an environmental related agency is necessary. The internship is an opportunity for students to relate academic preparation to practical experience and application in the field.

## Suggested program

First year
ENG 112 or equivalent (3)
MATH 124 (4)
SOC 101 (3)
BIOL 101 (3)
CHEM 125 and 126 (10)
CS or STAT (3)
PEG 100 (2)
General education requirements and electives

Second year
BIOL 204 and 205 or 104, 331, 332 (10)
PHYS 201 and 202 (10)
POLS 331, 335, 336 or 440 (3)
ECON 200 or 202 (3)
CHEM 306 (4)
Third year
ENVT 121 (2)
ENVT 160 (2)
ENVT 225 (3)
ENVT 260 (3)
Option requirements (10-17)
General education requirements (3-10)
Fourth year
CS or STAT (3)
ENVH 404 (4)
ENVH 491 Internship (4)
Option requirements or electives (17)
General education requirements (3)
This program may be modified to meet student needs. Electives must be approved by the program director.

## Other programs

Environmental programs are also offered by the College of Arts and Sciences, College of Education and Firelands College.

## Gerontology

## 120-A Health Center, 372-2326

The bachelor of science in gerontology degree prepares graduates for positions in agencies and institutions that administer and deliver services for the aged, including social service agencies, senior centers, nutrition programs, nursing homes, recreation and counseling agencies and research organizations.

While providing a basic background in general studies, the gerontology program is flexible enough to permit students to design courses that will best prepare them for particular types of careers within the general field of aging.

Each student in the gerontology program selects a cognate area from social work, administration, exercise physiology, biology, art therapy, urban planning, speech
communication, psychology, nutrition,
recreation, family services, food
management and sociology. Other cognate areas may be designed by the student and the program director.

During the course of the program, each student completes a field placement in an agency or an institution serving the elderly.

## Suggested program

First year
ENG 112 or equivalent (3-6)
MATH 115 (3)
SOWK 110 (3)
PSYC 201 (4)
PEG 100 (2)
BIOL 104 (4)
SOC 101 (3)
HOEC 207 (3)
Computer science (3)
Cognate requirements
Genera! education requirements
Electives

Second year-
BIOL 332 (3)
GEOG 326 (3)
PSYC 309 (3)
SOC-404 (3)

- HOEC 429 (3)
.IPCO 306 (3).
RED 260 (2)
Cognate requirements.
General education requirements
Electives:
-Third year
BIOL 310 (2):
MGMT 305 or 360 (3)
PHIL 319 (3)
HOEC 436 (3)
Cognate requirements
Electives.
Fourth year.
GERO 410, 420 and 493 (5)
GERO 491 (10).
Cognate requurements
Electives
This program is subject to revision and
may be modified to meet stưdent needs.
Nursing Home Administration option
A special option available to students
- majoring in gerontology is to élect a specially designed cognate, long term care, which prepares the student to seek an Ohio Nursing Home Administrator's license. This cognate consists of twelve courses in accounting, business administration, economics, finance, legal studies and manage:ment. The student is also required to complete a practicum of a minimum of 800 hours of experience in an approved skilled-intermediate care facility under the supervision of a licensed nursing home ädministrator.

As a result of the need for close supervision of the student registered for this practicum experience, the placement must be in a facility in close proximity to Bowing Green. The student should also be aware that 132 hours are required for graduation in the nursing home administration option.

## Suggesied program

Firsi year
ENG 1.12 :or equivalent (3-6)
MATH 115 (3)
SOWK 110 (3)
PSYC 201 (3).
PEG 100 (2)
BIOL 104 (4)
SOC 101,(3)
HOEC 207 (3)
Computer science (3)
General Education Requirements
Electives
Second year
ACCT 221 (3)
ACCT 222 (3)
BIOL 332 (3)
ECON 202 (3)
ECON 203 (3)
GEOG 326 (3)
PSYC 309 (3)
SOC 404 (3)
HOEC 429 (3)
IPCO 306 (3)
RED 260 (2)
MRA 301 (2)

Third year
BIOL 310 (2)
BA 325 (3).
FIN 300 (3)
LEGS 301 (3)
MGMT 305 or 360 (3)
PHIL 319 (3)
HOEC 436 (3)
Electives
Fourth year
FIN 425 (3).
GERO 410, 411, 420, 493 (7)
GERO 431 (10)
LEGS 425 (3)
MGMT 361 (3)
MGMT 463 (3)
Electives
Fifth year
GERO 491 (10)
This option has been approved by the Ohio Board of Examiners of Nursing Home Administrators and may not be modified without the approval of the Board.

## Medical Record Administration

114 Health Center, 372-0600
Information management is a critical'component of quality health care and medical delivery systems. Information is needed by physicians for patient care, by hospital administrators for management decisions and by state and federal governments for health care policy making. It is the medical record administrator who integrates the principles of management information systems with the management of human and institutional resources and provides this important information to health care services. A vital member of the health care. team, the medical record administrator is responsible for organizing and managing medical record departments which generate statistics and maintain medical records. of patients. A medical record is a permanent.document prepared for each person treated in a health care setting. It includes the patient's history and physical, physicians' progress notes and orders, nurses' notes, laboratory test results and $x$-ray reports. Systems designed by the " medical record administrator provide immediate record retrieval and scientifically classified information for medical research and clinical evaluation.

The medical record administration programis a four-year program which leads to a bachelor of science in medical record administration. It is designed to provide the future professional with the necessary skills and knowledge related to management, law, computerization, statistics, information han--dling and health care research. The program is accrëdited by the Committee on AIlied Health Education and Accreditation (CAHEA) in cooperation with the Council on. Education of the American Medical Record Association (COE-AMRA). As such, upon completion of the program graduates of the program are eligible to sit for the national registration examination given by the American Medical Record Association. Passing this examination certifies the graduate as a Registered Record Administrator (RRA).

To be eligible for admission into the professional portion of the medical record administration program, students must have completed general education requirements and specified required courses and are required to have completed at least 60 semester hours. In addition, the student must have a minimum GPA of 2.5:

In the professional portion of the program, students will participate in classroom instruction as well as laboratory practice (at BGSU) and in clinical experiences in area health care facilities. The student is responsible for providing his/her own transportation to the clinical practice site(s)

## Admission Criteria

The following criteria must be futfilled for : admisșion to the professional portion of the medical record administration

## program.

1. Admission to BGSU.
2. Completion of at least 60 semestèr hours (prior to the start of the professional program)*
3. Minimum GPA of 2.5 (Transfer students must submit an official transcript with the writteniapplication.)
4. Written application for admission due not later than January 31 of the academic year during, which the student expects to complete the criteria for admission to the MRA program
5. Two (2) letters of reference-one personal, one prọfessional
6. Participation in personal interview.
7. Typing proficiency ( 45 wpm )
8. Formal letter of admission from program director
*The student shall have completed at least the following courses (or equivalent) from the preprotessional curriculum:.

ENG 111
**EŃG 112
**BIOL 104
**BIOL 331
**BIOL 332
CHEM $115^{\circ}$
SOC 101 or ECON 200
PSYC 201
MATH 127
**MATH 115
MRA 101
**MRA 301 .
**MIS 200
**These courses must be taken for a grade and the student must achieve a C or béteer.

## Suggested Program

First year
ENG-111 and 112 (6)
BIOL 104 (4)
CHEM 115 (4)
SOC 101 or ECON 200 (3)
PSYC 201 (4)
MATH $127^{(3)}$
PEG 100 (2)
MRA 101 (1)
Humanities and Arts elective (3)

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Second year
MATH 115 (3)
SPCH 102 (3)
BIOL 331 and 332 (6)

- MIS 200 (3)

MRA 301 (2)
PHIL 342 (3)
BIOL 313 (4) or BIOL 400 (3)
Multicultural studies elective (3)
General electives (6)
Third year
BA 325 (3)
MGMT 305 (3)
ENG 388 or 488 (3)
NURS 370 and 380 (6)
MRA 401, 402, 406, 411, 489 (14)
Fourth year
LEGS 425 (3)
MGMT 361 (3)
MRA 403, 404, 405, 407, 408, 409, 410 and 489 (25)

## Medical Technology

504 Life Sciences Building, 372-0109 Professional medical technologists are involved in the detection, diagnosis and

- treatment of disease. They perform tests in blood banking, clinical chemistry, hematology, microbiology and immunology. Most medical technologists work in hospital laboratories, public health agencies, research institutions, pharmaceutical houses and industrial laboratories. Many pursue careers in laboratory supervision/management or in education.

Students in the pre-major portion of the program are encouraged to acquire as much liberal education as time permits during the first two years, while completing the prerequisite science courses. The last year and one-half are devoted to professional study and training through lectures, laboratory instruction, seminars and supervised practice in an affiliated clinical facility. Upon successful completion of the program, students receive a bachelor of science in medical technology degree and are eligible to take either of the national certification examinations for medical technologists. This major also prepares students for entry into a graduate school or other laboratory professions.
While acceptance to the major may occur at any time, applications are normally submitted in the second semester of the sophomore year for the Universitybased program. Admission is granted to applicants who have completed all prerequisites with a grade of C , or better, achieved a GPA of 2.5 or higher, met all announced criteria and for whom a training position in the professional studies program has been secured. These positions are assigned at the Toledo Hospital and St. Vincent Medical Center by a committee composed of hospital and University representatives. The protessional studies program provides experience in research as well as in clinical practice. As an alternative, by special permission of the program director, students may apply for their professional training through a hospital-based program. Hospitals affiliated with Bowling Green State University are located throughout northwestern and northeastern Ohio.

During the junior year, students given alternate or conditional admission should design their course schedules to insure the pursuit of a degree in another field of study if space in a professional study program is not available. A grade point average of 2.5 or better mușt be maintained after the beginning of the junior year.

During the year of professional training no more than one lecture course in which a D or $F$ has been earned may be repeated; no more than one laboratory course in which a D or $F$ has been earned may be repeated. In the Universitybased program a student may not proceed into the phase II portion of the year until all courses in phase I are successfully completed, with a grade of C or better in all lecture and laboratory courses.

## Suggested program

First year
BIOL 205, or an introductory course in BIOL approved by the program director (5)
BIOL 332 or 411 (3-4)
CHEM 125 and 126 (10); or CHEM 135 and 136 (10)
MATH 130 (MATH 131 is recommended) (3-10)
ENG 112 or equivalent (3-6)
PEG 100 (2)
General education requirements and electives (6-8)
Second year
BIOL 405 and 421 (8)
MEDT 201 (1)
CHEM 201 (3); CHEM 306 (4)
PHYS 201 (5)
General education requirements and electives (10-14)
Third year
BIOL 439 (4)
CHEM 308 and 309 (4)
MEDT year of professional study courses as
approved by the program director (4-12)
General education requirements and electives (4-12)
Fourth year
Year of professional study and seminars (32-38)
The following are recommended professional electives and desirable courses for general education group requirements:
BIOL 350, 352, 406, 407, 419, 438, 443, 446
PSYC 201, 311, 452, 454
CS $100,101,103$
MIS 200, 475
MGMT 305, 361
BA 325
LEM 428
IE 252
PHIL 319, 342
IPCO 203, 305, 306
ENG 488

## Parasitology and Medical Entomology

303 Life Sciences Building, 372-2834
Graduates of this program will be prepared for employment in the fields of public health, particularly those areas dealing with parasitology and medical entomology. An option of this program is a clinical experience that will be appropriate to the employment goals of the individual student. The graduate of the program will receive a bachelor of science in parasitology and medical entomology degree.

Because of the variety of options available to the student in this field, individual students, with their advisers, must design appropriate programs. Students should consult the program adviser for complete information regarding degree requirements and curricula.

## Suggested program

First year
ENG 112 or equivalent (3-6)
PEG 100 (2)
BIOL 104 or 205 (4-5)
BIOL 101 or 204 (3-5)
MATH 124 and 125 (8); or MATH 131 (5)
General education requirements and electives

## Second year

BIOL 321, 322, 409 and 410 (14)
CHEM 115 and 116 (8); or CHEM 125 and 126 (10); or CHEM 135 and 136 (10)

General education requirements and electives; Additional course in possible secondary specialization tracks in areas such as microbiology, ecology or animal physiology
Third year
Courses in area of secondary specialization
BIOL 405 and 435 (8)
Electives
Fourth year
Courses in area of secondary specialization
Clinical Practice (3)
BIOL 406 (3)
Electives

## Physical Therapy

503 Life Sciences Building, 372-0361
2601 Hospital Support Building, Medical College of Ohio, 381-3518
The basic physical therapy education program provides opportunities for development of the knowledge, skills and attitudes which enable students to be competent entry-level clinical practitioners, to participate in clinical research and to have the basis for future graduate study. The physical therapist is a highly skilled practitioner who is aware of the health problems of the disabled in all age groups and in a variety of environments.

This challenging profession provides a career for men and women who desire to participate with other health care providers in the restoration of maximal functional capabilities of individuals temporarily or permanently disabled by illness, disease, trauma or congenital abnormalities. Most physical therapists work in hospitals, public health agencies, rehabilitation and extended care facilities, public schools and other. governmental agencies.
During the freshman and sophomore years, students take a pre-professional program that permits them to fulfill all prerequisite courses and to attain a general education background in communication skills, natural sciences, social and behavioral sciences and the humanities.

The proximity of the University to the Medical College of Ohio has strengthened this, cooperative academic program. The junior and senior years are offered on the campus of the Medical College of Ohio. Courses in the professional curriculum include the basic sciences, physical therapy theory and .procedures and applied clinical sciences. An important feature of the program is the cooperative practicum and internship experiences in which all students participate. More than 57 hospitals, local health agencies, rehabilitation centers and public schools are affiliated with the program as clinical educational facilities.

This program is accredited by the Commission on Accreditation in Education of the American Physical Therapy Association. Graduates are eligible to take state licensure or registry requirements in the state in which they wish to practice.

Fees for the baccalaureate physical therapy program are the same as for all other degree programs. There are, however, additional charges for uniforms and required professional liability insurance. Transportation to and from classes at the Medical College of Ohio and clinical educational facilities, and 'any other specific health tests required by the clinical educational facilities, are the responsibility of the student.

## Acceptance requirements

Candidates for acceptance to the physical therapy professional component in the third and fourth years at the Medical College of Ohio in cooperation with the University of Toledo and Bowling Green State University must have:
1.. Submitted their applications and all supporting academic credentials for admission to the University to the Office of Admissions by December 1 of the year preceding their anticipated acceptance to the professional program, if the candidate is a transfer student.
2. been admitted to the University of Toledo or Bowling Green State University.
3. filed the physical therapy professional curriculum application prior to the deadline date of January 15 of the year the student wishes to enroll in the professional curriculum to the Depariment of Physical Therapy, Medical College of Ohio.
4. a minimum of 2.5 accumulative GPA. No S/U or PS (pass) or NC (no credit). options are permitted in required courses or prerequisites for required courses, except those graded only on that basis.
5. completed each of the following courses or their equivalent with a minimum grade of C
Natural sciences
BGSU: BIOL. 205 and 331
BGSU: CHEM 125 and 126
BGSU: PHYS 201
Behavioral and social sciences
BGSU: PSYC 201
BGSU: SOC 101
6: completed all other general program requirements specified by Bowling Green.
7. provided documentation of experience in health care and/or community service(s)
8. completed a personal interview as stipulated by the admissions committee for the professional curriculum.
9. filed a certified letter of acceptance with the program director by April 30.
The availability of clinical facilities and faculty currently limits the acceptance in the third year to only 12 students from each university. Admission to the professional component is highly competitive; therefore, completion of the admission requirements does not guarantee acceptance to the professional physical therapy program.

## Suggested program

First year (preprofessional program: 32-38 hours) ENG 112 or equivalent (3-6)
PEG 100 (2)
SOC 101 (3)*
MATH 130 (3)
SPCH 102 (3)
CHEM 125 and 126 (10)*
PSYC 201 (4)*
MRA 101 (1)
General education requirements (3-6)
Second year (preprofessional program:
27-35 hours)
PHYS 201 (5)
BIOL 205 and 331 (8)*
HED 313 (3)
MRA 301 (2)
PHIL 342 (3)
PSYC 240 (3)
CS 101 (3)
General education requirements: select from humanities, and art, foreign language and.multicultural studies
Third year (professional program: 30 hours)
Human gross anatomy: neuroanatomy and neurophysiology (9)
Pathology and pharmacology (4)
Physical therapy procedures (4)
Principles of massage (2)
Therapeutic exercise (4)
Research methods (2)
Functional anatomy (3)
Applied medical sciences (2)
Clinical practicums (2)
Prosthetics and orthotics (2)
Fourth year (professional program: 33 hours)
Human growth and development (3)
Reseaprch methods (2).
Therapeutic exercise (4)
Cardiopulmonary physical therapy (3)
Orhopaedic and sports trauma (5)
Electrophysiological assessment and treatment (2)
Pathology and pharmacology (2)
Physical therapy trends and management (2)
Evaluation rehabilitation techniques and principles applied (4)
Prosthetics and orthotics (2)
Independent study (2)
Clinical practicums (4)
Clinical internship (4)
Summer
Clinical Internship (10)
To enroll in the summer clinical internship the student must have a GPA of 2.5 or above in professional courses with a. PHYT prefix and faculty consent
This program is subject to revision and . may be modified to meet student needs.

- Required for admission to the professional curriculum in the third and fourth years.


## Social Work

320 Williams Hall, 372-2441
This program is designed to prepare students to be generalist practitioners at the beginning level of social work practice. Built upon a liberal arts foundation, the program provides students with knowledge and skills - needed to assist people seen in social service programs.

Social workers work in a great variety of social service programs including hospitals, schiools, courts, correctional institutions, programs for the aged, programs for physically and mentally handicapped and mentally ill, child welfare programs and many 'others.

In these settings, social workers assume the roles of medical social worker, school social worker, probation and parole counselor, correctional social worker, geriatric social worker,' , child protective social worker, foster care or adoption social worker and public ássistance social worker.

During the freshman and sophomore years, students take introductory social work courses along with courses in a variety of . other disciplines. A student may make application to become a social work major after completion of 45 semester hours. A written application is required.

Most of the social work courses are taken in the junior and senior years.

This program emphasizes student participation in area social agencies through observation, volunteer work and supervised field instruction. Graduates of the program receive a Bachelor of Science in Social
Work. The program is accredited by the Council on Sócial Work Education at the baccalaureate level.

## Suggested program

First year
SOWK 110 (3)
ENG 112 or equivalent (3-6)
BIO 101 or 104 (3-4)
SOC 101 (3)
CS 100 or 101 (3)
PSYC 201 (4)
PEG 100 (2)
General education requirements (6)
Electives (3)
Secornd year
SOWK 220, 227 (5).
POLS 201 (3)
IPCO 306 (3)
ECON 200 (3)
-PHIL 210 (3)
PHIL 103 (3)
General education requirements (6)
Electives (3)
Third year
SOWK 225, 321, 322 and 332 (11)
SOC 301; 369, 370 (9)
General education requirements (6)
Electives (6)
Fourth year
SOWK 326, 325, 330, 423, 430 (23)
PSYC 405 (3)
Electives (6)
This program is subject to revision and may be modified to meet stuident needs.

## School of Nursing

Medical College of Ohio, 381-3435
114 Health Center, 37-0760
Firelands option, 433-4460
The School of Nursing offers the students an opportunity to become actively involved in the health field as a professional nurse with a bachelor of science in nursing degree. The curriculum emphasizes a liberal education combined with the nursing theory and clinical practice needed to develop as an educated nurse. A graduate of the nursing program is capable of providing health services for individuals, families and communities, eligible to take the licensing examination to become a registered nurse, and prepared for future graduate study and leadership in nursing.

The School of Nursing is accredited by the National League for Nursing and has full approval of the Ohio State Board of Nursing Education and Nurse Registration.
Fees for the nursing program are the same as for all other degree programs. Additional charges, however, are mandated for uniforms, professional liability insurance, specific health tests and lab fees. Transportation to classes at the Medical College of Ohio in Toledo and to the clinical placements is the responsibility of the student.

## Admission requirements

Admission to the preprofessional nursing program is through the office of admissions of the University. Successful completion of the preprofessional requirements is a prerequisite for admission to the professional nursing program. The number of students accepted into the nursing program is limited by the availability of clinical facilities and facully. Admission to the professional program is competitive and based upon:

1. Completion of:

ENG 112
MATH-demonstrated competency above 096 level
CHEM 115 and 116
BIOL 205
PSYC 201
2. Accumulative grade point average in the preprofessional program.
3. Completion of 30 semester hours of credit
4. Particiaption in an interview

Admission applications are available from the nursing office in December of each year.

## Bachelor of science in nursing

A candidate for the bachelor of science in nursing degree must earn a minimum of 123 semester hours of credit either in residence, by advanced standing or transfer credits, in addition to the requirements listed on page 8.

A minor is not required for graduation.

## University Requirements

Each student is required to complete ENG 112 or demonstrate a proficiency in written expression equivalent to that attained by students who have completed the course. A penalty is imposed if ENG 112 is not completed with the first 60 hours. See page 10.

## Functional Understandings

## Natural sciences

Each students is required to complete BIOL 205, CHEM 115, 116 and MATH as demonstrated by a competency examination score above MATH 096 level.

## Social sciences

Each student is required to complete PSYC
201 and 405; PSYC 270, SOC 369, or MATH 115; SOC 101.

## Arts and humanities

Each student is required to complete one course in literature (American, English or foreign), PHIL 102 or 342, and one other course in one or more of the following areas: ART, literature, ethnic studies, music, PHIL, POPC, THEA or women's studies. A list of courses approved for the humanities requirements is available from the School of Nursing office, 114 Health Center.

## Foreign languages and multicultural studies

Each student is required to complete SOC 231.

Additional required credit hours exclusive of major include HOEC 207 or 307 , EDFI 490 or PSYC 240, SOC 231, two hours of PEG 100 and electives.

The major requires a minimum of 65 hours. These include 21 nursing courses and 6 human biological science courses. A minimum grade of C is required in all nursing courses in the professional program.

## Suggested program

First year (preprofessional program)
CHEM 115 and 116 (8)
MATH-demonstrated compelency above 096
level
SOC 101 (3)
PEG 100 (2)
ENG 112 or equivalent (3-6)
BIOL 205 (4)
PSYC 201 (4)
NURS 100 ( 1 )
Second year (professional program)
PHIL 342 or 102 (3)
BIOL 311.312 and 400 (11)
EDFI 490 or PSYC 240 (3)
HOEC 207 or 307 (3)
Humanities ( 6 )
SOC 231 (3)
PSYC 270, SOC 369 or MATH 115; PSYC 405 (6)
Third year (upper division)
NURS 370, 371, 372, 373; 380, 381, 382, 383, 384
390, 392, 393, 394
Fourth year
NURS 471, 472, 473, 474; 481, 484; 491, 492, 493. 494.

Electives
The above is a suggested program that may be modified according to individual needs and capabilities. The School of Nursing recommends academic advisement as the student progresses.

## Degree program for the registered nurse

The School of Nursing also offers an opportunity for graudates of associate degree and diploma programs to earn a baccalaureate degree with a major in nursing.. This alternate track for the RN student provides for flexibility and an individualized approach for the nurse who i already practicing.

Criteria for seeking admission to the major are:

1. minimum of 30 semester hours of college credit including prerequisite courses in chemistry and biology or equivalents with minimum GPA of 2.5 .
2. 50th percentile success on selected National League for Nursing Examinations.

The NLN examinations earn the diploma graduate 30 semester hours of nursing credit and determine placement for both diploma and associate degree graduates into the RN sequence (upper-division nursing). The diploma RN is also granted 12 semester of hours of technical credit.

Application to the major takes place spring semester preceding the fall semester in which the student plans to enter the major.

A lab fee will be assessed for all technology courses.

A minimum of 123 hours are required for graduation, of which 40 hours need to be in upper-division course work.

The nursing courses are offered through the Bowling Green main campus and the
Firelands campus.


# COLLEGE <br> OF MUSICAL ARTS 

Robert W. Thayer, Ph.D., dean, 1031 Moore Musical Arts, 372-2181
Richard Kennell, M.M., assistant dean, 1031 Moore Musical Arts Center, 372-2181
Department of Music Composition and History, JaFran Jones, chair. 1031 Musical Arts, 372-2181
Department of Music Education, P. Thomas Tallarico, chair, 1031 Musical Arts, 372-2181
Department of Performance Studies, David C. Rogers, chair, 1039 Musical Arts, 372-2181

## Objectives

The primiary objectives of the College of Musical Arts are to educate talented musicians for professional careers in teaching; performance, composition, and musical scholarship; and to serve the University community by contributing to the general education program. The college also strives through its division of public mission to enhance the cultural climate of the entire campus and community and to serve as a cultural resource for northwest Ohio.

## Music for the Non-Major

The student interested in music but not planning to be a major will find a wide variety of courses and performing options from which to choose. Courses range from a basic music appreciation class that embraces both popular and classical styles to more specific courses in classical music jazz, world musics, music theory and composition. Those interested in learning piano, voice.or guitar will find group instruction offered in these areas. Private instruction and membership in the University-performing ensembles is available on a limited basis by audition for people with previous performing experience.

## Accreditation

Since 1947, the College of Musical Arts has been accredited by the National Association of Schools of Music.

## Entrance Examinations

Students wishing to major or minor in music (except those music education minors in which study in a major instrument is not required) are required to audition in their principal performance medium and to take a placement examination in general musicianship, including music reading; elementary music theory and aural skills. In addition, a personal interview is strongly recommended. Applicants with performance skills in more than one medium are encouraged to audition in the second medium as well. Admission to a degree program in music is dependent upon satisfactory completion of these auditions and examinations. Students with majors in disciplines other than music who wish to register for applied music instruction (private lessons) are also required to audition in the principal performance medium. For information about other University entrance/placement examinations, see Academic Policies and Admissions.

## Music Performance Ensembles

Membership in music ensembles is open to all students in the University who quality on the basis of auditions. These ensembles include the A Cappella Choir, Men's Chorus, Women's Chorus and Collegiate Chorale; Concert, Marching, and Symphonic Bands; Symphony and Chamber Orchestras; and a variety of small vocal and instrumental ensembles, including Jazz Lab Band, Renaissance Ensemble, Balinèse Gamelan Ensemble, New Music Ensemble. See course descriptions for a full listing of ensembles.

## PROGRAMS OFFERED

## Bachelor of Music

The College of Musical Arts offers majors leading to the Bachelor of Music degree as fóllows:

Music composition - theory ( $\mathrm{M} \cup \mathrm{CH}$ )
Music education (MUED)
Choral option-keyboard emphasis
Choral option-vocal emphasis
Choral/musical theater option-keyboard emphasis
Choral/musical theater option-vocal emphasis

Classroom option-keyboard emphasis Classroom option-vocal emphasis Instrumental option-brass, percussion, string or woodwind emphasis Instrumental option-keyboard emphasis
Music history and literature (MUCH)
Performance (MUSP)
Church music option (organ or voice)
Instrumental option
Brass
Guitar (jazz emphasis) w
Harp
Percussion
String
Woodwind
Keyboard option
Harpsichord
Organ
Piano accompanying
Piano literature
Piano pedagogy
Voice Option
Voice/musical theater option
Woodwind specialist option.
A minor in jazz is available to Bachelor of Music degree candidates majoring in any of the fields listed above.
The Bachelor of Music degree provides. undergraduate preparation for a professional career and a background for graduate study. To insure not only technical, skills but a broad understanding of the social and cultural environment in which the art of music is practiced, breadth as well as depth are stressed in the curricular programs for each of these majors. See the sections immediately following as well as the course descriptions for specific details of each of these majors.

## Bachelor of Arts

The Bachelor of Arts degree with both majors and minors in music is also available (see College of Arts and Sciences). Bachelor of Arts degree candidates who wish to pursue a major or minor in music should contact the assistant dean of the College of. Musical Arts.

## Bachelor of Science in Education

A minor in music is available to students majoring in education (see College of Education). The following options are offered:

Secondary instrumental music (meets high school certification requirements)

Secondary vocal music (meets high school certification requirements)

Elementary Classroom Music (elementary education majors only)

## Approval for Continuation as a Music Major or Minor

The progress toward a degree of each music major or minor is reviewed each semester by the faculty of the appropriate department(s). Only students whose musical and academic performance is satisfactory are permitted to continue in the program.

## BACHELOR OF MUSIC DEGREE

## General Requirements for the Degree

A candidate for a degree in the College of Musical Arts must fulfill the general requirements listed on page 8 and meet the requirements for the degree listed in the following pages. To further assist students in academic program planning, curricular check sheets are available from each department.

## Academic Advising

A departmental adviser is available to assist students with career advisement, curricular planning; course selection and determining progress toward meeting graduation requirements. Ulitimate responsibility for knowing and meeting requirements rests with the student, and students need to be thoroughly familiar with the Undergraduate Catalog and with appropriate curricular check sheets. Students admitted to the College of Musical Arts as a music major or minor are encouraged to meet with the chair of the appropriate department to discuss their academic programs.

## Recital Attendance

All freshmen, sophomore and junior music majors (and minors during terms in which they are engaged in performance study) will be required to attend 15 musical recitals or concerts on campus each term, exclusive of those in which the student is a participant. Attendance at the biweekly musicianship and performance (M\&P) class may be counted toward the minimum of 15 recitals per term. To monitor recital attendance, students majoring in music must register for and successfully complete six semesters of MUS 099 (Recital Attendance). Students are also required to attend biweekly seminars according to medium of performance study.

## Double Major

A student interested in a double major should consult with the chairs of the departments involved for intormation pertaining to the requirements. Double majors must be approved by the chairs of the appropriate departments. Such programs ordinarily require more than eight semesters to complete.

## Minor in Another Discipline

A music major interested in concentrated study in another discipline should consult the chair of the department in which the major is being taken. With judicious course selection it is often possible to earn a minor or its equivalent in another field. This additional study may require more than eight semesters to complete.

## Jazz Minor

The jazz minor is a supplementary program of courses and performance experiences presenting the historical and stylistic features of jazz. The jazz minor may be added to existing undergraduate degree programs in music composition-theory, music education, music history and literature, or performance. Students interested in the jazz minor should consult with their department chair for assistance in planning for the additional required course work.
Jazz minor program (31)
MUCH 211, 212 - Jazz Improvisation and Repertoire (4)
MUCH 236 - Intro Jazz and Commercial Music (2)
MUCH 237 - Jazz (3)
MUCH 311, 312 - Jazz Arranging and Analysis (6)
MUCH 411 - Jazz Pedagogy (2)
MUCH 436 - Recording Techniques (2)
MUSP Small ensemble (4)
MUSP Applied instruction (8)

## S/U Grading

No required music courses may be taken for S/U grades. General education and professional requirements outside of music, however, may be taken for S/U credit. Elective hours within and outside of music may also be taken on an $\mathrm{S} / \mathrm{U}$ basis provided that the general grading policies of the University are maintained.

## Aural Skills

In order to acquire those hearing and sightsinging skills which are basic to any career in music, all music majors are required to pass level IV of aural skills prior to graduation (see course descriptions). Since these courses are competency based, students are encouraged to progress faster than the "normal" rate of one level per semester, This may be accomplished by passing proficiency exam(s) in the varicus level(s). See music composition-history chair for information regarding receipt of credit for levels skipped.

## Course Prerequisites

For all music majors, completion of MUCH 131 and 132 with passing grades plus completion of MUCH 142 with a grade of C or better are prerequisites to enrollment in 200level MUCH modules. Certain upper-division courses have specific prerequisites (see course description for details).

## Elements of Music :

MUCH 110 (preview to music) does not fulfill degree requirements (or electives) for music majors and minors. (Refer to additional requirements under Music Education for exception.)

## DEGREE PROGRAMS

## Music CompositionTheory

(courses coded MUCH)
1031 Musical Arts Center, 372-2181

## Admittance as a Composition-

 Theory MiajorStudents already majoring in other areas of music who have developed a strong interest in music composition and theory and have demonstrated a strong aptitude in one of these areas may apply to the chair of the Music Composition-History Department for acceptance as a major in music composition or music theory. It is also possible to add music composition-theory to an original major for a double major. Normally this is done by the end of the sophomore year. An application for this major or double major must be approved by the faculty of the department.

## 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 music ensembles. Ensemble credit is available in New Music Ensemble, Renaissance Ensemble and Balinese Gamelan Ensemble. Participation in the New Music Ensemble by music composition-theory majors is strongly encouraged. The other collegium musicum ensembles also provide a training ground for performance practice.

## Keyboard Proficiency Requirement

Functional keyboard proficiency tests I and II are required. See Music Education: Functional keyboard requirements, below, and course descriptions.

## Approval for Senior Status

Each candidate for senior status as a music composition-theory major must submit at least one score or tape of an original composition or arrangement, or one original paper on some aspect of music theory.

## Completion Requirement

Candidates for the bachelor's degree in music composition-theory are required either (a) to present a half-recital of original compositions (or equivalent, such as music for a stage play or film of substantial length): or (b) to submit papers which make contributions to the field of music theory through research or analysis.

## DEGREE REQUIREMENTS

The bachelor of music degree in music composition-theory requires 137 total credits distributed as follows:
1.42 credit hours in general study;
2. 51 credit hours in basic musicianship. including performance;
3.42 credit hours in advanced courses in music theory, literature and composition; 4. 2 credit hours in PEG 100.

For specific information, consult the chair of the Department of Music Composition History.

## General Education Requirements

## Group I: Communication

Students must complete at least one course
in written communication such as English 112 or the equivalent. A penalty is imposed if English 112 is not completed by the junior year See page 10: Tötal: 3 hours.

## Group II: Foreign language and multicultural studies

Students miust complete at least eight hours of one language either French or German is recommended. For students.without previoús foreign language training, election of GERM 100 is recommended. If proficiency equivalentto 101-102 in either language can be established with the appropriate language departments, then courses beyond: this level may be taken. One semester in a computer science programming language course may besubstituted for one semester of a foreign language beyond the first year of earned credits.

Studentṣ muṣt also complete eight hours of a second language or substitute music
courses not required in the major curriculum with the approval of the chair of music composition and history. Total: 16 hours.

## Group III: Mathematics and natural sciences:

Students must complete at least two
courses in science or mathematics. PHYS
350 is recemmended. Total: 6 hours

## Group IV: Social sciences

Students must complete at least two
courses selected from anthropology, ECON;
-GEOG, HIST; POLS; PSYC or SOC. Total: 6 hours.

## Group V: Arts and humanities

Students must complete one course in fine arts or philosophy and one in English. literature. Total 6 hours

In addition, students must select a suffi-
cient number of courses from any of the five groups in consultation with the chair to meet the minimum total group requirements of 49 hours.

## Music Requirements

All composition-theory majors are required to complete the following music courses: Minimum total: 86 hours.

## Music core.

Music modules MUCH131,132, 231, 232, 236 or 237 , and 233,234 or 235 . Aural skills 141, 142, 241, 242, and H341. Minimum total: 27 hours:
Music theory, composition major courses MUCH 308; 309, 315, 316 (12 hours), 320, 403, 404,410 ( 4 hours), 424 and * 425 . * 425 may be substituted by an additional semester (2 hours) of 410. Total: 33-34 hours

## Music electives <br> Music literature (4 hours). May include MUCH 116.

## Music Periormance

Large ensemble 4 tours; small ensemble 3 hours; instrument classes 3 hours; major instrument/voice 4 hours; MUSP 305, 3064 hours-Total: 18 hours

## Piano

MUED 150, 151, 250, 251 (may be waived by proficiency exam). Keyboard proficiency test I and 11 are required. Total: 5 hours.
Completion requirement (see above).
Suggested Program
First year (32 hours)
MUCH-131, 132, 141 and 142 (12)
PEG 100 (2)
Applied music or vocal/instrumental classes (2)
Groùp 1 requirements (3)
MUCH 236 (2)
Large or small ensembles (2)
MUED 150 and 151 or 152 (2)
Group V requirements (8)
Second year ( 34 or 35 hours)
MUCH 231, 232, 241 and 242 (9)
MUCH 233 or 234 or 235 (2)
MUCH 236 or 237 (2-3)
Applied music or vocal/instrumental classes (2)
Foreign language (8)
Group electives (6)
Ensembles (2)
MUED 250 and 251 (3).
Third year ( 33 hours)
MUCH H341 (2)
MUSP 305 and 306 (4)
MUCH 315 and 320 (4)
MUCH 410 (4)
MUCH $31: 6$ (6)
Ensembles (2)
Group electives (7)
MUCH electives (2)
Group III requirements (3)
Fourth year ( 36 hours)
MUCH 316 (6)
MUCH 424 and 425 (6) or MUCH $4100^{\circ}(4)$
MUCH 308 and 309 (4)
Group electives (5)
MUCH 403 and 404.(4)
MUCH electives (2)
Group IV requirements (3)
Foreign language (6)
The above is a sample program which may be modified with the approval of the chair of the music composition-history department according to the student's individual needs and capabilities

## Music Education <br> (courses coded MUED)

1031 Musical Arts Center; 372-2181
The music education curriculum is designed to prepare students to become elementary and secondary school music teachers. The department believes that this can be accomplished by providing for the student:

1. a program of general studies in the. sciences and humanities;
2. advanced study in music performance and comprehensive musicianship; and 3. a program of professional training including field experiences, methods courses, and laboratory training.

## Degree Programs in Music Education

All bachelor of-music degree programs in music education lead to provisional special certification for teaching music in grades $K$-: 12. Four degree options are offered in music education: a choral, an instrumental; a -classroom music and a choral/musical theater option. The choral option is intended. for those who wish to teach junior and senior high school choral ensembles; the instrumental option for those who wish to work with bands and/or orchestras at elementary and secondary levels; the classroomoption for those who are interested in teaching elementary and junior high school general music; and the choral/musical theater option for those who are interested in teaching choral music at the secondary level and in producing mușical shows. For complete degree réquirements for each option, refer to music education options below.

In order to graduate in four years, a student must take approximately 34 hours of required course work each year. Music ed. ucation majors üsually take between: 1.6 and 18 credit hours per semester. The total
number of houis required are distributed over the areas of general and professional study which appear below and vary slightly according to the specific options.

1. 42 hours of credit in general studies:
2. 9 hours of credit in professional education;

3:58 hours of credit in music core courses including music theory, music history, performance, conducting, ensembles, methods courses, and student teaching;

4:18-22 hours of credit in the music education option;
5. 2-3 hours of credit in physical educa tion (PEG):

## Selecting a Degree Option

All freshman music education majors are enrolled in a general course of study for the -first academic year: Students are required to select a degree option during that year.

Approval of an option is initially deter mined on the basis of the student's academic standing and performance achievement.

1: Academic standing is determined on the basis of cumulative grade point hours and quality points, and standing in the basic music courses.

2: Performance proficiency is measured through applied juries which are scheduled at selected times and are posted for each academic year. These performance juries are used to determine a student's perfor-mañce proficiency for choosing à speciaity area, and to determine whether performance progress has been satisfactory. Only students whose performance status is satisfactory will be granted an area of specialty.
3. To remain in a degree option, students, must exhibit teaching competency as juidged by the music education faculty

Students who decide to change-from one optien to another must first consult with the department chair. in addition, they may be required to meet additional professional and ; performance requirements. Any student changing an option musst complete at least 10 credit hours in onesperformance area.

## DEGREE REQUIREMENTS

## General Education Requirements

To ensure a general education background in addition to the teaching major, a student is required to complete 42 hours of credif fromthe five areas of knowledge indicated below.

## Group I: Communication

Students must complete ENG 112 and SPCH 102. A student is considered to have demonstrated acceptable performance in English skills if a grade of C or better is received in ENG 112. A student who receives a D in ENG 112 must repeat the course until a grade of $C$ is earned. A penalty is imposed if ENG 112 is not passed before the junior year. See page 10. Minimum total: 6 hours.
Group II: Foreign languages and muliticultural studies
Students are required to complete one nonwestern music course (MUCH 233, 234 or 235) and EDFI 408. Minimum total: 6 hours.

Group Ill: mathematics and natural science
Student must complete at least 6 hours of credit in course work selected from BIOL, CHEM, PHYS, GEOL, MATH or MIS. MATH 241 and 242 are applicable only for an elementary education major. One mathematics and one natural science course are roquired. Minimum total: 6 hours.

## Group IV: Social sciences

Students must complete PSYC 201 and at least 3 hours of credit from ECON, GEOG, HIST, POLS, PSYC, anthropology or SOC. Minimum total: 7 hours.

## Group V: Arts and humanities

Sudenis are required to complete one course in ENG literature ( 3 hours) and 6 hours of credit in one or more of the following: ART, speech (including RTVF and THEA), literature, modern dance, PHIL or foreign language. Group $V$ requirements may not include music courses.
Group V: Requirements for the classrcom music oplion
Students pursuing the classroom music option are required to take 9 hours in related art disciplines. These include: English literature ( 3 hours), ART 101 (3 hours) and a choice of one of the following: ART 145, 146, $147, \mathrm{SPCH} 347$ or 447 ( 3 hours). Fourteen hours may then be elected from one or more of the groups or from those disciplines listed above. Required courses in the music education option may not be used.

## Group V: Requirements for the

choral/musical theater option
Students pursuing the choral/musical theater option must complete the following courses in theater and related field: THEA 202, 241, 341, and 352 (12) and THEA 243 or 343 or 349 (3-4). Students are also required to take one course in ENG literature (3). Required courses in the music education major must not be used.

Choral/musical theater students must also complete 3 hours of recreation in dance from among ballet, ballroom dance, square dance, folk dance, jazz dance, modern dance and tap dance.

## Total group requirements

1. Instrumental and choral optionsGroup I, II, III, IV, V; total 30 hours. Classroom option-Group I, II, III, IV, V; total 33 hours.
Choral/musical theater option-Group
I, II, III, IV, V; total 42 hours.
2. Elective hours are distributed as follows: Instrumental and Choral options-12 hours.
Classroom óption-9 hours. Choral/musical theater option-0 hours.
These hours may be elected from one or more of the 5 general studies categories or from any of the following disciplines: JOUR MKT, MGMT, BUSE, international business LEGS, FIN, INS, LEM, HOEC, POPC, technology; health, physical education and recreation; music, and education. With the exception of MUCH 110, required courses in the music education option may not be used.
3. Students in all options except choral/ musical theater are required to take a minimum of 2 hours of PEG courses. Students in the choral/musical theater option select 3 hours of dance courses.

## Professional Education Requirements

To ensure adequate professiona preparation for a career in teaching, the following courses are required: EDFI 302 and 402 and EDAS 409. (The prerequisite for EDFI 302 is PSYC 201).

## Music Core Requirements

All music education majors are required to complete the following core courses. Minimum total: 58 hours.
Music history, theory and aural skills Music modules MUCH 131, 132, 231, 232, and 236. Music module MUCH 131, 132, 232, 236. (Either MUCH 233, 234 or 235 required under the Group II category.) In addition, either 315, 320 or 325 taken according to specific option. Aural skills I-IV (MUCH 141, 142, 241 and 242.) Minimum total: 25 hours.

## Conducting

MUSP 305 and 306 required in the junior year before student teaching. Minimum total: 4 hours.

## Periormance

10 hours minimum in one performance medium (e.g., trumpet, violin, voice).

## Ensembles

5 hours of large ensembles and one hour of small ensembles. Total: 6 hours.

## Music methods

MUED 240. Total: 3 hours.

## Student teaching

MUED 497. Eligibility requirements for student teaching are specified under
"Student Teaching" in this section of the Undergraduate Catalog. Total: 10 hours.

## Music Education Options

In addition to the core requirements (58 hours) each major in music education must complete the requirements of one the following options:

Choral option (keyboard emphasis)
MUED 340, MUED 359, MUSP 311, 3 hours of instrument classes (see additional requirements-instrument classes), 3 hours of class or studio voice, 2 hours of class piano and functional proficiencies I and II.
Total minimum: 20 hours.

## Choral option (vocal emphasis)

MUED 340, MUED 359, MUSP 311; 3 hours of insirument classes (see additional requirements-instrument classes), one hour of studio piano, 2-4 hours of class piano and functional proficiencies !, II, and III. Total: 19-21 hours.

## Classroom option (keyboard emphasis)

MUED 340, 451, 3 hours of instrument classes, 3 hours of class or studio voice; 2 hours of class piano and functional proficiencies I and IV. Total: 19 hours.
Classroom option (vocal emphasis)
MUED 340, 451, 3 hours of instrument classes, 1 hour of studio piano, $3-5$ hours of class piano and functional proficiencies $\mathrm{I}, \mathrm{Hl}$, and IV. Total: 18-20 hours.

## Instrumental option

(keyboard emphasis)
MUED 340, 7 hours of instrument classes, 1 hour of class or studio voice, 2 hours of class piano and functional proficiencies I, II, and III. Total: 19 hours.
Instrumental option (instrument emphasis in woodwind, brass, string, guitar or percussion)
MUED 340, 7 hours of instrument classes, 1 hour of class voice, $3-5$ hours of class piano and functional proficiencies I, II, and III. Total: 20-22 hours.

Choral-musical theater option (vocal emphasis)
MUED 340, 359, MUSP 311, 3 hours of instrument classes, 1 hour of studio piano, $3-5$ hours of class piano, and functional proficiencies I, II, and III. Total: 19-21 hours.

## Choral-musical theater option

 (keyboard emphasis)MUED 340, 359, MUSP 311, 3 hours of instrument classes, 3 hours of class or studio voice, 2 hours of class piano and functional proficiencies I, II, and ill. Total: 20 hours.
Performance requirements-musical theater option
Students must participate in one University musical (theater program and College of Musical Arts) and three theatrical productions well distributed over the following: opera, opera workshop, educational theater, community theater, professional theater, and dance theater. Each production must be approved by the chair of music education.
*MUED 340 consists of four major methods components: elementary general music, junior high school general music, the student's major option area of emphasis, and a field component. Specific option areas will be offered only during certain semesters. Students should consult the department for details.

## Performance Requirements

 $\rangle$In addition to specific course requirements; music education major must meet the following performance-oriented requiremients:
Performance jury examinations: "
Students in music education must have a major performance emphasis and must pass àn examination in that medium at jury examination times. Jury examinations are scheduled at selected times and are posted for each academic year. Students wishing to change their area of performance emphasis must do so with the approval of the chair of music education and the appropriate performance faculty:
Recital
A half recital (or its equivalent) is required of all music education majors. It may not be given while student teaching. Permission to" perform a recital is given by the appropriate performance faculty and is based upon the student's performance at a recital jury examination. Students desiring to meet this requirement through equivalent means must receive approval'from the chair of music education and the appropriate peiformance faculty. Students are encouraged to give a full recitat; however, a full recital may only be given with the consent of the performance area faculty.

## Functional Keyboard <br> Requirements

Music education majors are required to pass hree of the functional proficiency examinations listed below. Instrumental majors must pass proficiencies I, II, and III; choral majors proficiencies:I, II, and III: and classroom majors; proficiencies I, III, and IV. Piano requirements for all degree programs cannot be met simply by taking piano for a specified number of credit hours. The following skills-are required for each proficiency examination:

Proficiencyl: (freshman"level) scales, bäsic chord progressions, chording melodies, and sight reading

Proficiency II: (sophomore level)
harmonization and score reading
Proficiency III: (junior level) accompanying
Proficiency IV: (sophomore level)
harmonization, improvisation, and transposition

Proficiencyl is a freshman-level requirement; proficiencies II and IV are sophomore requirements, and proficiency III a"junior requirement.

All entering-freshmen are auditioned on piano and placed according to their keyboard skills. Students with no keyboard background are placed in the introductory class piano sequence of MUED 150 and 151. Students with some keyboard experience are placed in either 151 or 154 depending upon their level of proficiency.
Keyboard emphasis students are placed in: MUED :154 in lieu of taking MUED 150-151 and take MUSP 264 in lieu of proficiency 111.

All freshmen are expected to pass functional proficiency 1 by the end of the second semester: Sophomore and junior level piano course requirements are unique to each option in music education. They are specified in the music education handbook and are designed to prepare students for the second, third, and fourth functional proficiency examinations

- Any of these proficiency examinations may be passed ahead of schedule. Freshman and sophomore proficiencies must be completed prior to student teaching Students who have not passed functional próficiency I and III (or IV) will not be allowed to student teach. Because of the time required to place students in student teaching assignments, there must be at least one full semester between the time the final proficiency is passed and the semester of student teaching Summer session is considered equivalent to one sémester. Proficiency examinations are scheduled at the mid-term and end of each semester.
Certain piano classes múst be passed with a grade of $C$ or better. These are indicated in the course descriptions. Additional information on all functional piano requirements is available from the chair of music education. Students are responșible for knowing and meeting all proficiency requirements.


## Additional Requirements

## Academic minor

Ordinarily students pursuing a degree in music education do not carry an aciademic minor; however, a minor can be pursued provided the student is willing to take additional credits beyond the minimum required for graduation.

## Added Music Course Requirements

On the basis of the placement examination; students may be required to take MUCH 110. Credit for MUCH 110 will be'applied toward the elective in/outside music category.

## Field experiences

Field-based experiences are an essential part of professional teacher preparation. In compliance with state certification requirements; students are required to participate in such experiences as a part of certain music education courses.

## Instrument classes

Music education majors pursuing the instrumental option are required to take the following six,instrument classes: MUED 130 , $136,140,145,146$ and 180 . (It is strongly recommended that MUED 130, 140, 145 and 146 be taken initially, preferably during the freshman/sophomore years.) Students in the choral, classroom and theater options are required to take 3 hours of instrument classes including 1 woodwind, 1 brass and MUED 195 (guitar). The following instrument classes are available as highly recommended electives: MUED 190 (harp), MUED 125 (percussion), MUED 147 (bassoon reed .class).

## Conducting requirements

All music education majors must pass second semester conducting with at least a grade of C . Those students receiving a grade of $D$ or less will be required to repeat MUSP 306 (Conducting): and to achieve better than average work before being allowed to student teach

## Methods requirements

Music education majors must pass all required methods courses (MUED 240, 340) with at least a grade of C. Those students receiving a grade of Dor less will be required to repeat the course(s) in question and to achieve better than average working before being allowed to student teach.

## Large ensembles

Music education majors are encouraged to participate in large ensembles each semester except the semester they student teach. Instrumental option students.must acquire five hours of large ensemble creditexclusive of marching band. Marćhing band credit may. apply toward elective hours. Students in the choral, classroom and theater options must acquire five hours of large ensemble credit exclusive of men's and women's chorus. Credit for men's and women's chorus may apply toward elective hours.

## Student teaching

The requirements for student teaching in music are established by the State of Ohio, the. University, and the Department of Music Education. Tọ be eligible for an assignment in student teaching the student must meet the general requirements of the College of Education and those prerequisites estab'lished by the Department of Music Education' Departmental prerequisites
Music requirements for student teaching include the successful completion (with a grade of C' or better) of MUED 240 and 340 , MUSP 306; any other required methods courses, and the required functional piano proficiency examinations. In addition, instrumental option students should attempt to complete the seven-hour instrument class component prior to student teaching

## Registration

Each student teacher must register in two places: (a) with the University Office of Student Teaching in the College of Education; and (b) with the coordinator of student teaching, in the College of Musical Arts.
Speech and hearing test
Prospective teachers must also take speech and hearing tests so that they may avail themselves of appropriate corrective services if necessary
Transportation and housing Students miust provide their own transportation to assigned schools. Students without transportation are expected to live in the assigned community., Requests for stations close to the campus because of apartment leases; etc., may not be honored.

## Staiton assignment

Students will be assigned to teaching stations and supervisors at the discretion of the coordinator of student teaching．
Requested stations or supervisors cannot be guaranteed．

## Preteaching interview

Any school system has the right to interview a prospective student teacher．If the student is not accepted，the coordinator reserves the fight to designate a reassignment．If necessary，the coordinator may request that the student seek an interview with school authorities．
Radus
The radius for student teacher placement is not more than 75 miles from campus．
Withdrawal from student teaching
Once an assignment has been accepted by a school system，a student teacher may not withdraw except in cases of emergency
（e．g．，ill health，a death in the family）．
Changing semester of teaching
Students requesting to change their assigned semester of student teaching may have to wait one or more semesters if no opening in the semester requested exists．

## Extended stuctent teaching

If a student does not successfully meet the peformance objectives and competencies outlined by the Office of Student Teaching and the Department of Music Education during the semester of student teaching，the student may be required to do extended student teaching．A student doing unusually ineffective teaching in any of the compe－ tency areas may be required to pursue further academic study in that area（s）before being allowed to do exiended student teaching．

## Time requirement

All sludents must complete the full－semester time requirement for student teaching．
Written requirements
Student teachers must complete all written requirements connected with their final evaluations or receive an incomplete for the semester．

## On－campus activities

For a student to be effective，total com－ milment to teaching is necessary．Students may not take an academic course，present recitals，perform in ensembles，or take private lessons during student teaching except with the consent of the music education depertment．
Graduate students
Graduate students seeking teaching certification must meet all undergraduate student teaching requirements．
Summer student teaching
Student teaching during summer session terms is nol permitted．

## Suggested Programs

## Choral Option－Keyboard <br> Emphasis

Firse year（32－34 hours）
Semester 1
MUCH 131 ＊（to 132 or 232 or Non－West）（4）
MUCH 141 （2）

ENG 112 or SPCH 102 （3）
Applied Study（10 sem．hrs．required）（4）
Large Ensemble（A Capella or Collegiate Chorale）
（ 5 sem．hrs．required）（1－2）
MUED 154 （1）
Woodwind or Brass or Guitar Class（2）
PEG 100 （1）
MUS 099 （0）
Semester II
MUCH 132 （4）
MUCH 142 （2）
SPCH 102 or ENG 112 （3）
Applied Study（2）
Large Ensemble（1－2）
Group $V$ requirement（3）
Woodwind or brass or guitar class（1）
Voice class or studio voice（1）
MUS 099 （0）
＊Students requiring remedial or review work in
English（ENG 110／111）or Mus Theory（MUCH
110）may need to attend summer term in order to
complete all course work in four years．
Second year（35－36 hours）
Semester III
MUCH 231 （3）
MUCH 241 （2）
MUCH 236 （offered fall only）（2）
MUED 253 （offered fall only）（1）
MUED 240 （3）
Small ensemble（1）
Applied study（2）
MUED 359 （fall only）（2）
MUSP 310 （fall only）（1）
MUS 099 （0）
Semester IV
MUCH 232 （2）
MUCH 242 （2）
Elective（in／out music）MUSP 264 （1）
Group III requirement（3）
Large ensemble（1）
PEG 100 （1）
Voice class or studio voice（1）
Applied study（2）
PSYC 201 （4）
Woodwind or brass or guitar class（1）
MUS 099 （0）
Third year（34－36 hours）
Semester $V$
Junior Methods Project in Music（fall only for choral option）
MUED 340 （9）
MUSP 305 （2）
Large Ensemble（1－2）
Applied study（2）
EDFI 302 （3）
MUS 099 （0）
NO OTHER COURSES MAY BE TAKEN DURING
THE PROJECT

## Semester VI

MUCH 325 （spring only）（2）
Electives（in／out miusic）（5）
EDAS 409 （3）
Voice class or studio voice（1）
MUSP 306 （2）
Large ensemble（1－2）
Group III requirement（3）
MUS 099 （0）
Fourth year（ 30 hours）
Semester VII
Student teaching（first 10 weeks）（10）
EDFI 402 （last 5 －6 weeks only）（3）
Group II requirement：EDFI 408 （last 5 －6 weeks
only）（3）
Semester VIII
Group II requirement：MUCH 233／4／5，
Non－Western（2）
Group IV requirement（3）
Group $V$ requirements（3）
Elective（in／out music）（as required）（6）

## Choral Option－Vocal Empheasis

First year（32－34 hours）
Semester
MUCH 131＊（to 132 or 232 or Non－West）（4）
MUCH 141 （2）
ENG 112 or SPCH 102 （3）
Applied study（10 sem．hrs．required（2）
Large ensemble（A Capella or Collegiate Chorale）
（ 5 sem ．hrs．required）（ $1-2$ ）
MUED 150 （or 154）（1）
Woodwind or brass or guitar class（1）
PEG 100 （1）
MUS 099 （0）
Semester II
MUCH 132 （4）
MUCH 142 （2）
SPCH 102 or ENG 112 （3）
Applied study（2）
Large ensemble（1－2）
Group $V$ requirement（3）
Woodwind or brass or guitar class（1）
MUED 151 （or 154）（1）
MUS 099 （0）
＊Students requing remedial or revew work in English（ENG $110 / 11$ ）or Music Theory（MUCH 110）may need to attend
summer term in order to complete all course work in four years．

## Second year（ $34-36$ hours）

Semester III
MUCH 231 （3）
MUCH 241 （2）
MUCH 236 （offered fall only）（2）
MUED 252 or $253(1-2)$
MUED 240 （3）
Small ensemble（1）
Applied study（2）
MUED 359 （fall only）（2）
MUSP 310 （fall only）（1）
MUS 099 （0）
Semester IV
MUCH 232 （2）
MUCH 242 （2）
MUED 256 or 257 （1）
Group III requirement（3）
Large ensemble（1）
PEG 100 （1）
Applied study（2）
PSYC 201 （4）
Woodwind or brass or guitar class（1）
MUS 099 （0）
Third year（34－36 hours）
Semester $V$
Junior Methods Project in Music（fall only for
choral option）
MUED 340 （9）
MUSP 305 （2）
Large ensemble（1－2）
Applied study（2）
EDFI 302 （3）
MUS 099 （0）
NO OTHER COURSES MAY BE TAKEN DURING
THE PROJECT
Semester VI
Studio Piano（1）
MUCH 325 （offered spring only）（2）
Electives（in／out music）（5）
EDAS 409 （3）
MUSP 306 （2）
Large ensemble（1－2）
Group III requirement（3）
MUS 099 （0）
Fourth year（ 31 hours）
Semester VII
Student teaching（first 10 weeks）（10）
EDFI 402 （last 5 －6 weeks only）（3）
Group 11 requirement：
EDFI 408 （last 5－6 weeks only）（3）


## Semester VIII

Group il requirement
MUCH $233 / 4 / 5$ : Non-western (2)
Group IV requirement (3),
aroüp $V$ requirements (3).
ective (in/ out music as required) (7.)

## Clässroom Option-Keyboard

## Emphasis

First year ( $32-34$ hours)
Sêmesteri
MUEH 131\% (to 132 or 232 or Non-western) (4)
MUCH 141 (2)
ENG1120rSPCH:102 (3)
Applied stưdy (10 sem. hrs required) (2)
LEarge énsemble (ACápella or Collegiate.
Chorale) ( 5 sem hrss required) (1-2)
Woodwind or brass or guitar class (1)
MUED 154(1)
PEG100 (1)
MUS 099 (0)

## Semèster Il

MUCH 132 (4)
MUCH: 42
SPCH 102 or ENG 112
Applied study (2)
Large ensemble (1̀2)
Group: $V$ : ART 101 (3)
Woodwind or brass or guitar class (1)
Class voice or studio voice (1)
MUS O99 (O)
Students requing, remedial.or reyiew work in English (ENG summerterminordeory (MUCH-10) may need io four years
Second year (36-37 hours)
Semester ilf+,
MUCH 231 (3)
MUCH 241 (2)
UED 255 (offere dall only) (i)
UED 240 (3)
Smalle ensemble (1)
Apaplied study (2)
Woodwind ór brass or guitar class (1)
$\therefore$ PEG 100 (1)
Voice class or studio voice (1)
Elective (in/out of músic)" (3)
MUS 099 (0)
Seméster IV
MUCH232(2)
MUCH:242 (2)
Elective (in/out.music) MUSP 264 (1)
Group ill requirement (3)
MUCH 325 (offered spring only) (2)
Large ensemble (1-2) -
Applied study (2)
Voice class or stúdio voice (1)
-PSYC:201 (4):
MUD 099 (0)
Third year (33-35 houtrs)
Semester V
Group Il: MUCH 233/4/5 Non wester (2)
EDFI 302 (3)
MUSP 305 (2)
Appliedstiüdy (2)
Large ensemble (1-2)
Group ill requirement (3)
E. Elective (in /out music), (3)

MUS 099:(0)
Semester VI
Juinior Metthods Project in Music (spring only for clássroóm-ótion)
MUED 340:(9)
MUSP 306 (2)
fge ensemble: (1)
ctives (in out music) (2)
JAS 409 (3).
-MUS 099 (0)
NO OTHERCOÜRSES MAY BE TAKEN DURING
THE PROJECT

Fourth year (29 hours)
Semester VII
MUCH 236 (offered fall onty) (2)
MUED $451^{\prime}$ (offered fall only) (2)
Group IV requirement (3)
Group V ART 145 or 146 or THEA 347 (3)
Group V Lit: requirement (3)
Semesier VIII
Student teaching (last 10 , weeks) (10)
EDFI 402 (first 5 -6 weeks onily) (3)
Group II: EDFI 408 (first 5 - 6 weeks only) (3)

## Classroom Option-Vocal

## Emphasis

First year ( $32-34$ hoürs')
Semester 1
MUCH:131* (to 132 or 232 or Non-western) (4)
MUCH 141 (2)
ENG 112 or SPCH 102 (3)
Applied study ( 10 sem hrs required) (2):
Large ensemble (A Capella or Collegiate, Choiale) ( 5 sem. hrs. required) (1-2)
Woodwind or brass or guitar class (1)
MUED 150 (or 154) (-1)
PEG 100 (1)
MUS 099 (0)
Semester ill
MUCH 132 (4)
MUCH 142 (2)
SPCH 102 or ENG 1.12 (3)
Applied study.(2)
Large ensemble. (1-2)
Group V: ART 101 (3)
Woodwind or brass or guitar class (1)
MUED 151 (or. 154) (1)
MUS 099.(0).
*Students requiring remedial or review work in English (ENG -
110/111) or Music Theory (MUCH 110) may need 10 attend
summer term to complete all course work in tour years
Second year (34-36 hours)
Semester.III
MUCH 231 (3)
MUCH 241 (2)
MUED 254 or 255 (1 or 2)
MUED 240 (3)
Small ensemble (1)
Applied study (2)
Woodwind or brass or guitar class (1)
PEG 100 (1)
Elective (in/out of music) (3)
MUS 099:(0)
Semester 1 V
MUCH 232 (2)
MUH 242 (2).
MUED 256 or 257 (1)
Group III requirement (3)
MUCH 325 (offered spring only) (2):
Large ensemble (1-2)
Applied study (2)
PSYC 201 (4)
MUS 099 (0)
Third year (34-36 hours)
Semester $V$
Group il: MUCH $233 / 4 / 5$ : Non western (2):
Studio piano (1)
EDFI 302 (3).
MUSP 305 (2),
Applied study (2)
Large ensemble (1:2)
Group ill requirement (3)
Elective (in/out müsic) (3)
MUS 099.(0)

Semester VI
Junior Methods Project in Music (spring only for classroom option
MUED 340 (9)
MUSP 306 (2)
Large ensemble (1:2)
Electives (in/out music) (2)
EDAS 409 (3)
MUS 099 (0)
NO OTHER COURSES MAY BE TAKEN DURING
THE PROJECT

## Fourth year ( 30 hours)

Semester:VII
MUCH 236 (offered fall only*) (2)
MUED*451 (offered fall only) (2)
Group IV requuirement (3)
Group V: ART 145 or 146 or THEA 347 (3)
Elective (in/out music as required) (1)
Group $V$ literature requirement (3)
Sémester VIII
Siudent teaching.(last io weeks) (10)
EDFI 402. (first 5-6 weeks only) (3)
Group. I: EDFI 408 (first $5-6$ weeks only) (3)
*Spring alternative by permissioniof chair only.

## Instrumental - Keyboard <br> Emphasis

First year ( $31-33$ hours $)^{-}$
Semester 1
MUCH $131^{*}$ (to 132:0r2 232 or Non western) (4)
MUCH 141.(2)
ENG 112 or SPCH 102 (3)
Applied study ( 1.0 sem hrs :required) (2)
Large ensemble ( 5 ssem hrs required) ( $1-2$ )
MUED 154.(1)
Wind/percussion class (1)
PEG: $1000^{\circ}(1)$
MUS 099 (0)
Semester il
MUCH 132 (4)
MUCH 142 (2)
SPCH' 102 or ENG 112 (3)
Applied study (2)
Large ensemble (1,2):
Wind percussion class (1):
Group:V requirement (3)
MUS 099 (0)
*Student requiring remedial or review work in Engiish (ENG
$110 / 111$ ) or Music Theory (MUGCH-1 10) may need to attend
summer term' to complete all course work in four years

## Second year (35-36 hours)

Semester.ll
MUCH:231 (3)
MUCH 241:(2)
MUCH 236 (offered fall only) (2)
Group III réquirement (3)
MUED 251 '(offered fall only) (2)
Small ensemble (1)
Applied stuidy (2)
Wind/percussion class (1)
PEG 100 (1)
MUS 099 (0)

- Semester IV

MUCH 232 (2):
MUCH:242. (2)
MUCH 320 (2)
Elective (in/outmusic)
MUSP 264 (1)
MUED 240 (3)
Làrge ensemble ( $1-2$ )
Applied stúudy (2)
PSYC 201 (4)
Wind/percussion class.(1)
MUS 099 (0)

Thiro year (33-35 hours)
Semester V
Elective (in/out music) (3)
Applied study (2)
Wind/percussion class (1)
(Class) voice (1)
EDF'302 (3)
Large ensemble ( $1-2$ )
Group ill requirement (3)
MUSP 305 (2)
MUS 099 (0)
Semester VI
Jinior Methods Project in Music
MUED 340 (9)
MUSP 306 (2)
EDAS 409 (3)
Large ensemble (1)
Elective (in/out music) (2)
MUS 099 (0)
NO OTHER COURSES MAY BE TAKEN
DURING THE PROJECT
Fourth year (32 hours)
Semester VII
Student teaching (first 10 weeks) (10)
EDFI 402 (last $5-6$ weeks only) (3)
Group I: EDFI 408 (last 5-6 weeks only) (3)
Semester VIII
String class (2)
Elective (out of music) (2)
Group If: MUCH 233/4/5: Non-western (2)
Group $V$ requirements (3)
Grouo N requirement (3)
Electives (in/out music as required) (6)

## Instumental-Wind/String/Guitar Preussion Emphasis

Pifres year (32-34 hours)
Semester
MUCH $131^{*}$ to 132 or 232 or non-western) (4)
MUCH 141 (2)
ENG 122 or SPCH 102 (3)
Applied sludy ( 10 sem. hrs. required) (2)
Large ensemble ( 5 sem. hrs. required) (1-2)
MUED 150 (or 154) (1)
Wind/percussion class** (1)
Class voice (1)
MUS 099 (0)
Semester II
MUCH 132 (4)
MUCH 142 (2)
SPCH 102 or ENG 112 (3)
Applied study (2)
Large ensemble (1-2)
Wind percussion class (1)
MUED 151 (or 154) (1)
Group $V$ requirement (3)
MUS 099 (0)
*Studenis requiring remedial or review work in English (ENG 110/111) of Music Theory (MUCH 110) may need to attend summer term to complete all course work in four years.
**nitially. students should altempt to register for those instrument classes which are within the family of their major instrument
Second year (34-36 hours)
Semester II
MUCH 231 (3)
MUCH 241 (2)
MUCH 236 (offered fall only) (2)
Group ill requirement (MUED 240 for string majors) (3)
MUED 250 (or 251)
Small ensemble ( 1 )
Applied study (2)
Wind/percussion class (1)
PEG 100 (1)
MUS 099 (0)

Semester IV
MUCH 232 (2)
MUCH 242 (2)
MUCH 320 (MUED 180 for string majors) (2)
MUED 256 (or 257) (1)
MUED 240 (Group II requirement for string majors) (3)
Large ensemble (1-2)
Applied study (2)
PSYC 201 (4)
Wind/percussion class (1)
MUS 099 (0)

## Third year

Instrumental majors will be placed in the junior methods project in music (340) as follows:

1) String emphasis-fall only
2) Wind/percussion emphasis-University lab schools-fall only
3) Wind/percussion-all others-spring only
String Emphasis and Wind/percussion
Emphasis (Univ. lab schools)
Semester V
MUED 340 (9)
MUSP 305 (2)
EDFI 302 (3)
Large ensemble (1-2)
Applied study (2)
MUS 099 (0)
NO OTHER COURSES MAY BE TAKEN DURING
THE PROJECT
Semester VI
Elective (in/out music) (5)
Wind/percussion class (1)
PEG 100 (1)
EDAS 409 (3)
MUSP 306 (2)
Large ensemble (1-2)
Group ill requirement (3)
MUS 099 (0)
Wind/percussion Emphasis (all other school
assignments)

## Semester V

Applied study (2)
Wind/percussion class (1)
PEG 100 (1)
Class voice (1)
EDFI 302 (3)
MUSP 305 (2)
Large ensemble (1-2)
Group III requirement (3)
Elective (in/out music) (3)
MUS 099 (0)
Semester VI
MUED 340 (9)
MUSP 306 (2)
EDAS 409 (3)
Large ensemble (1)
Elective (in/out music) (2)
MUS 099 (0)
NO OTHER COURSES MAY BE TAKEN DURING
THE PROJECT
Fourth year (33 hours)
All Wind/percussion Majors
Semester VII
Student teaching (last 10 weeks) (10)
EDFI 402 (first 5-6 weeks) (3)
Group II: EDFI 408 (first 5-6 weeks) (3)
Semester VIII
String class (2)
Elective (out of music) (3)
Group II: MUCH 233/4/5: Non-western (2)
Group IV requirement (3)
Group $V$ requirements (3)
Electives (in/out music as required) (7)
String Majors

Semester VII
Orchestration (offered fall only) (2)
Group II: MUCH 233/4/5: Non-western (2)
Group IV requirement (3)
Group $V$ requirements ( 3 )
Elective (in/out music) (7)
Semester VIII
Student teaching (last 10 weeks) (10)
EDFI 402 (first 5-6 weeks only) (3)
Group II: EDFI 408 (first $5-6$ weeks only) (3)

## Music History and Literature

(courses coded MUCH) 1031 Musical Arts Center, 372-2181

## Admittance as a History and Literature Major

Students already majoring in other areas of music who have developed a strong interest in music history and literature and have demonstrated a high standard of academic achievement may apply to the chair of the Music Composition-History Department for acceptance as a major in music history and literature. Normally this is done at the end of the freshman or sophomore year. The application will be reviewed by the faculty of the department for acceptance or rejection.

## Collegium Musicum

The department maintains a collegium musicum as a training ground for performance practice and showcase for music nol usually performed by other traditional music ensembles. Ensemble credit is available in: Renaissance Ensemble, New Music Ensemble and Balinese Gamelan Ensemble. Participation in these ensembles by music history-literature majors beyond the required four hours is strongly encouraged.

## Keyboard Proficiency Requirement

Functional keyboard proficiency tesis I and Il are required. See Music Education: Func- . tional keyboard requirements, below; and course descriptions.

## Completion Requirements

Candidates for the bachelor's degree in music history and literature are required to submit papers which make contributions to the field. This is accomplished through
MUCH 406, Problems in Music History.

## DEGREE REQUIREMENTS

The Bachelor of Music degree in music history and literature requires 131 total credits, distributed as follows:
1.51 credit hours in general studies;
2. 48 credit hours in basic musicianship, including theory and performance;
3. 30 credit hours in advanced courses in music history and literature;
4. 2 credit hours in PEG 100.

For specifics consult the chair of the Department of Music Composition-History.

## General Education Requirements

Group I: Communication
Students must complete at leasì one course in written communication such as English 112 or the equivalent. Total: 3 hours.

## Group II: Foreign language and multicultural stúdies

tudents must complete at least 16 hours of ioreign language(s) (either French or German is recommended). The 16 hours can be two years of one language of a combination of two langauges. Students should consult with chair on language distribution. For students without previous foreign language training, election of GERM 100 is recommended If proficiency equivalent to 101-102 in the first lianguage or 101 in the second language can be established with the appropriate lanaguage department, then courses beyond this level may be taken. Total 16 hours.

## Group III:Mathematics and natural science

Students must complete at least two courses in science or mathemaics. Computer science-or acoustics is recommended Total: 6 hours.

## Group IV: Social sciences

Students must complete at least two courses selected from: anthropology, ECON GEOG, HIST, POLS, PSYC and SOC. Total: 6 hours

## Group V: Arts and humanities

Students must complete one course in ENG literature, one course in fine arts and one course in philosophy. Total: 12 hours. In
addition, each student must elect a sufficient number of courses selected from any of the five groups in consultation with the chair to leet the minimum total group requirements 49 hours.

## Music Requirements

All history majors are required to complete the following music courses Minimurn total: 7.8 hours.

## Music Core

Músic modules MUCH 131, $132,231,232$ 236 or 237 , and 233,234 or 235 ." Aural skills $141,142,241,242$ and H341. Minimum total: 27 hours.

## Music History Major Courses

MUCH 406, 407, music literature electives. Total 16 hours.

## Music Theory Courses

MUCH 315, 320 or $325, \mathrm{MUCH} 308,309$; electives 8: Total:' 14 hours.

## Music Perlormance

MUSP 305; 306, major instrument/voice 4 hours, large ensemble 4 hours, small ensemble 4 hours: Total: 16 hours.

## Piano

MUED 150; 151, 250, 251 (may be waived by proficiency exam). Keyboard proficiency levels I and II required. Total: 5 hours.
Completion Requirement (see above)

## Suggested Program

First year (33 hours)
MUCH 131, 132, 141, 142 (12)
MUED 150; 151 (2)
UCH 236 or 237 (2;3)
pplied music (2)
Large or small ensembles (2)
Group 1 requirements (3)
Group ill requirements (3)
Group $V$ requirements (5)
PEG 100 (2)

Second year ( 35 hours)
MUCH 231, 232, 241, 242 (9)
MUCH 233 or 234, or 235 (2)
Applied music (2)
MUED 250 and 251 (3)
Large or small ensemble (2)
Group IV requirements (3)
Group il requirements (8)
Group electives (6)
Third year (31 hours)
MUCH 315 or 320 (2)
MUCH 341 (2)
MUSP 305 and 306 (4)
Group il requirements (8)
Collegium Musicum (2)
Music history and literature electives (5)
Group electives (10)
Fourth year (29 hours)
MUCH 308 and 309 and 407 (6).
MUCH 406 (6)
Music history and literature electives (4)
Group. $V$ requirements (5)
Collegium Musicum (2)
Music theory electives (6).
The above is a sample program to be modified according to individual needs and capabilities with the approval of the chair of the music composition-history department.

## Performance Studies

(courses coded MUSP)

## 1031 Musical Arts Center, 372-2181

The Department of Performance Studies provides applied instruction and course work in performance for music majors and minors.
as well as for all qualified students of the
University. The department also administers the Bachelor of Music degree program in
performance with options as follows:
Church music (organ or voice)
Instrumental
Brass
Guitar (jazz emphasis)
Harp
Percussion
String
Woodwind
Keyboard
Harpsichord
Organ:
Piano Accompanying
Piano Literature
Piano Pedagogy.
Voice
Voice/Musical Theater
Woodwind specialist
The woodwind specialist option is a limited enrollment progräm. Acceptanice is based on an audition which is to be . scheduled at. the ènd of the student's first semester. Successful completion of the option requires high performance standards in the major woodwind instrument and a proficiency level in two other woodwind instruments equivalent to that of entering freshmen with these instruments as their major performing medium.

## Piano Proficiency

Applied keyboard instruction is required of all performance majors. A prerequisite to individual applied instruction is class piano MUED 151. Performance majors in brass, guitar, harp, percussion, strings, voice and woodwinds are required to demonstrate piano proficiency through:examination. The examination, which is to be scheduled through the keyboard coordinator during the final semester of applied piano study, consists of satisfactory performance of one Baroque, one classical and one Romantic or contemporary composition. One work is to be memorized:

## Admittance as a Periormance Major

A student is accepted for the Bachelor of Music degree program in performance by audition before the area faculty. The acceptance audition may be held at the time of the initial audition and pläcement examinations or during the course of degree study. It is highly recommended that the acceptance audition take place during the freshman year. Acceptance later than the freshman year may necessitate studies beyond the fourth year to meet repertoire and performance area standards.

Upon acceptance the student, in counsel with an adviser, develops a course of study based on degree requirements and the student's needs.

## Jury Examinations

Detailed information is available from the chair of the Department of Performance Studies.

## Completion Requirement: Recital

A full recital (or its equivalent) is required of all performance majors. This is usually given in the senior year. Permission to perform a recital is given by the appropriate performance studies faculty and is based upon the student's performance at a recital jury.
A students must be registered for applied study in the semester when the recital is presented.

## Ensembles

All performance majors are expected to participate in appropriate ensemble experiences each semester of registration, i.e., strings in orchestra; guitar in small ensembles; voice in choral ensembles or opera workshop; and piano in appropriate accompanying assignments.

## DEGREE REQUIREMENTS <br> General Education Requirements Group I: Communication

Students must complete English 112 or the equivalent. Total: 3 hours. English 111 (3) counts as an elective; not more than 6 hours of the English sequence counts toward the degree program. ENG 11.2, speech or another English.course should not be taken during the same semester.

## Group If: Forelgn language and muticultural stuxies

Students must complete a minimum of one course in foreign langauges and multicultural studies. Students in the voice option must take 8 credit hours of German and 8 credit hours of French. The freshman minimum sequence is GERM 101 and 102 and FREN 101 and 102 or the equivalent. Students in the voice/musical theater option must take 4 credit hours of German and 4 credit hours of French. The freshman minimum is GERM 101 and FREN 101 or the equivalent Nonwestern music can be used to complete the minimum requirement in this area.

## Group Ili: Natural sciences

Students must complete at least one course in natural sclence.

## Croup IV: Social science

Students must complete at least one course in social science.

## Croup V: Arte and humanities

Students must complete one course in ENG literature and one course in fine arts (ex-
cludmusic). Any ENG course 150 or above will meet the ENG literature requirement.

## Health and Physical Education

Students must complete 2 credit hours of PEG 100.

## Elective in or Out of Music

The exact number of required electives in or out of music will vary according to the student's program option. It should be noted that at least 25 percent of the total degree credit hours must be in general studies and that the minimum number of semester hours of credif for a baccalaureate degree is 122 .

## Recuired Music Core

Program options: church music, harpsichord, organ:
MUCH 131, 132, 231, 232, 141, 142, 241 and 242 (21)
Program options: instrumental, piano (accompanying, iterature, and pedagogy, voice, voice/musical theater, woodwind specialist.
Same as above with addition of MUCH 236 and 237 (5)
Some students may be required to enroll in MUCH 110 prior to MUCH 131 and 141.

## Tolai Pequirements

Note: Waived credits must be accounted for by registering for other courses of equal credit. More than 122 total hours minimum may be required for specific performance degree program options. Specific performance courses for the various program options are listed below along with a suggested order of courses over a four-year period.

Specific Requirements for Performance Program Options
Church Music Option (123 hours)
MUED 359 (2)
MUCH 403, 404,407 (6)
MUSP 100, 300, 277-79, 477-79 (8)
MUSP 261-461 (2)
MUSP 215-216 or 311-312 (4)
MUSP 272-263 (16)
MUSP 472-463 (4)
MUSP 305, 306, 396, 397, 415, 416 and 495 (14)
MUS 099 (0)
A performance studies major accepted to the church music program option is expected to participate in the music program of a church of his or her choice.

Instrumental Performance (124-125 hours)
Instrumental Option
320 Band Arranging OR 315 Orchestration (2)
318 Symphonic Literature (2)
408 Chamber Music Lit. (2)
305 Conducting (2)
453 OR 454 OR 458 Pedagogy (2)
238-39, 288-89, 438-39, 488-89, Large Ensemble (16)

100, 300 Small Ensemble (4)
261, 461 Applied Piano \& Proficiency** (2)
221, 231-35, 241-45, 281-85, Applied Instrument (32)

495 Recital
099 Concert Attendance
Harpsichord Option (123 hours)
100, 300 Baroque Ensemble (4)
308 Keyboard Harmony 1 (2)
309 Keyboard Harmony II (2)
315 Orchestration (2)
403 Counterpoint I (2)
404 Counterpoint II (2)
406 Problems in Music Hist. (3)
407 Performance Practice (2)
408 Chamber Music Lit. (2)
238-39, 277-79, 288-89, 438-39, 477-79, 488-89
Large Ensembles (4)
305 Conducting | (2)
306 Conducting II (2)
410 Harpsichord Repertoire (3)
411 Harpsichord Repertoire (3)
262, 462 Applied Harpsichord (30)
495 Recital (2)
099 Concert Attendance
Organ Performance (122 hours)
315 Orchestration (2)
403 Counterpoint 1 (2)
404 Counterpoint II (2)
407 Performance Practice (2)
305 Conducting | (2)
306 Conducting II (2)
215 Repertoire (2)
216 Repertoire (2)
396 Service Playing (2)
397 Service Playing (2)
415 Organ Construction (2)
459 Organ Pedagogy (2)
100, 300 Small Ensembles (4)
263, 463, Applied Organ (32)
238-39. 277-79, 288-89, 438-89, 477-79, 488-89,
Large Ensembles (4)
495 Recital (2)
099 Concert Attendance

Piano Accompanying Option (126-127)
315 Orchestration (2)
403 Counterpoint 1 (2)
407 Performance Practice (2)
408 Chamber Music Lit. (2)
410 Contemporary Music Pro-Seminar (2)
300 or 400 MUCH Literature (2)
160 Sightreading ( 1 )
210 Piano Repertoire (3)
2-1 Piano Repertoire (3)
264 Accom. Techniques (1)
2654 -hand class (1)
300 E Accomp. Practicum (2)
300G Ens. Mixed Chamber (2)
300 E or G Accomp. Practicum or Mixed Chamber (1)

360 Sightreading il (1)
361 Style \& Interpretation (1)
364 Accomp. Techniques (1)
367 Piano Pedagogy I (3)
466 Piano Ped. Practicum (1)
467 Piano Technology (1)
495 Recital (2)
261, 261 Applied Piano (32)
099 Concert Attendance
Piano - Literature Option (122-123)
315 Orchestration (2)
403 Counterpoint 1 (2)
407 Performance Practice (2)
408 Chamber Music Literature (2)
410 Contemporary Music Pro-Seminar (2)
3-0-400 MUCH Literature (2)
160 Sightreading | (1)
210 Piano Repertoire (3)
211 Piano Repertoire (3)
264 Accomp. Techniques (1)
300 E Accomp. Practicum (1)
300 G Ens. Mixed Chamber (2)
361 Style \& interpretation (1)
362 Style \& Interpretation (1)
367 Piano Ped. 1 (3)
466 Piano Ped. Practicum (1)
467 Piano Technology (1)
495 Recital (2)
261, 461 Applied Piano (32)
099 Concert Attendance (0)
Piano Pedagogy Option (125-126)
315 Orchestration (2)
403 Counterpoint 1 (2)
407 Performance Practice (2)
408 Chamber Music Lit. (2)
410 Contemporary Music Pro-Seminar (2)
300 or 400 MUCH Literature (2)
160 Sightreading | (1)
210 Piano Repertore (3)
211 Piano Repertoire (3)
264 Accomp. Tehcniques (1)
300 E Accomp. Practicum (1)
300G Ens. Mixed Chamber (1)
361 Style \& Interpretation (1)
367 Piano Pedagogy I (3)
368 Piano Pedagogy II (3)
466 Piano Ped. Practicum (3)
467 Piano Technology (1)
495 Recital (2)
261, 461 Applied Piano (32)
099 Concert Aitendance
Voice Option (124-125)
412 Opera Literature (2)
214 Italian Diction (2)
261, 461 Applied Piano (4)
272, 472 Applied Voice (30)
275 introduction to Opera (2)
305 Conducting I (2)
311 Vocal Repertoire (2)
312 Vocal Repertoire (2)
378 Opera Workshop (4)
100/300. 277-79, 477-79 Ensembles (6)
495 Recital (2)
099 Concert Attendance (0)

Voice/Musical Theater Option (125-126)
4120 peráliterature (2)
305 Conducting I (2):
31 Vocal Repertoire (2)
312 Vocal Repertoire (2).
214 Italian, Diction (2)
-272:472 Applied voice (22)
261,461A Applied Piäno:(4)

- 378 Opera Workstop (4)

100, 300,277-79 477-79: Ensembles (6)
4. 495 Recilital (2)
$\because$ Oral Interpretation Thea. 202)
Principles of Acting (Thea 241) (2)
$\Rightarrow$ Intermediate Acting (Thea: 344) (2):
Advanced Acting (Theaf 345) (2)
Hist of Mus: Thea (Thea 352) (3)
i Dance Modern Jazz Tap (2)
Modern Dance Techniques (3)

## 099 Concert Attëndance (0)

Woodwind Specialist Option ( $129-130$ )
$140^{\circ}$ Clarinet/ Saxophone (1)
2t. 145 Flute/iPerc̈ussion (flute only) (1)
146 Oboe/Bassoon (1)

* 320 Band Arranging or 315 Orchestration (2)
, 318. Symptonic Literature (2)
40 Chamber. Music Literature (2)
4305 Conducting (2):
$454^{\circ}$ Pedảgogỳ (4)


## Major 2 :

First minorits
Secondminort
, $238-39,28889$ 438-39 488-89; Largé Ensemble (16)

100:300 Small Ensemble (4)
$261{ }^{\circ} 461$ Apṕlied Priano \& Proficiency (2)
$241-45$ Applied Instrument (32) : Major 16
First minor 8 \& half recital or equivalent prof: ciency hearing
Second minori 8 \& half recitail or equivalent. proficiency hearing
495 Recital (majorinstrument) (2)
099 Concert Attendañce

## Suggested Programs

## Church music option



Semester V/I
MUS 099 (0)
MUCH 300 (Baroque Ens.) (1)
MUCH 309 (2)
MUSP 306 (2)
MUSP 462 (4)
Nalural science (3)
Elective (3)
Semester VII
MUCH 403 (2)
MUCH 406 (2)
MUSP 410 (3)
MUSP 462 (4)
MUCH 407 (2)

- Elective (1)

Semester VIII
MUCH 404 (2)
MUCH 408 (2)
MUSP 411 (3)
MUSP 462 (2)
MUSP 495 (2)
Elective (3)
Organ Periomance
Semester 1
MUCH 131 (4)
MUCH 141 (2)
MUSP 100 (1)
MUSP 263 (4)
MUSP 238-39, 277-79, 288-89 (1)
English literature (3)
MUS 099 (0)
PEG 100 (1)
Semester II
MUCH 132 (4)
MUCH 142 (2)
MUSP 100 (1)
MUSP 623 (4)
MUSP 238-39, 277-79, 288-89 (1)
ENG 112 (3)
MISS 099 (0)
PEG 100 (1)
Semester II
MUS 099 (0)
MUCH 231 (3)
MUCH 241 (2)
MUSP 100 (1)
MUSP 238-39, 277-79, 288-89 (1)
MUSP 263 (4)
Fine arts (3)
MUSP 215 (2)
Semester IV
MUCH 232 (2)
MUCH 242
MUSP 100
MUSP 238-39, 277-79, 288-89 (1)
MUSP 263 (4)
MUSP 216 (2)
MUS 099 (0)
Social science (3)
Semesterv
MUS 099 (0)
MUCH 315 (2)
MUSP 305 (2)
MUSP 463 (4)
Social science (3)
MUSP 396 (2)
Nalural science (3)
Semester VI
MUSP 306 (2)
MUS 099 (0)
MUSP 397 (2)
MUSP 463 (4)
Foreign fanguage/ multicultural studies (3)
Natural science (3)
MUSP 459 (2)

Semester VII
MUCH 403 (2)
MUCH 407 (2)
MUSP 415 (2)
Foreign langauge/
multicultural studies (3)
MUSP 463 (4)
Elective (2)
Semester Vili
MUCH 404 (2)
MUSP 463 (4)
MUSP 495 (2)
Elective (4)

## Piano Accompanying Option

Semester I
MUCH 131 (4)
MUCH 141 (2)
MUSP 160 (1)
MUSP 261 (4)
PEG 100 (1)
MUS 099 (0)
English literature (3)
Semester II
MUCH 132 (4)
MUCH 142 (2)
English 112 (3)
MUSP 261 (4)
PEG 100 (1)
MUS 099 (0)
Social science (3)
Semester III
MUS 099 (0)
MUCH 231 (3)
MUCH 241 (2)
MUCH 236 or 237 (2-3)
MUSP 261 (4)
MUSP 210 (3)
MUSP 264 (1)
Fine arts (3)
Semester IV
MUSP 300R (1)
MUCH 232 (2)
MUCH 242 (2)
MUSP 211 (3)
MUSP 265 (1)
MUSP 261 (4)
Social science (3)
MUS 099 (0)
MUSP 360 (1)
Semester $V$
MUS 099 (0)
MUCH 315 (2)
MUSP 300S (1)
MUSP 461 (4)
Natural science (3)
MUCH 300/400 literature (2)
MUSP 300R (1)
Foreign language/ multicultural studies (3)
Semester VI
MUS 099 (0)
MUSP 461 (4)
MUSP 300S (1)
MUSP 300R (1)
MUSP 361 (1)
MUSP 364 (1)
Foreign language/ multicultural studies (3)
Natural science (3)
Semester VII
MUSP 461 (4)
MUSP 367 (3)
MUSP 467 (1)
Elective (3)
MUSP 466 (1)
MUCH 403 (2)
MUCH 407 (2)

Semester VIII
MUSP 461 (4)
MUCH 408 (2)
MUCH 410 (2)
MUSP 495 (2)
Elective (3)

## Piano Literature Option

Semester I
MUCH 131 (4)
MUCH 141 (2)
MUS 099 (0)
MUSP 261 (4)
English literature (3)
MUSP 160 ( 1 )
PEG 100 (1)
Semester II
MUCH 132 (4)
MUCH 142 (2)
MUS 099 (0)
MUSP 261 (4)
ENG 112 (3)
PEG 100 (1)
Social science (3)
Semester III
MUCH 231 (3)
MUCH 241 (2)
MUCH 237 or 236 (2-3)
MUSP 261 (4)
MUSP 210 (3)
MUSP 264 (2)
MUS 099 (0)
Semester IV
MIS 099 (0)
MUCH 232 (2)
MUCH 242 (2)
MUSP 211 (3)
MUSP 300R (1)
MUSP 261 (4)
Social science (3)
Semester V
MUCH 315 (2)
$\mathrm{MUCH} 300-400$ literature (2)
MUSP 361 ( t )
MUSP 300 S (1)
MUSP 461 (4)
Social science (3)
Foreign language/ multicultural studies (3)
Semester VI
MUS 099 (0)
MUSP 362 (1)
MUSP 461 (4)
MUSP 300 S (1)
Fine arts (3)
Natural sciences (3)
Foreign language/ multicultural studies (3)
Semester VII
MUCH 403 (2)
MUCH 407 (2)
Natural science (3)
MUSP 367 (3)
MUSP 467 (1)
MUSP 461 (4)
Semester viII
MUCH 408 (2)
MUCH 410 (2)
MUSP 461 (4)
MUSP 466 (1)
MUSP 495 (2)
Elective (2)
Piano Pedagogy Option
Semester 1
MUCH 131 (4)
MUCH 141 (2)
MUSP 261 (4)
MUSP 160 (1)
PEG 100 (1)
English literature (3)
MUS 099 (0)


Semester IV.
MUCH 232 (2)
MUCH 242 (2)
MUSP 238-39, 288-89 (2)
MUSP 100 (1)
Applied (major) (2)
Applied (first minor) (2)
Applied (second minor) (2)
Natural science (3)
MUSP 261 and proficiency (1)
Semester V
MUCH 237 or 236 (2-3)
MUSP 305 (2)
MUSP 438-39, 488-89 (2)
MUCH 318 (2)
Applied (major) (2)
Applied (first minor,
plus half recital) (2)
Applied (second minor) (2)
MUSP 454 (first minor) (1)
MUS 099 (0)
Semester VI
MUS 099 (0)
MUCH 408 (2)
Natural Science (3)
MUSP 438-39, 488-89 (2)
Applied (major) (2)
Foreign language/
multicultural studies (3)
Appiied (second minor) (2)
Social Science (3)
Semester VII
MUSP 355 or 320 (2)
Foreign language/
multiculturat studies (3)
MUSP 438-39, 488-89 (2)
Applied (major) (2)
Applied (second minor plus
hall recital) (2)
MUSP 454 (second minor) (1)
Social science (3)
Semèster VIII
MUSP 454 (major) (2)
MUSP 438-39, 488-89 (2)
MUSP 495 (2)
Applied (major) (2)
Elective (6)


# COLLEGE OF TECHNOLOGY 

## Office of the Dean

Jerry Śtreichler, Dean, 204 Technology

- Building, 372-2436

John W. Sinn, Assistant Dean, 213
Technology Building, 372-2436
Office of Cooperative Education
Barry D. Piersol, Coordinator of Cooperative Education, 220 Technology Building, 372-2436
Office of Program Advisement
220 Technology Building, $372-2436$
Office of Graduate Studies
Career and Technology Education Graduäte Program Coordinator, Technology Building, 372-2436

## Departments

Technology Systems, Rod Colgan, Chair, 17 Technólogy.Building,:372-2436 isual Communication and Technology Education, Charles Spontelli, Chair, 219
Technology Building, 372-2436

## Goals

The foremost consideration in the College of Technology is to provide each student with a quality professional education and a strong general education component.

- Students acquire the competencies, attitudes and understandings to function as . qualified professionals in business, industry, government and education. The programs
- are based on the exciting and evolving dimensions of several specialties in industrial technology. The college's faculty accept and conscientiously contribute to the achievement of excellence in the cultural, : citizenship, communication and general. education goals of the University.

The college's goals and objectives and individual program objectives augment the University's mission statement and academic program goals. They contribute to 'the accomplishment of University objectives of (1) quality in instructional programs for the preparation of technologists and teachers of various levels of industrial education; (2).
: provide for better practical and theoretical understanding of cúrrent industrial technology; (3) emphasize the development Ind application of competencies, such as critical thinking, problem solving,
communication skills, career decision computation and mathematics; and (4) foster student understanding of other cultures, humanities, and of the social, the natural and the behavioral sciences. The mission of the College of Technology is carried out by students and faculty in

1. researching and testing ideas, methods and procedures to improve techniques of preparing personnel. This adds to the knowledge of industrial technology and of applied instructional and learning theory.
2. research and development in technical processes and materials to benefit the private sector, government and education.
3. undergraduate, graduate and continuing education programs which prepare, update and upgrade personnel for technical management positions in the private sector and government.
4. undergraduate, graduate and continuing education programs which prepare, update and upgrade personnel who serve at all levels in industrial education and industrial training.
5. undergraduate and graduate general education experiences which develop basic insights into the broad aspects of the technologies of industry. These involve problem-solving and creative processes, . . consideration of technological effects, and the development of skills and understanding which will allow people to adapt to or control the technological environment.
6. responding to the needs of the enterprise system to enhance the college's own capabilities. Faculty and students share specialized knowledge and skills with appropriate individuals, organizations and agencies at the local, state' and national levels.

## Special Opportunities <br> Special opportunities exist for students to

 become involved in a number of protessional organizations. Each -specialization in the College of Technology has a professional student organization.Student chapters of the following national or international organization's are operated by students who major in the college: Instrument Society of America, Society of Manufacturing Engineers, Associated General Contractors.

The college is also the international headquarters for Epsilon Pi Tau, the International Honorary Professional Fraternity for Education in-Technology Its Alpha Gamma Chapter serves students and other professionals who may be invited to membership on the basis of scholarship and leadership performance. The purpose of Epsilon Pi Tau is to recognize high academic achievement.

All technology specializations in the. College of Technology are fully accredited by the National Association of Industrial Technology. Students have the opportunity to become involved in the National Association of Industrial Technology as student members.

The industrial education programs are accredited by the National Council for the Accreditation of Teacher Education through the College of Education:

## College Matriculation

Students admitted to Bowling Green State University may register in the College of Technology when they have:

1. formally declared their intent to major in . the college.
2. registered with the college's Office of Program Advisement as a provisional member of a program or as an undecided major.
3. confered with an adviser assigned by the College of Technology.

## Program Matriculation

Full membership in a College of Technology program will become effective when a student has

1. completed at least 30 semester hours
2. attained an overall BGSU grade point average of at least a 2.0 for all programs.
3. completed cooperative education experience (TECH,289) for all programs except industrial education and industrial training.
4. met the additional specific requirements and application procedures that have been established by the various programs. İformation on specific program matriculation requirements is available in the College's Program Advisement Office.
5. Specific industrial education matriculation requiremients are listed on subsequent pages in this section of the catalog.

## Due Process for Academic Decisions

The College of Technology has established - spersific requirements for admission, program matriculation, graduation and cooperative education. Information pertaining to these requirements is available from the program advisement office. Questions regarding these requirements, standards or appeals procedures may be directed to the assistant dean of the College through the program advisement office.

Academic appeals may be initiated in the program advisement office where appeals are considered. A rationale for the appeal is required and documentation or other evidence may be attached. The written materials constituting the appeal are then reviewed by an appeals board which serves in an advisory capacity to the dean. Examples of academic appeals include: appeals for reinstatement after being dropped for academic reasons, appeals regarding the denial of admission to either the college or a program, and appeals to drop and/or change classes to or from S/U beyond the specified deadline. The dean of the college reserves the right to final decision.

In cases related to academic honesty or other disciplinary action, students are referred to the Student Code.

## Advising

The College of Technology faculty and administration are committed to an excellent program to communicate and advise students on academic matters. Faculty advisers are readily available. However, students should make appointments in a timely manner and prepare for their conferences with such items as tentative class schedules and questions as appropriate to the purpose of the meeting.

Toward this end, a staff including a program counselor and faculty adviser(s) is $10-$ cated in the program advisement office in 220 Technology Building. This staff is available to assist students with specific requirements, curriculum developments, career options, academic appeals procedures and general advisement.

After selecting a major within the college, the student is assigned to an adviser in the major area of study. Faculty advisers' teaching and advising schedules change every semester. At the beginning of each semester, faculty advisers post their advisement schedules in or near the program advisement office. The responsibility of contacting an adviser rests with the student. The programt advisement office supplements advising performed at the department level. Program revision, assistance with registration, matriculation and shifts in the demands of the marketplace require a close adviser/ student relationship.

## Intercollege Curricula and Dual Degrees

A candidate for a degree from the College of Technology who desires a second degree from a different school or college, or a second degree within the College of Technology may take work after graduation to complete degree requirements or qualify for the dual degree program prior to graduation. Students desiring a dual degree must:

1. secure permission of the dean(s) of the college(s) before the end of the junior year.
2. complete the requirements of the college(s) for the degree sought.
3. complete at least 20 hours of credit beyond the hours required for a single degree.
4. Note: No minors (see following pages).

## General Education Requirements

All College of Technology programs are in compliance with the University general education guidelines, as stated elsewhere in this catalog. Furthermore, general education components as integral parts of each College of Technology program as listed on the following pages.

## Bachelor of Science Degrees

The College of Technology offers the bachelor of science in technology and the bachelor of science in education. The programs leading to the bachelor of science in technology are designed for those students planning to seek a position in business or industry. Those programs leading to the bachelor of science in education are appropriate for students interested in teaching at junior or senior high schools or at technical colleges.

## BACHELOR OF SCIENCE IN TECHNOLOGY

Bachelor of science in technology programs are designed for the student interested in the application of arts and sciences to the technologies of industry. Career opportunities exist in a growing area of service. Emphasis is placed on technical processes and personnel leaderșhip with such employment classifications as: construction supervision, production management, technical sales, product design, quality control, technical service training, cost and systems analysis. These classifications are used in all segments of our enterprise system including the automotive, construction, pollution control, communications, glass and plastics industries. The University's geographical location is such that excellent cooperation exists with companies and government agencies requiring well-prepared individuals in technology.

A unique strength of this curriculum is its flexibility. During the second year of study, the student, in cooperation with the adviser, selects courses from the appropriate technology concentration, management, marketing, the physical sciences, communications and the humanities. Industrial experience is gained through the University-sponsored cooperative internship program which is required of all technology majors.

A candidate for the degree of bachelor of science in technology must meet the following requirements for graduation in addition to those listed on page

1. Complete 40 or more semester hours of credit in courses numbered 300 or above.
2. Complete all requirements for a major including prerequisites, laboratory experiences and other regulations.

## Aerotechnology

215 Technology Building, 372-2436
The aerotechnology concentration is designed to prepare students for responsible positions in aviation. The work is organized around three sequences entitled airport operations, aircraft maintenance and flight technology. The student should choose two of these sequences for a program.

Also, the program requires course work in areas of science and mathematics, general education and business. Supervised cooperative education experiences with or related to the sequences selected are required.

Students who have obtained an associatf degree in this or a closely related field may pursue a bachelor's degree in this technology by enrolling in the curriculum for $2+2$ transfer students. Refer to $2+2$ transfer statement following this section.
First year (30-33 hours)
ENG 112 (3)
SPCH 102 (3)
PEG 100 (2)
SOC 101 (3)
MATH (7-10)
DESN 104, TECH 152, ET 191 (9)
MFG 112 (3)
Second year (30-32 hours)
ENG 200 (3)
PSYC 201 (4)
TECH 289 (3-5)
CS 101 (3)
PHYS 201 or 202 (5)
CONS 235 (3)
AERT 342 (3)
AERT 240 (3)
VCT 203 (3)
Third year (33-35 hours)
MGMT 305 or 360 (3)
TECH 389 (3-5)
LEGS 301 (3)
Aerotechnology sequences by advisement (15)
Humanities elective (3)
Business elective (3)
Multicultural elective (3)
Fourth year (29-31 hours)
TECH 489 (3-5)
Business electives (3)
Aerotechnology sequences by advisement (15)
Electives (8)

## Construction echnology

211. Technology Building, 372-2436

This curriculum is designed to prepare per-

- soniel for technical positions on the construction site and in the office. The three options offered recognize the special requirements of residential, general (including commercial, industrial; and civil) and mechanical/electrical construction. Each option requires course work in the areas of science and mathematics, general education; "busiñess, industrial technology, construction job control, design, and methods and materials. Supervised, cooperative education experiences with a constructionrelated employer are required:

Students who have obtained an associate degree in this or closely related field may pursue a bachelor's degree in this tectinology by enrolling in the curriculum for $2+2$ transfer students. Refer to $2+2$ transfer statement following this section.
General construction option
First year (33-34 hours).
ENG 112.(3)
SPCH 102 (3)
SOC 101 (3)
PEG 100 (2)
$\because \quad$ Approved math sequence (7)
MFG 112 (3)
TECH 152 (3)
ESN 104 (3)
ONS 235 (3)
VCT 203 (3)
Second year (33-35 hours)
ENG. 200 (3)
4 PSYC 201" (4)
PHYS 201 (5)
CS 101 (3)
ET=191 (3)
Hymanities and art elective (3)
DESN 243,301 (6)
TECH 289.(3-5):
CONS 307 (3)
Third year (27-29 hours)
MGMT 305 or 360 (3)
LEGS 301 (3)
TECH 389 (3-5)
CONS 335 (3)
CONS 318, 437 (6)
`Construction option (6)
Múlticultural elective (3)
Fourth year (29-31, hours)
Approved business electives (6)
CONS 435, 439, 440 (9)
TECH 489 (3-5).
Construction option (6)
Electives (5).

## Mechanical/electrical option

First year (33-34 hours)
ENG.112 (3)
SPCH 102 (3)
SOC 101 (3)
PEG 100 (2)
Approved math sequence (7-8)
MFG 112 or 114.(3)-
ECH 152 (3)
ESN 104 (3)
CONS 235 (3)
VCT $203(3)$

Second year (30-32 hours)
:ENG 200 (3)
Humanities and ant elective (3)
PSYC 201 (4)
PHYS 201 (5)
CS 101 (3)
ET 191 (3)
DESN 243 and 301 (6)
TECH 289 (3-5)
Third year (27-29 hours)
MGMT 305 or 360 (3)
LEGS 301 (3)
TECH 389 (3-5)
CONS 335 (3)
Construction option (9)
CONS 318 (3)
Multic̣ultural elective (3)
Fourth year (32-34 hourss)
Approved business electives (6)
CONS 435, 439, 440 (9)
TECH 489 (3-5) -
Electives (5)
Construction option (9)
Residential option
First year (33-34 hours)
ENG 112 (3)
SPCH 102 (3)
SOC 101 (3)
PEG 100 (2)
Approved math electives ( $7: 8$ )
MFG 112 or 114 (3)
TECH 1.52 (3)
DESN 104 (3)
CONS 235 (3)
VCT 203 (3)
Second year (33-35 hours)
ENG 200 (3)
Humanities and art elective (3)
PSYC 201 (4)
PHYS 201 (5)
CS 101 (3)
ET 191 (3)
DESN 243 and 301 (6)
TECH 289 (3-5)
CONS 307 (3)
Third yèar (30:32 hours)
MGMT 305 or 360 (3)
LEGS 301 (3)
TECH 389 (3-5).
Multicultural elective (3)
CONS 335 (3)
CONS 306 and 318 (6)
Construction option (12)
Fourth year (26-28 hours)
Approved business electives (6)
CONS 435, 439, 440 (9)
TECH 489 (3-5)
Electives (5)
CONS 406 (3)

## Design Technology

218 Technology Building, 372-2436
This program involves the efficient application of arts, sciences, technology and business to the process of design in industry The arts involve the development of communicative working drawings, renderings and models. The scientific knowledge-re"quired includes a basic understanding of mathematics, physics and computer science: Computer-aided design principles and applications is an integral part of the program. The technology of manufacturing and construction and selected courses in business complement and complete the design program. An important component of this
technology curriculum is a cooperative education experience in a design or designrelated position in industry which is supervised by University faculty
Students who have obtained an' associate degree in an area of design technology or a closely related field may pursue a bachelor's' degree in this technology by enrolling in the curriculum for $2+2$ transfer students. Refer to $2+2$ transfer statement fol:: lowing this section:

## Architectural/environmental design option

This technology prepares students to deal with the architectural designs associated with the exterior and interior of such buildings as residences, schools and municipal projects.
First year (32 hours)
ENG 112 (3)
$\because$ : SOC 101 (3)
TECH 152 (3)
ART 102 and 103 (6)
*Arch./EnV. concentration (3)
PEG 100 (2)
SPCH 102 (3)

- DESN 104 and VCT 203 (6) .

MFG 112 (3)
CS 101 (3)
Second year (33-36 hours)
PHYS 201' or science elective (5)
ENG literature (3)
PSYC 201 (4)

- DESN 204 (3)

ET 191 and CONS 235 (6)
TECH 289 (3-5)
*Arch. /Env concentration (3)
TECH 121 or MAT.H 124 (3-4)
Electives (3)
Third year (29-31 hours)
TECH 389 (3-5)
. PHYS 202-(5)
$\therefore$ *Technical electives (5).
ENG 388.(3)
Approved business electives (6)
*Arch./Env. concentration (3)
Electives (3)
Fourth year (30-32 hours)
-TECH 489.(3-5)
*Arch:/Env: concentration (15)
*Techinical electives (6)
Business èlectives (6)

* Courses for the architectural/environmental design concentration and téchnical electives are derived from the following offerings:


## Arch./Env. required courses

CONS 235, 307, 439
DESN 301, 450, 404
ART 213,313

## Technical elećtives

DESN 305 and 436
GEOG 321
VCT 203
HOEC 319
TECH 489
ART 112 (3)
Other TECH /ART courses by advisement:

## Mechanical design option

This technology prepares the student to design tools and machines for manufacturing processes, and to deal with the practical aspects of generation and transmission of heat and fluid power.
First year (32 hours)
ENG 112 (3)
SOC 101 (3)
ART 102 and 103 (6)
MFG 112 (3)
TECH 152 (3)
PEG. 100 (2)
SPCH 102 (3)
DESN 104 and VCT 203 (6)
CS 101 (3)
Second year (31-33 hours)
ENG literature elective (3)
PSYC 201 (4)
ET 191 and CONS 235 (6)
TECH 289 (3-5)
*Mechanical design concentration (3)
PHYS 201 (5)
Approved MATH sequence (7).
Third year (28-30 hours)
TECH 389 (3-5)
PHYS 202 (5)
"Mechanical design concentration (8)
ENG 488 (3)
Approved MATH sequence (4)
Elective (5)
Fourth year (31-33 hours)
TECH 489 (3.5)
**Mechánical design concentration (10)
**Approved technical electives (12)
Approved business electives (6)
*Courses for the mechanical design concentration and technical electives are derived from the following offerings:

## Mechanical design required courses

DESN 304. 455 and 404
ET 347 and 441
TECH 323 and 223
MFG 338 and 426

## Technical electives by advisement

MFG 214; 311, ET 291
TECH 489 and $391,{ }^{\circ}$ CONS 337 and DESN 490 Other technical courses by advisement

## Product design specialization

This technology involves the design of products with the aid of technology and art. The program prepares the student to develop creative solutions to three dimensional problems involving aesthetics, materials, manufacturing processes and human factors. This is a cooperative program between the College of Technology and the School Art.
First year (32 hours)
ENG 112 (3)
PEG 100 (?)
ART 102 and 103.(6)
MFG 112 or 114 (3)
TECH 152 (3)
SOC 101 (3)

- SPCH 102 (3)

CS 101 (3)
DESN 104 and VCT 203 (6)
Second year (33-35 hours)
PHYS 201 or science elective (5)
ENG literature elective (3)
PSYC 201 (4).
TECH 121 or MATH 124 (3-4)
Approved business elective (3)
-Product design specialization (3)
CONS 235 and ET 191 (6)
TECH 289 (3-5)
Elective (3)

Third year (33-35 hours)
TECH 389 (3-5)
PHYS 202 (5)
*Product-design specialization (10)
"Technical electives (6)
ENG 488 (3)
Elective (3)
Approved business elective (3)
Fourth year (29-31 hours)
TECH 489 (3-5)

- Product désign specialization (8)

Technical electives (6)
Business electives' (6)
Electives (6)
*Courses for the product design specializa-
tion and technical electives are derived
from the following offerings
Product design required courses
ART 112, 211, 212, 313, 419
ART 416,418
DESN 304, 404, 243 and 204

## Technical electives

ART 211 or 418
DESN 404, 305, MFG 424
TECH and ART courses by advisement

## Other programs

Three other design specializations are available: graphic design and environmental design in the School of Art and interior design in the Department of Home Economics.

## Electronic Technology

210 Technology Building, 372-2436
Electronic technology is a comprehensive study of the diverse areas of electronics such as circuits, electronic devices (including microprocessors), computer hardware and interfacing, electric motors, instrumentation, fiber optics and electronic communications systems. Emphasis is placed on the practical application of physics, mathematics and computer science to the study of electronics. An emphasis can be taken indigital electronics and computer systems, instrümentation and control or electronic communication. This knowledge is blended with a core study of manufacturing, design, construction, business and general education to develop the whole person as well as flexibility for career responsibilities and advancement. An important component of this technology curriculum is a cooperative education program in industry which is supervised by University faculty.

Students who have obtained an associate degree in this or a closely related field may pursue a bachelor's degree in this technology by enrolling in the curriculum for $2+2$. transfer students. Refer to $2+2$ transfer .statement following, this section.
First year (31-33 hours)
ENG 112 (3)
Humanities and art elective (3)
Approved math electives (8-10)
PEG 100 (2)
DESN 104 (3)
MFG 112 (3)
TECH. 152 (3)
ET 191 (3)
Multicultural elective (3)

Second year ( $31-33$ hours)
CS 101 (3)
ECON 200 or 202 (3)
ENG 200 (3)
SPCH 102 (3)
VCT 203 (3)
TECH 289 (3-5)
PHYS 201 (5)
ET 240 and 241 (8)

- Third year (29-31 hours)

TECH 389 (3-5)
PHYS 201 (4)
Electronic concentration (3)
Approved business elective (6)
ET 300, 358, 441 (10)
CONS 235 (3)
Fourth year (27-31 hours)
TECH 489 (3-5)
Approved business electives (6)
ET 441, 443, 453 (9)
Electronic concentration (6)
Other electives (3-5)

## Industrial Training <br> Technology

## 217. Technology Building, 372-2436

industrial trainer preparation is an interdisciplinary program of studies consisting of a block of course work in industrial technology' instruction strategies, related social sciences and management. The. combination of:practical/laboratory studies; applied disciplines and actual work experience (cooperative education) will enable the graduale to function confidently and effectively in the training role.

Students who have oblained an
associate degree in this or closely related field may pursue a bachelor's degree in this technology by enrolling in the curriculum for $2+2$ transter students. Refer to $2+2$ transfer stảtement following this section.

First year (32-34 hours)
ENG 112 (3)
PEG (2 activities) (2)
ENG 200 (3)
SPCH 102 (3).
DESN 104 (3)
MFG 112 (3)
TECH 152 (3)
MATH Requirement (3-5)
ET $191^{\prime}$ (3)
VCT 203 (3)
CONS 235 (3)
Second year (32-35 hours)
PSYC (4)
PHYS 201 or CHEM 115 (4-5)
CS 10.1 or (3)
ECON 200 or 202 (3)
VCT $208{ }^{\circ}(3)$
DESN 204 (3)
IE 252 (3)
Concentration (6)
TECH 289 (3-5)
T̀hird year ( $30-32$ hours)
EDFI 302 (3)
MGMT 305 (3)
IE 352 (3)
VCT 282 (3)
SOC SCI Electives (3)
TECH 389 (3-5)
Concentration (6)
SOC 101 (3)
HUMAN \& ART Elective (3).

Fourth year ( 30 hours)
Business Electives (6)
NG 388 (3)
428 (3)
LEM 455 (3)
EDFI 402 (3).
TECH 489 (5)
VCT 466 (3)
Multicultural Elective (3)
Elective (1)

## Manufacturing Technology

210 Technology Building, 372-2436
This field of study draws upon the principles of mathematics and the physical sciences and applies them to industrial problems related to mánufacturing systems. An understanding of the computer and its use in de-: signing, monitoring and contröling 'manufacturing processes, which' includes robots and automated work cells, is also an important part of this program. In addition to these technical studies, the curriculum offers excellent opportunities for studies in management and industrial psychology: Three options are offered under this specialization: mänufacturing, industrial environment tech-' nology, and physical plant and energy utilization technology. An important component of this tectinology curriculum is a cooperative education experiences in industry which is University supervised.
Students who have obtained an associate egree in this or a closely related area may pursue a:bachelor's degree in this technology by enrolling in the curriculum for $2+2$
transfer students. Refer to $2+2$ trañsfer : statement following, this section.

## Manufacturing option

First year' 33 hours)
ENG 112 (3)
SOC 101 (3)
SPCH 102 (3)
DESN 104 (3)
MFG 112 and 114 (3)
TECH 152 and ET: 191 (6)
ENG literature elective (3)
VCT. 203 (3)
STAT 200 (3)
Second year (31-34 hours)
CS 101 (3)
PHYSZ201 (5).
DESN 204 and 243 (6)
MFG214 (3)
MATH requirement (3-4)
TECH 289 (3-5)
Multicultural elective (3)
ECON 200.(3)
PEG 100 (2)
Third year (31-35 hours)
IPCO 306 or 307 (3)
TECH 389 (3-5)

- Math requirement (4-6)
- CONS 235 (3)

MFG 329 (3)
MFG 311 (3)
Business'electives (6) lanufacturing:electives (6) Fourth year (30-32 hours) ENG 488 (3)
MFG 426, 427 and 338 (9)
Other electives (3)
Business electives (6)
Manutacturing electives (6)
TECH 489 (3-5)

## Industrial environment technology option

This program consists of studies in indus-
trial technology, business and the sciences:
Technical problem solving in manufactur-
ing, instrumentation and process control gives students an appreciation of industrial production practices; while studies in business emphasize consideration of the organizational, legal and financial principles involved. The sciences, primarily chemistry and biology,offer students the opportunity to develop an understanding of the chemical nature of pollutants and their effect on the ecological system.
First year (31-33 hours)
ENG 112 (2)
BIOL 204 (5)
CHEM 125 (5):
DESN 104 (3)
TECH 152 (3)
SPCH 102 (3)
MFG 112 (3)
MATH requirement (3-5)
SOC 101 (3)
Second year ( $31-35$ hours)
CS 101 (3)
BIOL 205 (5)
MFG 114 (3)
ET 191 (3)
CHEM 126'(5)
MFG 214 (3)
MATH requirement (4-5)
.PEG 100 (2)
TECH 289 (3-5)
Third year (31-33 hours)
MGMT 305 (3)
ENG 200 (3)
CHEM 306 (4)
CONS 235:(3)
:ECON 200 (3)
TECH 389 (3-5)
TECH 391 (3)
TECH concentration elective (3)
STAT 200 (3)
VCT 203 (3)
Fourth year (29-31 hours)
LEGS 301 (3)
TECH 489 (3-5)
ENVT 421 (3)
MFG 424 (3)
TECH concentration elective (9)
Multicultural elective (3)
Elective (2)
LEGS 431 (3)

## Physical plant and energy utilization option

The energy utilization technologist may be employed in commercial or industrial areas and be responsible for efficient, proper and economical use of mechanical, electrical, thermal, nuclear, chemical and radiant sources of energy. These are applied to the production, processing and transportation of goods and materials; and the heating, cooling and ventilating of physical plants.

First year (29-31 hours)
ENG 112 (3)
PEG 100 (2)
MATH requirement (3-5)
MFG 112 (3)
SPCH 102 (3)
ET 191 (3)
DESN 104 (3)
TECH 152 (3)
ENG 200 (3)
BIOL 101 (3)
Second year (32-35 hours)
ECON 200 or 202 (3)
CS 101 (3)
PHYS 201 (5)
CONS 235 (3)
CHEM 125 or 135 (5)
MATH requirement ( $4-5$ )
TECH 289. (3-5)
STAT 200 (3)
Multicultural elective (3)
Third year (31-33 hours)
MGMT 300 (3):
DESN 301 (3)
CONS 337 (3)
VCT 203"(3)
Physical plant or énergy utilization option (12)
TECH 389 (3-5)
PSYC 201: (4).
Fourth year (30-32 hours)
Business electives. (6)
ENG 388.(3)
DESN 436 (3)
-MGMT $305 .(3)=$
ET 357 (3):
Physical plant or energy utilization option (9) .
TECH 489 (3-5)

## Visual Communication Technology

215 Tecthology Building, 372-2436 The visual communication technology pro-: gram prepares stúdents for media production, training, sales and management positions within the communication industry. These careers require general and specific technical competencies in design, printing, television, film, display and photography
With help from an adviser, each student selects in the junior year an occupational cluster for specialization from numerous career options. The total program proceeds through a framework of analyzing and applying the many methods of creating, reproducing and distribüting visual communication materials. Students ultimately combine concepts, theories and principles with critical and creative-technical problem solving abilities to generate solutions for visual communicatiọn problems.

By developing the ability to solve commünication problems, students will be prepared for súch technological production and manägement positions as advertising production, graphic design, commercial and industrial photography, motion picture and television graphics, múltimedia production, printing and publishing plant control and similar occupations:

The occupational options are chosen individually by each student with the assistance of an adviser. The occupational clusters are display production, display marketing/sales, display management, photographic production, photographic marketing/sales, photographic management, photographic training, print production, print marketing/sales, print management, print training, film production, film marketing/ sales, film management, film training, televi$\therefore$ sion production, television marketing/sales, television management, television training, industrial media specialist, visual communications generalist.

Students who have obtained an associate degree in an allied communication area may pursue a bachelor's degree in visual communication technology by enrolling in the curriculum for $2+2$ transfer students. Refer to $2+2$ transfer statement following this section.
First year (33-36 hours)
TECH 142 (3)
VCT 203 (3)
ENG 112 (3)
SPCH 102 (3)
SOC 101 (3)
MATH requirement (3-5)
PHYS 201 or CHEM 115 (4-5)
PEG 100 (2)
Humanities and art elective (3)
ART 101 or 102 (3)
DESN 104 (3)
Second year (31-33 hours)
PSYC 201 (4)
CS 100 (3)
ECON 200 or 202 (3)
RTVF 263 (4)
RTVF 255 (3)
ART 211 (3)
VCT 208 (3)
VCT 282 (3)
Science elective (2-5)
TECH 289 (3-5)
Third year (33-35 hours)
VCT 399 (3)
MKT 300 (3)
VCT cluster (i5)
MFG 112 (3)
CONS 235 (3)
ET 191 (3)
TECH 389 (3-5)
Fourth year (25-27 hours)
VCT cluster (12)
VCT 467 (3)
MGMT 305 (3)
Multicultural elective (3)
TECH 489 (3-5)
Electives (1)

## Curriculum for 2+2 Transfer Students in Technology Programs

208 Technology Building, 372-2436
For students who have earned an associate degree in an engineering or related technology from a regionally or Ohio Board of Regents accredited post-secondary institution, the upper-division program (junior and senior years) is designed by the student and an adviser in one of the technology programs offered.

At least 65 hours must be earned at Bowling Green. After analysis of the student's credentials, appropriate courses are selected by the student and adviser to best fulfill career objectives.

## BACHELOR OF SCIENCE IN EDUCATION

The College of Technology offers several programs in industrial education and technology which lead to the bachelor of science in education. These programs include several options and minors.
Professional education and general education requirements are specified elsewhere in this catalog.

For admittance to the Bachelor of Science in Education Program the student must

1. meet College of Education program matriculation requirements.
2. complete at least 30 semester hours including at least 12 hours within the College of Technology (at least 9 hours of technical core courses).
3. attain a 2.5 GPA for all courses in the College of Technology.
4. submit recommendations from professionals along with a 500 -word scholarly statement on career choice and goals.

## Industrial Education and Technology

214 Technology Building, 372-2436
Major - Industrial Arts
(meets special certification, kindergartentwelfth grade)
First year (31 hours)
ET 191 (3)
ENG 112 (3)
SPCH 102 (3)
DESN 104 (3)
MFG 112 (3)
EDFI 202 or EDCI 202 (2)
TECH 121, 152 (6)
PEG 100 (2)
ENG literature (3)
CONS 235 (3)
Second year ( $31-33$ hours)
PHYS 201 or CHEM 115 by advisement (4-5)
CS 101 or 103 (3)
PSYC 201 (4)
VCT 203 (3)
MFG 323 (3)
DESN 204 (3)
MFG 114 (3)
IE 252 (3)
TECH 391 ( 3 )
Humanities and art elective (2-3)
Third year ( 33 hours)
ECON 200 or 202 (3)
IE 352 and 462 (6)
TECH electives ( 6 )
EDFI 302, 402 (6)
MFG 311 (3)
ET 357 (3)
CONS 306 (3)
Multicultural elective (3)

Fourth year (32 hours)
EDFI 408 (2)
EDAS 409 (3)
Student teaching (10)
IE 447 and 449 (6)
TECH electives (5) (Sugg. MFG 424)
Social science elective (3)
Elective (3)
Minor - Industrial Arts
(meets high school cerlification)
( $36-38$ hours)
One methods course by advisement (3-5)
DESN 104 and 204 (6)
MFG 112, 114, 214, and 323 (12)
ET 191 (3)
VCT 203 (3)
CONS 235 and 306 (6)
TECH 152 (3)

## Major - Vocational-Industrial <br> Education

(meets high school certification)
First year ( 34 hours)
ENG 112 (3)
SPCH 102 (3)
DESN 104 (3)
MFG 112 (3)
TECH 152 (3)
EDCI 202 or EDFI 202 (2)
PEG 100 (2)
TECH concentration (6)
CONS 235 (3
ENG literature (3)
ET 191 (3)
Second year (31-35 hours)
PHYS 201 or CHEM 115 (4-5) by advisement
VCT 203 (3)
TECH concentration (3)
IE 252 (3)
TECH 289 (3-5)
TECH 121 (3)
PSYC 201 (4)
CS 101 or 103 (3)
Social science elective (3)
Third year (32-33 hours)
ECON 200 or 202 (3)
EDFI 302 (3)
IE 352 (3)
IE 470 (3)
IE 447 (3)
Technology concentration by advisement (9)
TECH 389 (3-5)
Humanities and arts elective (2-3)
Multicultural elective (3)
Fourth year (32-34 hours)
EDFI 404 and 408 (5)
Student teaching (10)
TECH 489 (3-5)
IE 449 (3)
EDAS 409 (3)
TECH 490 (2)
TECH concentration (6)
" Upper-division students may arrange a minor program with
300- and 400 -level courses

## Major - Technical College

## Teaching

(meets high school certification in indus-
trial arts and qualifications for coordinator
of cooperative education program)
First year ( 32 hours)
ENG 112 (3)
SPCH 102 (3)
PHYS 201 (5)
PHYS 202 (5)
PEG 100 (2)
EDCI 202 or EDFI 202 (2)
MFG 112 (3)
DESN 104 (3)
TECH 152 and ET 191 (6)

Second year:(33-38 hours).
PSYC 201 (4)
CT 203 (3).
ESN 243:(3)
490 (2):
CONS 235 (3)
IE 252 (3).
TECH:289 (3:5)
ENG literature (3)
CS 101 (3)
MATH elective $(35)$,
Humánities änd arts elective (23)
Techinology concentration (3)
Third year ( $30-32$ hours)
ECON 200\% or 202(3)-
Technology concentration by advisement. (12)
EDEI 302 (3)
IE 352 (3)
Social science elective (3)
EDFI' 402: (3)
TECH 389 (3.5)
Fourthyear ( $33-35$ hours)
EDFF 408 (2).
Student teaching (10)
EDAS 409 (3)
TECH 489 (3.5)
IE $449(3)$ ?
TECH concéntrátion by advisement (9)
Multicútural elective (3)

## Major - Industrial Arts/Special Needs Vocational Education

(meets high school centification in industrial atts and OWE $/$ OWA centification)
First vear (31 hours)
ENG $112(3)$
PEG 100 (2)
CH 102 (3) IG liferatufe (3) OFI 202 or EDCI $202^{\circ}(2)$ E 3 DESN 104 (3)
MFG112(3)
TECH 121,152 and ET $191^{-1}(9)$
CONS 235 (3)
Second year ( $34=36$ hours)
PHYS 201 or CHEM 115 (4-5) by advisement
VCT 203(3)
DESN 204 (3)
MEG 214 (3)
IE 252 (3)
Technology elective (3):
PSYC 201 (4)
$\left.\operatorname{CS}^{401} 13\right)^{-\pi}$
Social science elective (3)
ECON 200 or 202 (3)
Humanities and ants elective (2-3)
Third year (33 hours)
EDFI 302 (3)
EDSE 431 and 433 (5)
ET 357 and CONS 306 (6)
EDCI 360 and EDFI 412 and EDFI 402 (7)
BUSE 370 and $470 \%(6)$
IE 35?:(3)
MFG 311 (3)
Fourth year ( 34 - 35 thours)
EDFI 408 (2):
Student teeaching: $(10)$
BUSE 462 (2)
IE 447 and 449 (6)
TECH 391 and MFG 323 (6)
EDAS 409 (3)
Elective-(3)
Multicultural elective (3)

## Major - Junior and Senior Transfer Students Wishing to Teach Industrial-Technical Subjects

The student who presents an associatede gree with technical specialization may receive full credit for the degree if it is tecthi cally compatible with one or more of the three options described below and was awarded by an institution approved by the Board of Regents or regionally accredited: These program options exist for persons. who want to teach in the subject matter of their associate degree spécialization.
Option A-industrial arts leaching
A student who completes the work in the fol lowing outline is qualified to teach industrial arts in elementary middle, and junior and senior high schools"and receives an Ohio Provisional Special Certificate (kindergarten twelfth grade) in the field
Third year ( 36 hours):
EDCI 202 or EDFI'202 (2):
EDFI 302 (3)
TECH 152 (3)
IE 252and 352 (6)
VCT 203 or LEM 301 (3)
PSYC 201 (4)
Technology upper-division corre by advisement (15)
Fourth year (31 hours)
EDFI 402 and 408 (5).
Student teaching (10)
EDAS 409 (3)
IE 449 and 447 (6)
Technology electivés (4)
IE 462:(3)
Option B - vocational-industrial teaching
Depending upon the technical specialty and the nature of cooperative internships, students may be eligible to receive Ohio Pro visionnal Certificateś, ie., a provisional certificate as a trade and industrial education teacher, or provisional certificates in other specific vocational"areas.
Third year (32 hours)
EDFI 302 (3)
TECH -152, 289 and 389 (9)
IE 252 and 352 (6)
VCT 203 or LEM 301 (3)
EDCI 202 or EDFI 202 (2)
MGMT 305 (3)
Technology electives by àdvisement (6)
fourth year ( 38 hours)
EDFI 402 and 408 (5)
Student teaching (10)
IE-447 and 470 (6)
EDAS 409 (3)
TECH 389 and IE 449 (6)
Technology electives by advisement (8)

## Option C - technical college teaching

No-centificates are required for teachers of technical subjects on the post-high school level However, those interested in this pro fessional work must complete, with some options, the course work listed in option B. and upon completion of the bachelor's degree requirements are urged to enroll imme diately in a Master of Education program that combines post-high school level teach -ing, cooperative internships and formal course work

## Vocational Work Experience



## FIRELANDS COLLEGE

Telephone (419) 433-5560
William R.McGraw, dean, 122 East Building
Paúl'R: Shilling, assistant dean, 112 Eäst Building
Catherine Dyer director of student services, 139 North Building
John" P Hartung, director of admissions and registration; 114 East Building
Paul R. Shilling, acting coordinator for community services, 101 East Building
Hölly R. Hilborn, public relations, coordinator, 110 East Building
Charles C Stocker business manager. 106 East Building
Terrence Bähn, coordinatòr of program advisement, 136 North Building
H: Kreig Elicker assistant director of admiśsions, 114 Eást Building
Joseph J O'Loughiin III, director of. computer services, 233 North Building

## The College

Firelands College is a state-assisted; regional campus and college of Bowling Green State University It is located at the' Rye Beach Road intersection of State Route 2 and US, Route 6 in Huron, Ohio. Firelands College offers a variety of prebaccalaureate and two-year associate degree programs and extension and lifelong learning courses. A major emptiasis at Firelands is the offering of university instruction by a qualified university faculty. Firelands combines university instruction with an academic climate and size conducive to close contact and interaction among students, faculty and the community

The college strives to orient itseff to the student as an individual and is studentoriented and endeavors to provide the academic atmosphere, the human association and the discipline vital to his or her total development.

Firelands College interprets its mission through activities related to its students, to the community it serves and to its faculty and staff. It recógnizes, through itss activities, the need'for open interaction among all facets of the college community.

## Firelands library

The Firelands College Library functions:as an integral part of the educational process. The collection of more than 32,000 volumes, 225 current periodical and newspáper titles and a wide variety of audio-visual materials. enhances the instructional program and provides additional resources for use by members of the community. The collections of the University Libraries in Bowling Green are also made available to Firelands College students through a regular shuttle service

The library handbook, revised annually, contains specific information on the services of the library and instructional media center. as well as a general'introduction to the use of libráry research tools. Instruction in library usage is offered throughout the academic year

## Admissions

The procedure for admission to Bowling Green State University is described on page 20 of this catalog. Students seeking admis sion to Firelands College should follow the same procedure.

For specific information, tours or an admissions interview; contact the Firelands Admissions' Office, 901 Rye Beach Road Huron, Ohio 44839

## Housing

A wide variety of reasonably priced housing. options is available throughout the Firelands area. The Firelands Admissions Office main tains a list of available housing which includes rooms, apartments, houses and motels.

Because the population in the area increases in the summer; many housing op-tions in the local community are available at very reasonable rates during the academic year. Students should, however, plan to provide their own transportation to and from Firelands College. For further information or a complete höusing list, contact the Firelands Admissions Office

## Registration

The Office of Registration at'Firelands' is re sponsible for the coordination of all registration and bursar-related functions for Fire"lands students" Student concerns relative to academićc policies, registration for classes, payment of fees, and academic records should be addressed to this office, 114 East Building.

## Computer Services

Firelands College's access to large-scalecomputers on the main campus as well as local.on-site mini-and micro-computers provides students, faculty, and staff with diverse computing capabilities. Via a remote job entry facility and interactive terminals, Firelands has access to software on the IBM 4341 and the DEC System 2060 on the main campus Locally, various microcomputers, located in the computer science and word processing laboratories, are available for instructional use and/or program preparatiọn.

## Student Services

Firelands College provides a variety of student services which include career development and plàcement, counseling, program advisement, and developmental education opportunities. The Student Services Office. maintains day and evening hours to accommodate all students.

Career Developmént ánd Counseling Services provides educational, career and personal counseling services to students. In" formation on academic majors, cáreer op tions and other colleges is available on the COIN Computer and a variety of printed materials can be found in the Student Services Office Career Library
A course entitled Career Planning and Decision Making, CA'O 131", is offered each. - semester. Career-related interest and values inventories are also available to stüdentstas an aid for career planning

The College Level Examiñation Program (CLEP), National League of Nursing Examination (NLN) and the Career Planning Profile (CPP) are administered quarterly by the - office

The Placement Service, located in the West Building in room 129, is responsible for providing employment counseling, assistance in resume writing and information on interviewing procedures to all graduates and alumni. Students should develop a placement file at the beginning of the final semester before graduation so that individual assistance can be given in establishing a placement file and planning the job search.
Program Advisement at Firelands College provides the opportunity to gather information about various fields of study available through Bowling Green State University. While all students are encouraged to make regular contact with their adviser, all freshmen and sophomores must meet with their advisers every semester io plan course schedules.
Students who are undecided as to their career goals and those returning to school after a lengthy absence, have the opportunily 00 discuss their interests and objectives with a career counselor in the Program Advisement Office.
Advisers from the University's main campus are available at specific times each semester to provide information on four-year baccalaureate degree programs.
Handicapped services are provided to enable disabled persons to attend classes and to participate in a broad range of activities. The Student Services Office acts as a liaison between rehabilitation agencies and the college. All handicapped students should be in close contact with the Student Servicés Offices.

## Learning Achievement Center

The Learning Achievement Center is located on the second floor in room 203 North and is avaliable to all students who want to improve their learning skills and become more effective and efficient in college.

The services include:

1. Free tutoring in most subject areas. Assistance is also provided for students who want to form sludy groups.
2 Computer-assisted instructional software in many subject areas to provide reinforcement and alternate methods of instruction.
2. Computer instructional programs to be used independentiy of regular courses to improve students' learning skills in study skills, speed reading, wordprocessing for writing papers, keyboarding for typing. Appointments can also be arranged to assist individual students to improve their learning skills.

## Cooperative Education

Cooperative education integrates classroom theory with on-the-job training, either in business, government, industry or the nonprofit sector.

Every effort is made to place students in assignments compatible with their academic programs and career goals. Employers are responsible for assigning, supervising and evaluating work assignments and for paying students fair wages. Assignments are monitored by the College.

Cooperative education is open to students in all programs. Application should be made at least one semester prior to the anticipated assignment. Interested students should contact the Student Services Office in 129 West Building.

## Surdent Life and Activities

Firelands College offers students cocurricular opportunities for personal growth and development. Social, cultural and athletic programs are coordinated through the Student Services Office, various student organizations and academic departments of the University. Many academic departments and student groups provide additional opportunities for learning through lectures, seminars and activity programs. A committee composed of students and faculty advisers develops a calendar of activities and events each year. Chartered clubs and organizations include:
Firelands College Theater
Firelands Environmental Club
Firelands Writing Center
International Club
Intramurals
More Mature Element
Ski Club
Social Science Club
Society of Manufacturing Engineers
Speech Activities Organization
Student Advisory Committee
SAB
Weight Club

## Financial Aid and Scholarships,

The Financial Aid Office, 114 East Building, coordinates all Pell Grants, Ohio Instructional Grants (OIG), National Direct Student Loans (NDSL), and the campus-based scholarship programs.

## Scholarships

Numerous annual scholarships are administered by Firelands College. Applications for these scholarships are available from the Financial Aid, Admissions or Community Services Offices and must be filed by April 1 to be considered for the next academic year. Special need analysis forms are not required for scholarships administered directly by the Firelands College, which include:
BGSU Alumni Association
Central Soya Company
James E. Cole Memorial
Sally DeForest
Erie County Board of Realtors
John F. and Doris H. Ernsthausen Memorial
Firelands Area Chapter BGSU Alumni Association
Firelands Friends of Music

Firelands Osteopathic Medical Assistant's Society
Patricia and Howard Fisher Scholarship
Thomas J. Hanlon Memorial
Harlequins Founders'
Huron Junior Women's League
Huron Rotary Club
Third and Fourth Degrees of Sandusky Knights of Columbus
Firelands Shrine Club, and Singara Grotto
Midwest Bank and Trust Company Firelands Offices
Milan Chamber of Commerce
Milan Mothers Club
William J. Parker Family
Pilgrims Opportunities, Inc.
Sandusky Exchange Club
Sandusky Register
Society Bank of the Firelands: Vermilion, Huron, Milan, and Wakeman
Lyle L. Speer Memorial
SAB(2)
Dr. Car! R. Swanbeck Memoria
Robert W. Traver Memorial
Pauline L. Wallace Memorial

## Emergency Loan Funds

The objective of the Firelands College Emergency Loan Fund Program is to assist students who, for one reason or another, find it extremely difficult or impossible to make payment for University instructional and general fees by the payment date.

## Amount of Loan

The maximum loan that may be granted is $\$ 350$. The amount of the loan is contingent upon the time of application and is determined by the person administering the loan fund. All loans of $\$ 250$ or more may require a cosignature.

## Studeni Qualifications

The emergency loan program is available to continuing Firelands College students who have at least a 2.0 ( C ) accumulative grade point average. Exceptions to these criteria may be considered on an individual basis. Transient students are not eligible for a loan under any circumstances.

## Repayment Deadiline

All loans during any semester become due as specified in the loan agreement. Students may request an extension from the business office.

## Finance Charge

The finance charge for all loans is at the annual rate of 18 percent:

## Late Payment

Students who fail to repay emergency loans by the date due are charged a late payment fine. Fines are assessed at a rate of $\$ .50$ per day (including Saturdays and Sundays), but will not exceed $\$ 25$. Students are granted a three-day grace period. If payment is not made during the grace period, the fine on the fourth day is $\$ 2$.

## Non-payment

Students not repaying loans by the end of the grade period (three days after the due date) will have their class registration for that semester cancelied and all records in the Office of the Registrar frozen. Also, they will be denied registration for any future semesters until the loan and penalty are repaid.

Other Loans<br>Harry G. Beare Memorial loan fuñd<br>This Ioantis available to Firëlands College students whôare graduátes or candidates for graduation from Edison High School in: Milan The loan is based on provenfinancial need and is inteerest free However, it is sug gested that the student make a-gift to the loan fund after repayment of the loan<br>\section*{Kiwanis Club of Sandusky<br><br>\section*{Loan Program}}

The Kiwanis Club of Sandusky has aloan progam available to any student in the Fireländs College area A stüdent may negotiate a loan up to $\$ 250$ per year which iṣ interestfree while the student is in school An inter. ét rate of six percent per annum is charged once the studentis no longer enrolled at the University Early repayment of the loan is encouraged after the student's graduation or termination of enrollment in order to allow finäncial assistance to other students.

## V.F.W. Post No: 2743 Loan Fund

The Norwalk. Post No 2743 of the Veterans of ${ }^{3}$ Foreign Wars has established a loan fund for Firelands "College students: Loans are in, dividually negotiated and no interest is charged when terms of the loan are metz The loan is administered'by an agent of the veteran's organization however, information is available at the Firelands College Financial Aid:Office
Third and Fourth Degrees of Sandusky Knights of Columbus, Firelands Shrine Club; and Singara Grotto Loan Fund Loan funds have been provided by these orgánizatiòns since Firelands College was opened Typically the loans are for up to $\$ 250$ and are issued for short periods of: time - emergency types of loans Early repayment is encouraged and a small service charge is assessed.

## Academic Objectives and Organization

Firelands is organized as a collegë of Bowing Green Stãté Univeršity The college has three academic departments applied: sciences, humänities, and natural and social. sciences The departments are structured by academic discipline as follóws:

## Applied Sciences

Bưsiness mànagement.
Computer science as
Désign technỏlogy
Economics
Electronic technólogy Environmental health: Informatión systems, Manúfacturing technology
Medical record technology or health infor "mation"technology
Respiratory care tectnology
Statistics
Technology general

Humanities
Art
Creative writing
Education
English
French
Health
Journalism
Librarianship
Musici
Philosophy
Physical edúcation
Spanish
Speech communication
Theater arts

## Natural and Social Sciences

Biology
Chemistry
Geography:
Geology
History
Human servićes
Mathematics
Physics
Political science
Psychology
Sociology

## Pre-baccalaureate Courses

Firelands Coliege offers a wide variety of courses that can be applied to most baccalaureate majors available at the Bowling Green campuis Because Firelands College does not offer the baccalaureate degree, a student who plans to complete the degree at Bówling Green State University must com: plete a minimum of 20 semester hoúrs of credit in upper=division courses on the cam pus in Bowling Green.

Students who are interested in completing. a baccalaureate degree at Bowling Green should consult the appropriate section of this catalog for a complete program description, These students should work closely with their academic advisers' at Firelands and the main campus to ensure completion of appropriate group requirements for the degree:sought

## General Education Requirements

A university education is more than the: learning of skills appropriate to a career or job. The acquisition of knowlédge from such areas as the humanities and the natural and socicial sçiences contribute to the foundation of the well educated person: Through the courses of the general education require ments, students discover their values and gain insight into the challenges of the future

Designed to contribute: to the foundation of the baccalaureate degree programs, these requirements add breadth to the major field selected by the student The requirements are grouped intofour areas: lan guàgé, humanities, social science and mathematics-phyșical sciences.

A wide variety of general education courses are available at Firelands. Theșe courses can be used to meet the appropriate group requirements in baccalaureate and associate degree programs.

## Upper-division Courses

Firelands College primarily serves the educational needs of astudent in the freshman and sophomore years of college. However the college does provide opportunities for. some study at the junior, senior and gradu atee levels:

## Lifelong Learñing (noncredit) Courses

The Office for Community Services offers a wide variety of lifelong learning (noncredit) courses workshops and seminars The chief purpose of these offerings is to provide area residents with opportunities to develop new skills or to stimulate new interests. Special workshops and seminàrs are also offered in many topical areas, such as management, education, computers, industrial edúcation and technology and environmental quality control:
Lifelong learning courses, workshops seminars and in-service training programs may be organized for a paiticular firm school organization or interest groüp. Inquiries relative to the offering of such specific programs should be directed to the Office for Community Services at Firelands Collége

## Associate Degree Programs

Four associate degrees are offered by Fire: lands College associate of arts, associate of applied science, associate of applied business tand associate of science. The associate of art's and assóciate of science programs are designed to fulfill the first two years of a baccalauarêate dégree, but may also serve as terminal programs for students who do not plan to complete a four year degree The associate of applied business and associate of applied science-degrees are primarily intended to prepare students for employment upon graduation Although termed career education they are articulated with similarly oriented four-year programs, the permitting a student to continue toward a baccalaureate degree in related disciplines

Stưdents who seek an associate degree must complete both generala and specific re quirements for the degree sought.

## General Requirements

A candidate for an associate degree at Fire lands: College must satisfy the general requirements listed on page 10 of this catalog

Those with an American College Test score of 20 or below must complete ENG 1111 before taking ENG 11.2. Those with an ACTV:Score of 1-1 or below must complete both ENG 110 and/or 111 before taking 112 Equivalent Career Planning Profile scores may be used for English placement upon the recommendation of the director of student services. No more than six credit hours of basic writing from ENG 1 10, 111 and 112 may be applied toward graduation.

## ASSOCIATE OF ARTS

Firelands College offers two years of general education courses leading to the associate of arts degree. Students who complete the associate of arts degree have reached the halfway point in the progression toward a baccalaureate degree.
The associate of arts degree program is designed to provide pre-baccalaureate students with a sound academic background in a number of academic disciplines. Credits earned may be transferred to four-year programs. The intent is to provide a liberal background within a two-year program. General education programs have been developed in the following areas:
Elementary education
Humanities
Human services
Liberal studies
Pre-business administration
Secondary education
Social science

## Associate of Arts Requiremenis

This degree is awarded to a student who completes one of the prescribed curricula, including the general education requirements listed below and complies with general degree requirements cited previously.

## Communication

Each student is required to acquire proficiency in written expression and oral communication. ENG 112 and SPCH 102 are required.

## Mathematics and Science

Each student must complete a minimum of nine credit hours in mathematics and science.

## Social Sciences

Eaoh student must complete a minimum of 10 credit hours in courses designated social science.

## Pine and Applied Arts

Each student must complete a minimum of 10 credit hours in courses designated fine and applied aris including at least one course in ENG literature.

## Physical Education

Two academic semesters of physical education (PEG 100) are required, for a minimum of two credits. This requirement may be waived if a student has attained the age of 21 at the time of initial registration, has a written statement from a personal physician, or is a veteran of the military service. Exemption trom physical education does not excuse a sludent from meeting the 62 semester hours fequired for graduation.

## Eecuves

Each student must select a sufficient number of electives to earn a minimum of 62 hours. A student planning to pursue a baccalaureate degree in arts and sciences is encouraged to take a foreign language.

## Elementary Education

This curriculum provides courses prescribed by colleges of education to students seeking certification in elementary education. These courses are those in the first two years of the program and ensure a broad background of study. In addition to the associate of arts general requirements, students must complete the following:

## Communication

See general education requirements for associate of arts programs. Six hours minimum.

## Mathematics and Science

MATH 241 and 242 and BIOL 101; CHEM 104, GEOL 101, PHYS 104. Total requirement of 17 hours.

## Social and Behavioral Sciences

All courses listed below plus one additional social science course, except from geography or history. Twenty hours minimum.
GEOG 121 and 122 (4)
HIST 205 and 206 (6)
HIST 151 or 152 (3)
PSYC 201 (4)
Total of 17 credits.

## Fine and Applied Arts

ART 101, MUED 239, and an ENG literature course (ENG 342 recommended). Two additional courses must be selected from art, business education, English, French, technical courses, philosophy, Spanish, and speech. Nine hours minimum. THEA 202 and PHIL. 103 are recommended.

## Other Requirements

PEG 100 (2)

## Humanities

This degree program provides the foundation for a bachelor of arts program with concentrations in humanities. In addition to the associate of arts general requirements, students must complete the following:

## Communication

See general education requirements for associate of arts programs. Six hours minimum.

## Mathematics and Science

Each student must complete both (A) and (B) below. Nine hours minimum.
A. One of the following:

1. Three and one-half years of high school mathematics or equivalent proficiency as demonstrated on a placement test.
2. MATH 121, and one of the following:

PHIL 103, or CS 100,101 , or 103.
3. Three years of high school mathematics and CS 100 , or 101 , or 103. 4. MATH 115,124 or 130 .
B. At least two courses elected from biological sciences, chemistry, geology, physical geography (GEOG $125,126,127,213$ ). At least one course must be for laboratory credit.

Students who plan to pursue bachetor of fine arts or bachelor of arts in communication degree programs at Bowling Green State University may elect to follow the Group III mathematics and science requirements for those degrees.

## Secial and Behavioral Science

Each student must complete a minimum of 10 hours from at least two disciplines includ- - natas. ing a minimum of six hours in one discipline. Eligible disciplines include: economics, geography, history, political science, psychology, social geography and sociology.

## Fine and Applied Arts

Each student must complete HUM 101 and a minimum of 16 hours from at least three of the following disciplines: art, humanities, literature, philosophy (except PHIL 103, when used to apply to mathematics/science requirements), theatre, film, music, popular culand American studies. One course in Ifterature and one course in the fine arts (art, music, theatre, film) must be included. See the College of Arts and Sciences Group $V$ listing of approved courses.

## Human Services

This program prepares students for employment as paraprofessionals in social service agencies. It also provides a means for those currently employed in agencies and organizations to improve their proficiencies and qualify for promotions.

The two-year degree program combines academic courses and supervised field experiences and may be applied toward several baccalaureate community services programs offered by the College of Health and Human Services. In addition to the associate of arts general requirements, students must complete the foliowing:

## Communication

See general education requirements for associate of arts programs. Six hours minimum. In addition, IPCO 203 is required.

## Mathematics and Science

A minimum of nine credit hours in mathematics and science. MATH 115 is required. Science courses may be selected from biology, chemistry, geology, physical geography, CS 100 and physics.

## Social and Behavioral Sciences

A minimum of 19 hours in social and behavioral areas, Required courses are: PSYC 201; 204 or 303; SOC 101; 202 or 316; and 361; SOWK 220.

## Fine and Applied Arts

PHIL 102, BUSE 335, SOWK 110, ENG literature. Total: 11 hours.

## Other Requirements

SOSC 289 (3-4) PEG 100 (2)

## Core Electives

Choose six hours from CEO 121, IPCO 306, PHIL 319, POLS 201, PSYC 305, PSYC 405, SOC 316, SOC 361, SOC 441, SOC 301 (or PSYC 311)

## Field Experience

Thirty volunteer hours in a supervised field experience is one of the requirements for SOWK 220. During the student's second year, a 15 -week supervised field experience at a campus-approved agency is required. Three or four credit hours (SOSC 289) may be earned depending on the number of weekly hours of the field experience. A weekly seminar in human services is also part of the SOSC 289 course.

## Liberal Studies

This curriculum allows the undecided student to sample a variety of disciplines while ensuring a well-rounded background. A student may obtain a degree in liberal studies and a foundation in journalism or anotherprofession or a two-year terminal degree. In addition to the associate of arts general requirements, students must complete the following:

## Communication

See general education requirements for Associate of Arts programs. Six hours minimum.

## Mathematics and Science

A minimum' of 10 hours in at least two sciences or a science and a mathematics combination.

## Social and Behavioral Sciences

A minimum of 10 hours chosen from: economics, geography, history, political science, psychology, and sociology
Fine and Applied Arts
Each student must complete both ( A ) and (B):
A. 'Fine Arts and Humanities: HUM 101 and a minimum of 7 hours from at least two of the following: art, film, humanities, English, music, philosophy (except PHIL 103 when used to apply to math and science requirements), popular. culture, theatre and American studies. One course in ENG literature must be included.
B. Applied Arts: a minimum of two hours from: business education, environmental health, health education, home economics, technical education or journalism

## Other Requirements

In addition, each student must complete 16 hours at the 200 level.

## Pre-business

Donald Wilch, program adviser 305 West Building
This program of study includes the general education requirements and offers business foundations in mathematics, accounting economics and statistics. In addition to the associate of arts general requirements, students must complete the following:

## Communication

See general education requirements for associate of arts programs. SPCH 102 and one additional course in speech communication are required. Nine hours minimum.

## Mathematics and Science

A minimum of 17 hours including STAT 211 and 212, MIS 200 and one of the following:
A. MATH 124 and 125 ( 8 hours); or
B. Math 131 and a science elective ( 8 hours).

## Social and Behavioral Sciences

A minimum of 10 hours including PSYC 201 or SOC 101, and ECON 202 and 203. The remainder may be chosen from geography, history, political science, psychology and sociology

## Fine and Applied Arts

A minimum of 10 hours from at least two of the following departments: art, foreigni language, English, philosophy and speech. One course in ${ }^{\circ}$ ENG literature must be included.

## Other Requirements

Each student must complete ACCT. 221 and 222, LEEGS 301, MKT 300, FIN 300 and MGMT 300.

## Secondary Education

Students in this program have the opportunity to complete the general education requirements of colleges of education and tomeet major and minor requirements in courses offered at Firelands College. In addito the associate of arts general requirement, students must complete the following:

## Communication

See general education requirements for Associate of. Arts programs. Six hours minimum.

## Mathematics and Science

A minimum of nine hours in at least two. sciences' or a science and a mathematics combination.

## Social and Behavioral Sciences

A minimum of 13 hours, including PSYC 201, chosen from the following disciplines: economics, geography, history, political science, psychology and sociology.

## Fine and Applied Arts

A minimum of 10 hours from at least two of the following disciplines: art, business education, English, French, home economics, technology courses, philosophy, Spanish and speech. One course in English literature must be included.

## Other Requirements

Each student should consult an adviser for information concerning courses required in various secondary teaching fields.

## Social Science

This curriculum offers the foundation of a bachelor of arts degree program in geography, history, political science, psychology, sociology or liberal studies. In addition to the associate of arts general requirements, students must complete the following:

## Communication

See general education requirements for associate of arts program. Six hours minimum.

## Mathematics and Science

Both $(A)$ and $(B)$ below. Fifteen hours minimum:
A. One of the following

1. Three and one half years of high school mathematics or equivalent proficiency as demonstrated on a placement test.
2. MATH 115,124 , or 130 .
3. MATH 121, and one of the following PHIL 103, CS 100, 101 or 103.
4. Three years of high school mathe-
matics and CS 100, 101 or 103.
B. At least two courses elected from biological sciences, chemistry, geólogy, physics or physical geography (GEOG $125,126,127$ 213): Oné course must be approved for laboratory credit.

## Social and Behavioral Sciences

A minimum of 20 hours from at least three of the following disciplines: anthropology, economics, history, social geography, psychology and sociology. Students should also have an area of concentration from one of these disciplines:

## Fine and Applied Arts

A minimum of 10 hours from at least two of the following: art, film, literature, music, philosophy (except PHIL 103 when used to apply to mathematics/science requirements), popular culture, speech and theatre One course in literature must be included; a course in the fine arts (art, film, music, or theatre) is highly recommended. (See College of Arts and Sciences listings for Group $V$ coursés.)

## ASSOCIATE OF APPLIED BUSINESS

Two-year, career-oriented curricula are available leading to the associate of applied business degree. These programs prepare students for immediate employment in area communities and elsewhere, and also may be transferred to similarly oriented baccalaureate degree programs

Usually, general education requirements are not part of the curriculum. Those general education courses that are taken are in some related general education field (such as English, speech, psychology), in appropriately related disciplines (such as applied mathematics and science, physical science) and in specific major areas (such as business management, secretarial technologies).
Applied business programs offered at
Firelands include:
Business management technology
Computer science technology
Secretarial administrative sciences
0

## Associate of Applied Business Requirements

This degree is awarded to a student who successfully completes the career-oriented programs listed below and the general associate degree requirements listed on page 11.

## Business Management Technology

David Zuercher, program director 311-A West Building
Majors within this program are accounting, banking and finance, business management, and real estate/property management.

## Accounting

## Planned Program

This program prepares students for paraprofessional positions in industrial, public or governmental accounting. It is designed to provide the graduate with theoretical and praćtical accoūnting knowiedge and skills required of business personnel in today's economy. Many of the courses in the twoyear accounting program are applicable to the four-year baccalaureate degree in business

## First Year

General education
ENG 110, 111 and/or 112 (3-8)
SPCH 102 (3)
Basic courses
MIS 200 (3)
MATH 124 and $125^{\circ}(8)$

Core courses
ACCT 221 and 222 (6)
ACT 231* (3)
BAT 102 (3)

## Second Year

General education
SOC 101 or PSYC 201 (3-4)
ECON 202 and 203 (6)
BA 203 (3)
Basic courses
STAT 211 (3)
core courses
ACl $241^{*}$ and $251^{*}$ (6)
BAT 201 and 291, MKT 300
and FIN 300 (13)
*Designed onfy for the associate degree in accounting

## Banking and Finance

## Planned Program

This program is designed to prepare students for careers in the banking and financial industries. It is planned to fit the needs of siudents whose work necessitates a parttime schedule. The program emphasizes management, finance, accounting, and banking skills dealing with operations, loans, trusts and consumer services. Many of the courses in the two-year banking and finance program are applicable to the four-year baccalaureate degree in business.

## First Year

General education
ENG 110, 111 and/or 112 (3-8)
ECON 200 (3)
SPCH 102 (3)
Social science elective (3)
Basic courses
MATH 127 (3)
MATH elective (3)
MIS 200 (3)
Core courses
BAT 201, 205, 210.* 211,* and 291 (16)

## Second Year

## Basic courses

LEGS 301 (3)
Computer elective (3-4)
Technical Elective (3)
ACCT 221 and 222 (6)
Core courses
BAT 212, 213*, 214*, and 291,
MKT 300 and FN 300 (16)
*Offered in consortium with the Ampican institute of Banking.

## Business Management

## Planned Program

Persons completing the business management technology program are involved in the management of both human and capital resources. Their work may include personnel administration, operations and production supervision, marketing, business research, financial management, accounting or the small business environment. Career opportunities exist in the industrial sector, private service firms, governmental agencies and nonprofit organizations.

## First Year

General education
ENG 110, 111 and/or 112 (3-8)
SPCH 102 (3)
Electives (3-4)
Basic courses
MATH 127 (3) ${ }^{*}$
MiS 200 (3)
\$TAT 200 (3)*
Quantifative elective (3-4)
Core courses
BAT 102, 201, 205, and 291 (15)

## Second Year

General education
BA 203 (3)
ECON 200 and elective (6)*
Basic courses
LEGS 301 (3); CST 260 (4)
Core courses
ACCT 221 and 222 (6)
BAT 203 and 291; MKT 300
and FIN 300 (13)
*Baccalaureate sequence also available.

## Real Estate <br> Property Management <br> Planned Program

This program is designed to prepare students for careers in real estate sales and property management. It is planned to fit the needs of students whose work necessitates a part-time schedule. It is designed to provide the graduate with theoretical and practical skills in real estate appraisal, financial analysis, sales brokerage activities and property management functions for private and commercial investments.

## First Year

General education
ENG 110, 111 and/or 112 (3-8)
SPCH 102 (3)
ECON 200 (3)
Communication electives (3)
Basic courses
MATH 127 (3)
MIS 200 (3)
Core courses
ACCT 221 (3)
BAT 100, 101, 205, 215 (12)

## Second Year

General education
PHIL 320 (3)
Choose 1 of the following:
SOC 101, PSYC 201 or GEOG 225
Basic courses
CST 260 (4)
Core courses
BAT 208, 216, 217, 218, 290, 291 MKT 300 (17)
Technical elective (3)

## Computer Science Technology

Ronald Willard, program director 233 North Building

## Planned Program

Computer science technicians are two-year college graduates with an associate of applied business degree. This program will prepare students to seek employment as application programmers, maintenance programmers or programmer/analysts. Graduates will have learned principles of computer logic and decision making, computer languages (BASIC, Pascal, RPGII, COBOL, IBM Assembler), advanced programming skills such as structured design, system implementation, basic system architecture, and techniques of system analysis. Students will have experience programming on microcomputers, minicomputers and mainframe computers which are state-of-art in the present business world. Career opportunities exist in business, industry, education, government or public service. In addition, credits received may be applied to a baccalaureate degree in computer science.

## First Year

General education
ENG 110, 111 and/or 112 (3-8)
PHIL 103 (3)
SPCH 102 (3)
Basic courses
Math 128 or 124 and 125 OR 131 and 232 (5-8)
Core courses
CS 101 (3)
CST 231 and 260 (8)

## Second Year

General education
PSYC 201 (4)
Basic courses
ACCT 221 and 222 (6)
Core courses
CS 201, 205 and 360 (9)
CST 171, 221 and 232 (6)
Electives
MATH/LAB
SCI/STAT/ACCT (3-4)
*Select option A or B
A. Choose 2 courses from BAT 201, 205 and MIS 200
B. Choose 3 foreign language courses

## Secretarial <br> Administrative Sciences

Teresa A. Marano, program director 311-B West Building
The two-year program prepares students for secretarial responsibilities in business and industrial firms, professional offices, and governmental agencies. Upon successful completion of the two-year program, students receive an associate of applied business degree

The program is designed to provide students with training in secretarial and word processing skills and with knowledge of business and communication theory to enhance their opportunities for career advancement.
The program can meet the needs of both beginning and advanced secretarial students, and credits received may be applied toward a four-year baccalaureate degree in a related field.

In addition to the two-year program, oneyear certificate programs are offered in medical secretary and information/word processing.

## First Year

General education
ENG 110, 111 and/or 112 (3-8)
SPCH 102 (3)
Basic courses
BAT 102 (3)
MIS 200 (3)
Core courses
BUSE 101. 111, 210, 213, 215, and 220 (17)

## Second Year

Generat education
PSYC 201 (4), ECON 200 (3)
Basic courses
ACCT 220 (3)
BA 203 (3)
LEGS 301 (3)
Core courses
BUSE 202, 240, 302, 311, 335 and 401 (18)
BUSE 314 (2)

## Information/Word Processing Option

The one-year information/word processing option prepares:students for clerk/word processor positions The program is arranged so that credits received in a oneyear program may be transferred ifta student decides to pursue a two-or-four-year degree in a related field To'receive the information/processing certificate, the student-must have at least a 20 grade point average for: all work completed.

## Oné-year Certificate

Geñeral éducation -
ENG 110, 111 and/or 112 (3-8)
SPCH 102 (3)
Basic course
BAT 102 (3)
BA 203(3)
Gore courses
BUSE 101, 111,202 210,220, 302 ; 335 and 401 (23)

## Medical Secretary Option <br> <br> Planned Program

 <br> <br> Planned Program}- The medical transcriptionist/secretary is re suponsible for transcribing medical information and reports from dictating equipment onto paper in àcomplete and accuratemanner Career opportunities exist in the medical record departments of hospitals. physicians? offices, private clinics and other settings. The program consists of selected courses from both the "secretarial adminis-
trative sciences program and the health informatiọ technology program: Students may continue in either program for an asso ciate degreee.


## One-year Certificate

General eductiction
ENG 110,111 and or $12(3-8)$
SPCH 102 (3)
Basic courses
BUSE $100^{\circ}$ (3)

## Core courses

BUSE 114, 202210 and $302(12)$
MRTA01, 102, 290 (8)
BA.213(3)

## Associate of Applied Science

Two -year career-oriented curricula also exist teading to the associate of applied science degree These programs prepare students for immediate employmentin area communities and elsewhere and also may. be transferred to similarly oriented baccalaureate degree programs.

Ușually, general education requirements are not part of the curriculum Those general education courśes that are taken are in: some related general education field (such as English speech, psychology, in appropriately related disciplinies (such as applied. mathematics and sciencé physicăl sciénce) and in specific major areas (such as envir-onimental health and engineering tectinologies):

Applied science programs offered at Firelands incluide:

- Electrical/electronics engineering technology
Environimenta health technology
Health informationtechnology.
Mañufacturing/indưstrial technologgy, Respiratory care technology


## Associate of Applied

## Science Requirements

This degree ol áwarded to a" student who successfully completes one of the careeroriented programs listed below and the general associate degree requrements listed on page 1.1 of this catalog.

## Electrical/Electronics Engineering

Dr. Jan Adams; prograam director 152 Noth Building

## - Planned Program

Academico preparation for this program em phasizes digital electronics and microcomputer electronics with robotices applications: Also covered are communication systems and circuits instrumentationsand measure ments power and energy materials processing and design and engineering graphics The program prepares students for positions as engineering assistants, engi neering technologists, production techiniciañs instrument calibration and repair techńicians, field service téchnicians, customer service representatives and other entry level positions in electronic engineering technology Also; students who complete the associate degree have reached the hallway póntin progress toward a baccalaureate degree.

## First Year

ENG 110,111 a and or, 112 (3-8)
Basic courses
MATH 128 (5).
PHYS 201 (5).
Corecourses
ET. 240,241 and 191 (12)
DESN 104.(3)-
MFG 112 and 114 (6)

## Second Year

General éducation
SPCH 102 (3)
SOĆ 101 Or ECOÑ 200 (3)
PSYC 201 (4)
Basic courses
CS101 (3)
Core courses
ET $244,245,249$ and $442(15)$
TECH 218, MFG 214 and CST:250 (9)

## Environmental Health Technology

Majors-within this program are environmental health, occupational health and safety, anailysis, and waterand wastewater. treatment: Any of these majors can be
a s -applied toward the baccalaureate degree in environmental health

## Environmental Health <br> M.P. Henning III, program director 155 North Building

## Planned Program

The one-year program is designed to retain or upgrade people already working in this field: The two-year major is for people with no experience in this field. The environmen tal health technician conducts sample collection, analysis and inspection of indoor and outdoor environments for theensuring of compliance with occupational, public health, safety and environmental quality laws. Ca reer opportunities exist in private industry. environmental protection and occupational safety agencies, public health and county engineering departments, pollution analysis laboratories, private consulting firms, water and wastewater treatment facilities and health care institutions

## One-year Certificate

General education
ENG 110, 111 or 11 ट्र (3-5)
SPCH 102. (3)
Basic coürses
MATH 127 or AMS 100 (3)
Core Courses
ENVT 121; 160, 211, 223, 225 and 270 (19)

## Two-year Program

## First year

- General education

ENG 110;111 and/or ENG $112(3-8)$
Báșic courses
CHEM 115 or 125 (4-5)
PHYS 201 (5)
MATH 127 (3)
Core courses
ENVT 121, 160, 211,270 and $272(16)$

## Second Year

General"educatión
BAT 205 (4)
PSYC 201 (4)
SOC 101 (3)
SPCH 102 (3)
Basic courses
CHEM 116 or 126 or PHYS $202(4-5)$
Core courses
ENVT 222, 223, 225, 260 and 291 (16)
ENVT 261* (2)
ENVT:290* (1)

## Optional electives

## Occupational Health and Safety Anälysis

M.P Henning ill, program director 155 North Building

## Plánned Program

The one-year program is designed to retrain or upgrade people already working in this field. Ție two-year major is for people. with no experience in this field. The occupational health and safety technician conducts sample collection, analysis and inspection of the work environment to ensure compliance with occupational health and safety laws for workers on the job. The technician is capa-: ble of assisting safety and industrial hygiene. personnel in setting up and running an occupational health and satety program in private industry. Career opportunities include posi-- tions in privaté industry; pollution análysis laboratories, private consulting firms; and oc cupational safety and health agencies.

One-year Certificate
General education
ENG 110, 111 or 112 (3-5)
SPCH 102 (3)
Basic courses
TECH 218 (2)
EAT 205 (3)
MATH 127 (3)
Core courses
ENVT 121, 225, 260, 261, 270 and 272 (18)
ENVT 280* and 291* (1-4)

## Two-year Program

First Year
General education
ENG 110,111 and/or 112 (3-8)
Basic courses
CHEM 115 or 125 (4-5)
PHYS 201 (5)
MATH 127 (3)
Core courses
MFG 112 and 114 (6)
ENVT 121, 160, 270 and 272 (10)
Eveond Year
General education
SPCH 102 (3)
PSYC 201 (4)
SOC 101 (3)
Basic courses
DESN 104 (3)
CHEM 116 or 126 (4-5)
TECH 218 (2)
Core courses
ENVT 225, 260, 261 and 291 (13)
ENVT 290 (1)*
-Optionall etecives

## Water and <br> Wastewaier Treaiment

M. P. Henning III, program director

155 North Building
Planted Program
The one-year program is designed to retrain or upgrade people already working in this field. The two-year program is for individuals with no experience in this field. The water and wastewater technician conducts sample collection analysis and inspection of water for process control and for compliance with envionmental quality laws. Career opportunities include positions in private industry, environmental protection agencies, county engineering departments, pollution analysis laboralories, private consulting firms, and water and wastewater treatment facilities.

## One-year Cenificate

General education
ENG 110,111 or 112 (3-5)
SPCH 102 (3)
Basic courses
MATH 127 (3)
Core courses
ENVT 121, 211, 222, 223. 270, 272 and TECH 218 (21)
Yro-year Program
Fives Year
General education
ENG 110. 111 and/or 112 (3-8)
Basic courses
CHEM 115 or 125 (4-5)
MATH 127 (3)
PHYS 201 (5)
Core courses
ENVT 121, 160, 211 and 222 (14)

Second Year
General education
PSYC 201 (4)
SPCH 102 (3)
SOC 101 (3)
Basic courses
CHEM 116 or 126 or PHYS 202 (4-5)
Core courses
ENVT 223, 270, 272 (7)
ET 191, 240 and 241 (11)
TECH 218 (2)

## Manufacturing/Industrial Technology

Majors in this program are industrial manufacturing and machine design. Both of these majors can be applied towards a baccalaureate degree in technology.

## Computer Assisted Manufacturing

Richard K. Kepple, program director 150 North Building

## Planned Program

Industrial manufacturing technicians are employed in business and in industry. The program is planned to fit the needs of students whose work necessitates a part-time schedule. It is designed to provide the graduate with theoretical and practical skills for assignments in planning, organizing and controlling the manufacturing operation, including supervisory and management techniques and systems used in productions.

## First Year

General education
ENG 110, 111 and/or 112 (3-8)
SPCH 102 (3)
Basic courses
MATH 128 (3)
PHYS 201 (5)
DESN 104 (3)
MIS 200 (3)
STAT 200 (3)
Core courses
MFG 112 and 114 (6)
ET 191 (3)
INET 143 (3)
DESN 204 (4)

## Second Year

General education
SOC 101 (3)
ECON 200 (3)
Core courses
BAT 203 (3)
INET 134 (3)
MFG 214 (3)
TECH 218 (2)
BAT 201 or BAT 205 (4)
ET 249 (3)

## Computer Assisted Machine Design

Richard K. Kepple, program director 150 North Building
Machine design technicians are employed in business and in industry. The program is planned to fit the needs of students whose work necessitates a part-time schedule. It is designed to provide the graduate with theoretical and practical skills for employment as a machine design technician, draftsman or other specialist who requires knowledge of basic machine design principles and machine components. Additional emphasis includes design of jigs, fixtures, dies and tools.

First Year
General education
ENG 110, 111 and/or 112 (3-8)
SPCH 102 (3)
Basic courses
MATH 128 (3)
PHYS 201 (5)
DESN 104 (3)
MIS 200 (3)
Core courses
DESN 204 and 205 (7)
MFG 112 and 114 (6)
ET 191 (3)
DESN 202 (5)

## Second Year

General education
SOC 101 (3)
ECON 200 (3)
Core courses
DESN 205 (4)
INET 134 (4)
MFG 214 (3)
DESN 243 (3)
TECH 218 (2)
ET 249 (3)

## Health Iniormation <br> Technology

Nancy C. Weekly, RRA, program director 125 West Building

## Planned Program

Medical record technicians are two-year college graduates who are eligible to sit for the national accreditation examination administered by the American Medical Record Association. After successful completion of the examination, the Accredited Record Technician (ART) is ready to work in the ever expanding field of medical records. Career opportunities exist in private businesses, attorneys' offices, group medical practices, teaching institutions, as well as in hospitals, extended care facilities and government agencies. Their work includes all aspects of medical records: filing and retrieval; analyzing; coding; indexing; compiling statistics; answering subpoenas; utilization review; medical care studies; medical research; medicolegal correspondence; abstracting; transcribing; auditing; quality assurance; and compiling and presenting medical data, through the use of computerized systems.

## First Year

General education
ENG 110, 111 and/or 112 (3-8)
Basic courses
MATH 115 (3) or STAT 200 (3)
BUSE 111 (3)
BIOL 104, 331, and 332 (10)
Core courses
MRT 100, 101, 102, 112, and 201 (15)
MRT $290^{*}$ and 291* (1-4)

## Second Year

General education
SPCH 102 (3)
SOC 101 (3)
PSYC 201 (4)
Basic courses
MIS 200 (3)
Core courses
MRT 201, 202. 204, 211 and 212 (11)
*Oplional elective

## Respiratory Care Technology

Robert K Greenham, RRT, program director 153 North Building

## Planned Program

Respiratory care is an allied health specialty concerned with the treatment, management, control; diagnostic evaluation and care of patients with deficiencies and abnormalities associated with the cardiopulmonary sys: tem. Most respiratory care practitioners work in hospitals, although, employment oppoitu-. niare expanding in such areas as home care, skilled nursing facilities, medical clinics ties and research

The respiratory therapist delivers medical gases, maintains environmental control systems and provides many therapeutic modalities to improve venilation and promote bronchopulmonary hygiene, such as humidity, aerosols, breathing exercises, postural drainage and chest percussion, and IPPB.

The respiratory therapist also has primary responsibility for management of artificial airways ánd sophisticated life support sys tems, and is an integral part of the emer--
. . gency resuscitation team. Respiratory therapists also perform and interpret various tests to evaluate cardiorespiratory function, such as arterial blood gases and ventilatory volumes, pressures and.flows. The respiratory care practitioner must be able to provide. these services skilifully to patients of all ages, from newborns to the elderly:
Program graduates are eligible to sit for the certification examination for entry-level respiratory care practitioners; which is administered by the National Board for Respiratory Care (NBRC). After successiful completion of this exam and one year of clinical experience, the Certified Respiratory Therapy Technician (C.R.T.T.) is eligible to sit for the registry examinations to earn the Registered Respiratory Therapist (R.R.T.) credential. Graduates are also eligible to sit for the certification examination for entry=lével pul: monary function techinologists, and if successful earn the Gertified Pulmonary Function Technologist (CPFI) credential

To be admitted into the clinical portion or the program, i.e. RT 151, a student must ${ }^{\text {a }}$ meet certain matriculation standards by the end of the first semester. These standards are:

1. Succesšful completion of RT 100, MRT 101 and BIOL 104 with a combined GPA of 25
2. Achievement of an overall GPA of 20 for all courses.
To continue in the clinical portion of the program, a student must continue to meet the spirit of the initial matriculation standards by meeting the,following standards
3. A student receiving a grade of $D$ or $F$ in any MRT, RT or BIOL course must repeat the course.
4. Maintain aminimum combined GPA of 2.5 in all MRT; RT and BIOL courses.
5. Maintain an overall GPA of 2.0 for all courses.

The matriculation standards also require students to carry liability insurance,-which: may be obtained through the University for a nominal fee, and to submit an essay of high scholastic quality,'describing their career choice and goals, alonig with their matriculation applications: Students are also responsible for expenses incurred for transportation to and from' clinical sites, lab coats and/or uniforms and stethoscopes.

## First Year

Gëneral education
ENG 110 or 111 (3-5)
PSYC 201 or PHIL 342.(3-4)
Basic courses
MATH 127 (3)
MRT-101 (3)
BIOL 104 and 331 (7)
Core courses
RT 100, 102, 150 and 151 (i.1)

## Summer Session

General education
ENG 112 (3)
SOC 101 (3)
SPCH 102 (3)
Basic cöurses
ENVT 110 (3)
Core courses
RT 200 (3)
Second Year
General education
PSYC 201 or PHIL 342(3-4)
Basic courses
BIOL 332 (3)
MRT 204 (4)
Cöre courses
RT 152, 250 and 251 (12)

## ASSOCIATE OF SCIENCE

Firelands College offers two years of general. education courses leading to the Associate of Science degree: Students who complete the associate of science degree have reached the halfway point in the progression töward a B.S. degree.

The associate of science degree program is designed to provide pre-baccalaureate students with a sound academic back-
ground in a number of academic disciplines. such as the biological sciences, computer sceience, chemistry, geology, physical geography, mathematics and
physics/electronics
In addition, the associate of science degree offers the foundation to many career opportunities, such as:
Pre-professional
medicine
nursing
optometry
veterinary medicine
dentisitry
hygienists
pharmacy
occupational therapy
Microbiologist
Agriculturist ${ }^{*}$
Wild́life management
Applied mathematician

Chemist
inorganic-organic
physical-nuclear
structural-polymer
Computer scientist
Secondary school teacher.
Pre-engineering
General requirements for the associate of. science degrée are:
Communication (6 hrs: minimum)
Each sfudent is required to acquire proficiency in written expression and oral com-munication. ENG 1.12 and SPCH 102 are required.
Math/science ( 20 hrs. minimum)
To include a concentration of two courses in a major field and two courses in a cognate field Eligible disciplines include: biology, chemistry, computer science, geology, phys ical geography, physics and mathematics.
Math 130 or 131 required.
Social and Behavioral Sciences ( 14 hrs . minimum')
To include courses from at least two of the: following disciplines: economics geography,
history, political science and sociology.
PSYC 201 is required.
Fine and Applied Arts (10 hrs. minimum)
To include courses from at least two of the fóllówing: art, film, literature, music, popular culture, philosophy, speech and theatre. One course in literature must be included.

## Phyșical Education and Electives

To include foreign language (depending on student's background).

A * preceding a course number indicates that the course is offered both at Firelands and on the main campus.

A + preceding a course number indicates that the course is offered only at Firelands.

A $\frac{1}{}$ preceding a course number indicates thai the course may be used to fulfill a general education requirement.
The Arabic number in parentheses immediately following the titte of the course indicates the number of hours of credit.

The Roman numerals indicate the term the course is usually offered on the main campus with I indicating fall semester; II, spring semester; and III, summer term.

Courses numbered from 100 to 199 are ordinarily for freshmen or sophomores.

Courses numbered from 200 to 299 are for sophomores, juniors, and seniors and are not ordinarily open to freshmen.

Courses numbered from 300 to 499 are ordinarily open to juniors and seniors but under exceptional circumstances may be taken by a student upon the recommendafion of his or her adviser and with the written approval of the instructor of the course or the chair of the department concerned.

Courses which may be taken for graduate credit are listed following the undergraduate courses in this handbook.

## Accounting (ACCT)

ACCT 220. Administrative Accounting (3) II. Practice and procedures of accounting for office personnel. Not open to credit for students enrolled in baccalaureate programs.

- ACCT 221. Introduction to Accounting I (3) I, II, summer. Financial accounting concepts and methodology for accumulating data on the results of economic activities of a business concern and reporting such results to various user groups. Underlying theory of the reporting model as it relates to user decisions about the business. Prerequisite: sophomore standing or consent of department.
ACCT 222. Introduction to Accounting II (3) I, II, summer. ACCT 221 continued with emphasis on usage of accounting information in the managerial process. Problems of cost determination, cost flows, cost behavior, budgeting, standard costing, relevant costing and capital expenditure evaluation are introduced. Prerequisite: ACCT 221.
ACCT 321. Intermediate Financial Accounting I (3) 1, 11, summer. Development and application of financial accounting concepts and generally accepted accounting principles. Preparation of financial statements and accounting for changes in accounting principles. Emphasis on valuation and cost allocation methods for assets and related effects on income statements. Prerequisite: admission to the degree program in accounting or consent of department.
ACCT 322. Intermediate Financial Accounting II (3) I, II, summer. ACCT 321 continued with emphasis on long-term liabilities, pensions, leases, stockholders' equity, income tax allocation, accounting for inflation, and the statement of changes in financial position. Prerequisite: grade of $C$ or better in ACCT 321.


## ACCT 325. Accounting Concepts for Non-

business Students (3) I, II, summer. Accounting concepts and procedures and their contribution to administrative processes. Enterprise analysis, relevant data, its uses and limitations. Not applicable to pre-professional core requirements in the College of Business. Not open to students who have completed ACCT 221 or ACCT 222. Prerequisite: junior standing.
ACCT 327. Financial Accounting for Nonmajors (3) I. Structure and theory of financial accounting. Evaluation of existing conventions and procedures pertaining to external reporting. No credit towards accounting concentration. Prerequisite: ACCT 222.
ACCT 331. Cost Accounting (3) I, II, summer. Cost determination and cost accounting systems. Cost analysis using regression methods. Job order, process, standards, and variable cost systems. Accounting for spoilage, service departments, and joint products. Prerequisite: admission to degree program in accounting and STAT 212, or consent of department.

ACCT 332. Intermediate Managerial Accounting (3) I, II, summer. Accounting's relationship to planning and control function. Budgeting, corporate planning models, cost-volume-profit analysis, relevant data, capital budgeting, data for operations research models, behavioral considerations, enriched variance systems, evaluation of performance, and transfer pricing. Prerequisite: grade of C or better in ACCT 331.
ACCT 337. Management Accounting for Nonmajors (3) II. Accounting concepts as tools for administrative evaluation and control of business operations. Nature, usage, and reliability of accounting data in the decision making process. Cost analysis and profit planning. No credit toward accounting concentration, Prerequisite: ACCT 222.
ACCT 360. Accounting Information Systems (3) I, 11 , summer. General systems concepts and theory. The collection and processing of accounting information. Internal control asepcts of accounting systems. Systems life cycle in an accounting framework. The interface of accounting systems and computer technology. Prerequisite: Grade of C or better in ACCT 221, 222, and MIS 200.
ACCT 421. Advanced Financial Accounting (3) I. Theory and practice for business combinations and consolidations, partnerships, branch and home office accounting, financial reporting for multinationals including foreign currency translation. Prerequisite: grade of C or better in ACCT 322.
ACCT 422. Contemporary Financial Accounting Topics (3) II, alternate years. Theory and implications for accounting practice of selected contemporary financial accounting topios. Topics vary with governmental and professional bodies' pronouncements impacting on financial accounting. Prerequisite: grade of C or better in ACCT 322.
ACCT 423. Accounting for Non-profits (3) II, alternate years. Methods and problems of controlling and reporting on resources (funds) segregated for conducting specific activities of non-profit-seeking entities; budgetary control. Prerequisite: grade of C or better in ACCT 322 or consent of department.
ACCT 424. Financial Reporting ior Multinationals (3) II. Alternate years. Case study of worldwide accounting control and reporting problems, impact of cultural and legal constraints, and objective appraisal of various accounting principles and pronouncements. Prerequisite: grade of C or better in ACCT 322 or consent of the department.
ACCT 429. Problems in Accounting Practice (3) II, alternate years. Comprehensive review and integration of accounting theory and practice using problem method. Prerequisite: 15 hours of accounting and grade of $C$ or better in ACCT 322.

ACCT 439. Role of the Financial Executive (3) II. Capstone case study of accountant's role in management planning and control; profit centers, discretionary costs, budgeting, strategy, and evaluation of enterprise performance. Prerequisite: grade of C or better in ACCT 332. or in ACCT 337, or consent of instructor.
ACCT 441. Introduction to Federal Taxation (3) I, II, summer. History, assumptions, objectives of federal tax system. Detérmination of an entity's taxable and nontaxable incomes, capital gains and losses, deductions and exemptions, and special provisions. Reporting requirements and determination of tax liability. Introduction to federal tax research methodology. Prerequisite: grade of $C$ or better in ACCT 322, or grade of $C$ or better in ACCT 321 if concurrently registered for ACCT 322.

ACCT 442. Advanced Federal Taxation (3) II. Determination of taxable income and reporting requirements unique to corporations, partnerships, and Subchapter S corporations. Application of federal tax laws to special problems of corporations including stock redemptions, capital structure, liquidation, and corporate accumulations. Overview of federal taxation of gifts, estates, and trusts. Prerequisite: grade of C or better in ACCT 441.

ACCT 451. Auditing I (3) I, II, summer. Auditing procedures and practices of independent verification of financial records and reviews of operations as used by internal auditors and public accountants. Nature of audit evidence, evaluation of internal controls, statistical sampling, computer auditing. Prerequisite: grade of $C$ or better in ACCT 322 or grade of C or better in ACCT 321 if concurrently enrolled in ACCT 322.

ACCT 452. Auditing II (3) II. Auditor's role in society; auditing standards, professional ethics, accountants' legal liability, the auditor's report. Case studies in applied auditing. Prerequisite: grade of C or better in ACCT 451, or consent of instructor.
ACCT 489. Internship Seminar (1-3) I. To be completed at first opportunity following suitable internship experience. Work experience to be preceded by at least 70 hours of academic credit and advanced approval by program coordinator. Not open to students with other internship credit in College of Business Administration. Graded S/U.
ACCT 491. Studies in Accounting (1-3) 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 nature of material. Prerequisite: approval of department.

## Accounting Technology (ACT)

$\dagger$ ACT 231. Financial Accounting (3) I or II. Theory and application of generally accepted accounting principles as pronounced by the Financial Accounting Standards Board (FASB) and the Securities Exchange Commission (SEC). Designed for the associate of applied business accounting program at Firelands. Prerequisite: ACCT 221.
$\dagger$ ACT 241. Cost Accounting (3) I or II. Theory and application of job-order-cost systems, process cost systems, and standard cost systems. Designed for the associate of applied business accounting program at Firelands. Prerequisite: ACCT 222.
251. Federal Income Tax (3) I or II. Theory and application of federai income taxes as applied to the individual, sole proprietorship, partnership, and corporation. Designed for the associate of applied business accounting program at Firelands.

## Aerospace Studies (AERO)

These courses are for Air Force ROTC. Successful completion of these courses can lead to a commission as an officer in the United States Air Force.
AERO 111. Air Force Organization (1) I. Organization of the United States Air Force, mission function and employment of strategic forces, capabilities of Army in limited war and counterinsurgency, Naval forces structure and employment, enemy threat assessment. Leadership laboratory activities.
AERO 112. Air Force Organization (1) II. U.S. general purpose force capabilities, mission, resources, operation of tactical air forces defensive forces, airlift forces, structure and function of logistics support weapons systems development. Leadership laboratory activities.
AERO 211. Air Force History (1) I. Development of air power from the first lighter-than-air vehicles through to the establishment of the Department of the Air Force as an independent military force. Various concepts of employment of air power and factors which have prompted research and technological change. Examples of impact of air power on strategic thought. Leadership laboratory activities.
AERO 212. Air Force History (1) II. Development of air power since the establishment of the independent Air Force to the present. Various concepts of employment of air power and factors which have prompted research and technological change. Examples of impact of air power on strategic thought. Leadership laboratory activities.
AERO 311. Air Force Management (3) I. Integrated management course emphasizing individual as a leader in the Air Force. Human behavior, individual and in groups, historical development of management thought, discussion of classical leadership theory; oral and written communication, military writing, and briefing formats. Leadership laboratory activities. Prerequisite: departmental approval.
AERO 312. Air Force Management (3) II. AERO 311 continued. Air Force leadership, planning, organizing, coordinating, directing and controlling functions of management with emphasis on Air Force application, concept of command and staff, junior officer as administrative leader, Air Force personnel system, management of change, managerial strategy in changing environment. Leadership laboratory activities. Prerequisite: departmental approval.
AERO 372. AFROTC Flight Instruction Program (2) II. Aircraft operation; flight safety; rules of the air, instruction in advanced flight maneuvers; navigation techniques. Required of and limited to AFROTC pilot candidates. (Register Pass/Fail only).
AERO 411. American National Security (3) I.
The Air Force officer as part of national security forces in contemporary American society, armed forces as integral element of society, American civil military relations and environmental context in which defense policy is formulated. Formulation and implementation of U.S. defense policy; framework of defense policy including domestic and international system. Leadership laboratory activities. Prerequisite: departmental approval.

AERO 412. American National Security (3) II. The Air Force officer and his part in the evolution of defense strategy since World War II. Strategy and management of conflict, arms interaction and control, limited war, insurgency, counter-insurgency, international terrorism, military law. Initial Active Duty Orientation. Leadership laboratory activities. Prerequisite: departmental approval.

## Aerotechnology (AERT)

AERT 240. Air Transportation. (3) I, II, summer. History, regulation and administration of the air transportation system. Emphasis on air carrier, air taxi, corporate and general aviation.
AERT 342. Flight Instruction I and II (3) I, II, summer. Aerodynamics, aircraft systems, charts, airports, communication procedures, meteorology, regulations, aviation publication, flight computer, medical facts, radio navigation, and cross country flight planning. Upon completion of course, students qualified to take FAA Private Pilot-Airplane written exam.
AERT 343. Flight Instruction III (1) I, II, summer. Includes 15 hours of solo and 20 hours of dual instruction specified as a minimum for FAR Part 141 private pilot training. License must be obtained to receive credit for course. Additional fees arranged with chief flight instructor. Prerequisite: AERT 342 or permission.
AERT 344. Commercial Ground School (1) II, On demand. Advanced aerodynamics and aircraft systems, commercial pilot operations, weight and balance, complex operation. Upon completion of course, students qualified to take FAA Commercial Pilot-Airplane written exam. Prerequisite: AERT 342.

AERT 345. Commercial Flight Instruction I (1) I, II, summer. Advanced flight maneuvers, night flight instruction, cross country flight training. First of two flight sequences leading to the Commercial Pilot-Airplane rating. Flight fees arranged with chief flight instructor. Prerequisite: AERT 343.

AERT 346. Commercial Flight Instruction II (2) I, II, summer. AERT 345 continued, includes commercial pilot flight maneuvers and complex aircraft flight training. Commercial Pilot-Airplane license must be obtained to receive credit for course. Prerequisite: AERT 345. Additional fee arranged with chief flight instructor.
AERT 348. Airport Operation. (3) II. General aviation airport operations planning including airport environment, airport security, legal aspects, deregulation, airport finance and airport master plans. Prerequisite: junior status.
AERT 401. Aviation Instructor Ground School (2) II, On demand. Presents learning theory in an aviation setting, instructor responsibility, lesson planning, and advanced aviation problems. Upon completion student qualified for FAA written exam Fundamentals of Instructing and either Basic Ground Instructor or Flight Instructor-Airplane. Prerequisite: AERT 344.

AERT 402. Instrument Ground School (3) I. On demand. Instrument flight planning, meteorology, approach procedures, approach chart interpretations and instrument flight communication. Upon completion students are qualified for the Instrument-Airplane written examination. Prerequisite: AERT 342.
AERT 403. Instrument Flight Instruction (1) I, II, summer. Dual flight instruction required for the FAR Part 141 Instrument rating. Flight fees arranged with chief flight instructor. Prerequisite: AERT 345 or permission.
AERT 490. Problems in Aerolechnology (1-3) On demand. For advanced students wanting to conduct intensive study of selected problems in aerotechnology. Prerequisite: consent of college. Graded S/U.

## American Sludies（AMST）

胃A解ST 200．Introduction to American Siudies（3） 1．Regional，ethnic，and economic aspects of American national experience as reflected in verbal，visual，and material artifacts．Culture theory and models used to examine selected topics and problems．Required of all American studies majors．
FApher 230．Issues in American Civilization（3）I， II．Characteristically American themes，issues，or problems reflecting relationships among ideas， values，traditions，events，and personalities． Subject matter designated in time schedule； may be repeated once if topics differ．

## AMST 240．Historical Perspectives on

 American Culiure（3）1，II．Interdisciplinary study of a theme，issue，or problem as it relates to his－ torical development of American culture． Designed for non－majors；meets requirement for Group IVA感ST 300．Interpretations of American Cul－ we（3）I，II．Such theories as frontier thesis， metting pot，cuftural pluralism，regionalism， and technocracy and their imaginative expres－ sion．Prerequisite：junior standing or consent of instrucior．May be repeated if subject differs．

ABST 400．The Literature of American Surdies（3）it．interdisciplinary approach to study of American culture．Required of Amer－ ican studies majors，but of interest to students who focus on American culture，society，insti－ tutions，or economics in their particular disci－ plines．May be repeated once if toplcs differ． Prerequisite：senior or permission of instructor．＂
AWST 490．Tutorial in American Studies（1－3） 1，th．Independent study in special interdis－ ciplinary subject not covered by existing courses．Prerequisite：junior standing；pro－ posal，signed by proposed tutor，must be submitted for approval by undergraduate adviser in American studies prior to semester in which tutorial begins．

## Applied W⿵⿰丿⿺⿻⿻一㇂㇒丶𠃌⿴囗十一athematics and Slatistics（AMS）

TAMS 100．Developmental Mathematics（3）I， II，summer．Review of basic mathematics such as equations，inequalities，exponents and rad－ icals，logarithms，polynomial functions， graphs，and applications．Graded $\mathrm{S} / \mathrm{U}$ ．
＂Cannot be oounted toward spectatization in STAT．
＂See also methematics and statistics（MATH）

## Applied Siatistics（STAT）＊＊

＊STAT 200 ．Using Statistics（3）I，II．Descriptive statistics，probability distributions，estimation， hypothesis testing，regression，contingency ta－ bles．Interpretation and misinterpretation of sta－ tistical techniques．Dees not count toward gra－ duation credit for students receiving B．S．in B．A． 6STAT 241 ．Elementary Statistical Methods I（3） 1，II．Elementary probability，random variables， probability distributions，sampling，descriptive statistics，sampling distributions，estimation． Prerequisite：MATH 125 or MATH 131 or con－ current registration in MATH 125.
－STAT 212．Elementery Statistical Methods I （3）1．Il．Estimation，hypothesis testing，regres－ sion，correlation，analysis of variance，and con－ tingency tables．Prerequisite：STAT 211.
＊STAT 311．Iniroduction to Regression and De－到g（3）1，II．Regression analysis，analysis of variance，topics in design of experiments．Pre－ requisite：STAT 212 or consent of instructor．
＊STAT 312．Topics in Applied Statistics（3）．Se－ lected topics from time series，sample design， decision theory，nonparametrics or factor analy－ sis．Prerequisite：STAT 212.

## STAT 315．Introduction to Stakistical Inference

（3）I． N －dimensional random variables and dis－ tributions：methods of estimation；hypothesis testing．Prerequisites：STAT 212 and MATH 232. Not open to students with MATH 442.
STAT 402．Regression Analysis（3）I．Linear nonlinear，and multiple regression and correla－ tion analysis．Prerequisite：STAT 315 or MATH 441 or consent of instructor．
STAT 404．Time Series Analysis（3）Stochastic stationary and nonstationary models；use in fore－ casting seasonal and nonseasonal discrete time series；fitting models to time series data． Prerequisite：STAT 315 or MATH 441 or con－ sent of instructor．

STAT 406．Sample Design（3）II．Sampling as a tool of scientific inference in research and management．Planning surveys；sample size， stratified，systematic，and cluster sampling； sources of error in surveys．Prerequisite： STAT 315 or MATH 441 or consent of instructor．

STAT 410．Experimental Design（3）II．Con－ structing statistical designs and analyzing resulting data；basic experimental design and analysis of variance．Prerequisite：STAT 315 or MATH 441 or consent of instructor．
STAT 412．Applied Nonparametric Statistics （3）．Nonparametric approach to testing hypotheses；contingency tables，goodness of fit，procedures based on ranks．Prerequisites： STAT 315 or MATH 441 or consent of instructor．

STAT 414．Statistical Quality Control（3）．Sta－ tistical process control；Shewhart control charts（variables and attributes）；acceptance sampling（single，double，and sequential）； Dodge－Romig Tables．Prerequisite：STAT 212 or MATH 441 and one additional STAT course or consent of instructor．

STAT 491．Studies in Statistics（ $1-3$ ）．On demand．Investigation of selected areas or． contemporary problems．May be offered indi－ vidually and in classes depending on student needs and nature of material．

## ART（ART）

TF ART 101．Introduction to Art（3）I，II，sum－ mer．Historical and aesthetic components of art with laboratory experiences with basic elements of creative expression．Non－majors only．Two hours studio，two hours lecture．
f\＄ART 102．Two－Dimensinal Foundations（3）！ II，summer．Introduction to principles of art through a variety of concepts and media used in creative two－dimensional form organization． Required of art majors and minors．Can be taken with ART 103 OR 112.
©ART 103．Drawing Foundations（3）I，II，summer． Development of drawing skilis through observa－ tion of natural objects to aid expressive drafts－ manship and pictorial accuracy．Required of art majors and minors．Can be taken with ART 102 or ART 112.
ART 112．Three－Dimensional Foundations（3）I， II，summer．Creative principles of art in three－ dimensional form emphasizing aesthetics，utilit－ arian concepts and tools in experimental studio experiences．Required of art majors and minors． Can be taken with ART 102 or 103.
© ART 205．Figure Drawing（3）I，II．Principles and practices of creative and structural figure draw－ ing：development of concepts and techniques for competent graphic expression related to drawing human forms．Six studio hours．Pre－ requisite：ART 103．Lab fee．
－ART 206．Drawing from Life（3）I，II．Further work on visual comprehension in figure drawing to improve perceptual judgment；move to a more personal and selective level of stylistic interpre－ tation．Six studio hours．Prerequisite：ART 205. Lab fee．

ART 261．Sculpture I（3）I，il．Creative concepts， arrangements and techniques of three－ dimensional sculptural forms．Six studio contact hours．Prerequisites：ART 101 or ART 102．Lab fee．
ART 263．Ceramics I（3）I，II．Clay as creative medium for functional forms．Handbuilding and wheel techniques；simple sculpture；glazing and firing；survey of clays，pottery types，kilns，py－ rometry．Six studlo hours．Prerequisites：ART 102，ART 112．Lab fee．

ART 267．Stained Glass Compositions（3）I． Techniques involved with creative two－and three－dimensional arrangements；emphasis on individual studio development．Six studio hours． Lab fee．
ART 277．Prinimaking ！（3）I，II．Basic techniques for woodcuts，silk screen，intaglio，or litho－ graphy．Six studio hours．Prerequisite：ART 103. Lab fee．
ART 305．Advanced Drawing from Life（3）I，II． Advanced experimentation using the figure in drawing composition with a graphic media．Six studio hours．Prerequisite：ART 206．Lab fee．
ART 315．Glassworking（3）I，II．Free handblown glass formation；personal creative use of glass as an artistic medlum for expression．Six studio hours．Lab fee．
ART 320．Enameling on Mital（3）I，II．Enameling techniques on copper；after initial 6 hours credit earned，choice of copper or jeweiry techniques． Six studio hours．May be repeated to 9 credit hours．Prerequisite：ART 101 or ART 102，or consent of instructor．Lab fee．
ART 321．Beginning Jewelry Design（3）I，II．De－ sign and fabrication techniques of metal jewelry －piercing，chasing，repousse，soldering and stone setting．Six studio hours．Prerequisite： ART 101 or ART 102，or consent of instrucior． Lab fee．

ART 322．Jeweiry Design（3）I，II．Centrifugal casting of silver，gold，tombac，brass and bronze jewelry and related objects，using wax and plasmodels．Six studio hours．Prerequisite：ART 321．Lab fee．
ART 325．Creative Photography I（3）I，II．
Photography as a fine art．Use of camera for creative expression：introduction to history and critical awareness．Black and white lab work． Prerequisites：ART 102 or consent of instructor．
ART 326．Creative Pholography i！（3）i，HI．View camera techniques，development of critical awareness of contemporary creative photo－ graphy，personal imagery and perception．Six studio hours．Prerequisite：ART 325.
equisites：ART 252 and EDFI 302.
C／F hrs．：40．Lab fee．
ART 361．Sculpture II（3）1，11．Three－dimensional development in techniques such as：casting，as－ sembling，fabricating，manipulating and forming metal；plastic，plaster，etc．；welding with oxygen／ acetylene，arc and MIG；and carving wood and stone．Six studio hours．May be repeated to six hours．
ART 363．Ceramics 11 （3）I ill．Development of throwing techniques，design concepts，surfack decoration，and sculpural forms．Laboratory development of simple glazes．Kin stacking and firing．Six studio hours．Prerequisite：ART 263. Lab fee．
ART 365．Weaving（3）I，II．Techniques of weav ing on a 4 －harness loom．Emphasis on mate－ rials and creative interpretation of fiber forms． Six studio hours．Lab fee．

ART 366. Fiber/Fabric Techniques (3) I, II. Use of fiber and fiber dyeing, construction techniques and materials used to develop personal creative expression. Feltmaking, plaiting, machine quilting, painting with dyes, coiling. Six studio hours. Lab fee.

- ART 371. Watercolor Painting I (3) I, II. Introductory experimentation with painting techniques on paper; employment of the figure, still life and landscape as initial references. Six studio hours. Prerequisite: ART 103.
- ART 372. Watercolor Painting II (3) I, II. Choice of specific compositional problems exploring the possibilities of design and expression in watercolor techniques; creation of foundational surfaces, mixed media, and works in series. Six studio hours. May be repeated to 6 hours. Prerequisite: ART 371.
ART 373. Oil/Acrylic Painting I (3) I, II. Exploration of painting techniques from traditional and contemporary using oil and acrylic paint as a medium emphasizing individual artistic response. Six studio hours. Prerequisite: ART 103.
ART 374. Oil/ Acrylic Painting II (3) I, II.
Opportunity to experiment with varying media and techniques and to use fundamentals learned in introductory course. Six studio hours. May be repeated to six hours to provide more individual instruction. Prerequisite: ART 373.
ART 377. Printmaking II (3) I, il. Development of additional techniques as related to woodcuts, silk screen, intaglio or lithography. Six studio. hours. May be repeated to six hours. Prerequisite: ART 277. Lab fee.
ART 390. Introduction to Computer Art (3) I, II. Survey of Methods of producing original computer art, software and appropriate hardware. Prerequisites: ART 102, 103, 112, or consent of instructor. Lab fee.
ART 391. Computer Art II (3) il. Intermediate animation using computers, video equipment, software and languages in creation of original works of art. May be repeated to 6 hours. Prerequisites: ART 390 or consent of instructor. Lab fee.
ART 392. Applications of Computer Art (3) I, II. Computer art in specific disciplines such as design, painting, sculpture, etc. Topic to be announced. May be repeated to 9 hours. PrereqLisites: ART 391 or consent of instructor. Lab fee.


## ART 395. Workshop on Current Topics in Art

(1-4). Select semesters. Short-term workshop in studio or art education with content and emphasis as directed by needs and interests. One or two clock hours per credit depending on type. Prerequisite: as announced for each workshop.
ART 405. Advanced Drawing (3) I, II. Conceptual imagery in drawings as completed visual statements; not exclusively concerned with the human figure. Six studio hours. May be repeated to six hours. Prerequisite: ART 206. Lab fee.
ARTD 414. Senior Design Seminar (3) I, II. Preparation for entrance into the profession. Emphasizes job related skills and practices. Each student prepares a portfolio and designs and prints a personal resume. Prerequisite: ARTD 412 or ARTD 417 or consent of instructor.
ART 415. Advanced Glassworking (3) I, II. Continuation of free handblown glass formation. Cast glass techniques including: pate de verre, slumping, sand casting. Equipment and studio construction. Six studio hours. May be repeated to six hours. Prerequisite: ART 315. Lab fee.

ART 421. Advanced Jewelry Design (3) I, II. Advanced problems in jewelry design, smithing and forging. Six studio hours. May be repeated to 9 credit hours. Prerequisite: ART 321 and 322. Lab fee.

ART 423. Jewelry Enameling (3) I, II, summer. Specialized course for students wishing to combine champleve, cloisonne, and plique-ajour enameling techniques with jewelry. Six studio hours. Prerequisite: ART 320 and 421. Lab fee.
ART 425. Advanced Problems in Creative Photography (3) I, II. Advanced level assignments in creative photography; development of personal direction; emphasis on communicative potential of resulting images. Six studio hours. May be repeated to six hours. Prerequisite: ART 325.
ART 426. BFA Thesis Project in Creative Photography (3) I, II. Semester-long project emphasizing personal development of philosophy and style in creative photography. Six studio hours. Prerequisites: ART 425.
ART 461. Sculplure III (3) I, II. Advanced sculptural techniques and introduction to environmental and architectural scaling. Six studio contact hours. May be repeated to six credit hours. Prerequisite: ART 361. Lab fee.
ART 463. Ceramics III (3) I, II. Throwing of duplicate forms and functional ware. Glaze development through unity molecular formula. Individual projects determined upon consultation with instructor. Six studio hours. May be repeated to six hours. Prerequisite: ART 363. Lab fee.
ART 465. Advanced Weaving (3) I, II. Conceptual and functional work leading to development of personal direction in tapestry, multiple harness, Ikat, rug or pattern weaving. Six studio hours. May be repeated to six hours. Prerequisite: ART 365 or consent of instructor. Lab fee.
ART 470. Independent Studies in Studio (1-3). Supervised individual problems in selected studio research for students who have shown proficiency and marked degree of independence in other studio coursework. May be repeated. Prerequisite: consent of instructor.
ART 471. Watercolor Painting III (3) I, II. Individual development in watercolor medium emphasizing personal style and presentation. Students are encouraged to find self-directions and motivation in consultation with instructor. Six studio hours. May be repeated to 6 hours. Prerequisite: ART 372.
ART 473. Oil/Acrylic Painting III (3) I, II. For advanced student to pursue personal style and to concentrate on elements most important to them. Emphasis placed on individuality and arranged critiques. Six studio hours. May be repeated to 6 hours. Prerequisite: ART 374.
ART 477. Printmaking II (3) I, II. Specialized advanced techniques in woodcuts, silk screen, intaglio, or lithography. Six studio hours. May be repeated to six hours. Prerequisite: ART 377. Lab fee.
ART 490. Problems Computer Art (3) I, II. The computer and contemporary technology (i.e., video, robotics, light, etc.) in the creation of art forms. May be repeated to 9 hours. Prerequisites: ART 391 or consent of instructor. Lab fee.

ART 491. Advanced Computer Art (3) II. The creation of art through computer simulation. May be repeated to 9 hours. Prerequisites: ART 490, advanced math, languages (BASIC and one structured language) or consent of the instructor. Lab fee.
ART 495. Special Topics in Art (1-3). Innovative and intensive group studies in selected studio research. Prerequisites announced for each offering. May be repeated.

## ART DESIGN (ART D)

ARTD 211. Introduction to Graphic Design (3) I. II. Exploration and application of design principles, layout and typography; tools, techniques and terminology of the discipline. Six studio hours. Prerequisite: ART 102 or consent of instructor. Lab fee.
ARTD 212. Introduction to Product Design (3) I, II. Problem-solving as related to product design; terminology, drafting, model making and prototypes. Six studio hours. Prerequisites: ART 103 or ART 112 or DESN 104 or consent of instructor. Lab fee.
ARTD 213. Introduction to Environmental Design (3) I, II. Fundamentals, terminology, methods of communication for the environmental profession. Use of illustration and threedimensional models as means of exploring design and presentation. Six studio hours. Prerequisite: ART 112 or consent of instructor. Lab fee.
ARTD 311. Intermediate Graphic Design (3) I, II. Continued exploration in graphic design with an emphasis on typography and editorial and publication design. Prerequisite: ARTD 211 or consent of instructor.
ARTD 312. Advertising Design (3) I, II. Translating words and ideas into visual realities of mass communication; magazines, newspapers, billboards, direct-mail, and TV. Use of felt markers, storyboards and video tape. Six studio hours. Prerequisite: ART 311 or consent of instructor. Lab fee.
ARTD 313. Rendering (3) I, II. Studio practice with professional techniques for presenting three-dimensional design on a two-dimensional surface. Six studio hours. Prerequisite: ART 212 or ART 213 or consent of instructor. Lab fee.
ARTD 411. Advanced Graphic Design (3) I, il. Concentrated study and advanced level problems that allow senior level students to expand and refine their abilities in graphic design. Prerequisite: ARTD 311.

ARTD 412. Packaging and Promotion Design (3) I, II. The package as attractive, informative product vehicle, and its relationship to consumer purchase. Promotional and collateral advertising of product and package. Six studio hours. Prerequisite: ART 312 or consent of instructor. Lab fee. .
ARTD 413. Corporate Identity Design (3) I, II. Professional presentation of corporate identity program for existing or fictitious company. Development and application of trademark and/or logo type based on compiled in-depth research. Six studio hours. Prerequisite: ART 412 or consent of instructor. Lab fee.
ARTD 416. Producl Design and Development
(3) I, II. Research, design and development of objects for manufacture. In-depth projects include drawings, renderings, and models or prototypes. May be repeated to six hours. Prerequisites: ART 212 and ART 213 or consent of instructor. Lab fee.
ARTD 417. Environmental Design (3) I, II. Contemporary environmental planning; includes projects dealing with a variety of spaces and functions; use of renderings and models. May be repeated to six hours. Prerequisite: ART 213 or consent of instructor. Lab fee.
ARTD 418. Senior Design Problems (3) I, II. Specific design problems chosen from actual product or environmental situations. Research, design, and presentation handled as final portfolio project. Six studio hours. Prerequisite: senior standing. Lab fee.
ARTD 419. History of Design (2) I, II. Slide survey of architectural, graphic, and industrial design movements influencing western culture from 1850 to present.

ARTD 420. Graphic Design Synthesis (3) I or II Must be taken in conjunction with VCT 467. A cooperative venture between graphic design and VCT offering valuable work experience in offset lithography that results in a printed portfolio piece: Prerequisites: ARTD 411, VCT 308 and submission of portiolio.
ARTD 470 . Independent Studies in Design (13). Supervised individual problems in selected design, research for students who have shown proficiency and marked degree of independence in other design coursework. May be repeated. Prerequisite: consent of instructor.
ARTD 489. Design Internship (3-10) I, II, summer. Studio experience in chosen area design firm. Gredit approved upon submission of portiolio and written description of experience in consultation with firm; elective hours only. Prerequicites: 15 hours of design, consent of design staff.
APTO 435. Special Topics in Design (1-3). Innovative and intensive group studies in selected cesign research. Prerequisites announced for each offering. May be repeated.

## ART EDUCATION (ART E)

ARTE 252. Foundations for Teaching Visual Arts (3) I. Lecture, laboratory, and field-based experiences for art teaching. Clinical analysis of instructional behavior in art education settings. Prerequisite: sophomore standing.
-ARTE 343. Art in the Elementary Schools (2) I, II, summer. Professional methods lecture, clinical studio laboratory exploration of art media and planning approaches for teaching art to children in relation to their creative and artistic development. Not for arts and sciences credit. Not open to art majors. Prerequisite: ART 101 or ART 102. Lab fee.
ARTE 352. Approaches to Public School Art (3) 1. Theories of creative development in lecture/ laboratory and field experiences. Lesson content selection, planning and presentation for visual arts teaching. Not for arts and sciences credit. Prerequisites: ART 252 and EDFI 302. C/F hrs.: 40. Lab fee.

ARTE 353. Approaches to Art Curriculum and Supervision (3) II. Planning and management of art programs; clinical experiences related to deveiopment of instructional units for art curricula. Not for arts and sciences credit. Prerequisites: AFT 252 and 352. C/F hrs.: 20. Lab fee.
ARTE 470. Independent Studies in Art Education (1-3). Supervised individual problems in selected art education research for students who have shown proficiency and marked degree of independence in other art education coursework. May be repeated. Prerequisite: consent of instructor:
ABTE 482. Art for Special Needs Children (3) I, II. Art strategies and media adaptions for exceptional populations in both regular and alternative educational settings. Uses of art for exceptional children in regular classroom. Not for arts and sciences credit. C/F hrs: 40. Lab fee.
ARTE 483. Teaching for Art Appreciation (3) On demand. Role of art in society; development of instructional units on art history, art criticism, aesthetic responsing. Prerequisite: senior standing. C/F hrs: 29.

ARTE 487. Studio Teaching Practicum (3) I, Il. Clinical teaching experience in School of Art Children's Program. Two credits if instructing, one credit if assisting. Prerequisite: permission of program director.
ARTE 492. Student Teaching (1-10) I, II. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required for elementary and/or kin-dergarten-primary certification. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs: 300. May be repeated. Graded S/U.
ARTE 495. Special Topics in Art Education (13). Workshop topics and intensive group studies relative to special needs of visual arts teachers. Prerequisites announced for each offering. May be repeated.
ARTE 497. Student Teaching ( $1-10$ ) I, il. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Fee: \$5 per credit hour. Eligibility requirements must be met. C/F hrs: 300. May be repeated. Graded S/U.

## ART HISTORY (ART H)

If ARTH 145. Western Art I (3) I, II. Ancient, Medieval, and eariy Renaissance art.
I $\diamond$ ARTH 146. Western Art II (3) I, II. Art from High Renaissance to present. May be taken before ART 145.

ARTH 440. Modern Architecture (3) Alternate years. Architecture of 19th and 20th centuries in Europe and America.
ARTH 441. American Art to the Civil War (3) I. Painting, sculpture, and architecture of colonial era and United States to 1860; interrelationship between visual arts and significant issues in American culture.
ARTH 442. American Art Since the Civil War (3) II. Painting, sculpture, architecture, and photography of United States from 1860 to present. Special attention to artists and developments prior to W.W.Il frequently overlooked in surveys of modern art.
ARTH 445. Ancient Art I (3) Alternate years. Art and archaeology of prehistoric Aegean and of Greece to Persian Wars.
ARTH 446. Ancient Art II (3) Alternate years. Art of Greece from Persian Wars and of Rome from Late Republic to Constantine.
ARTH 449. Medieval Art (3) I. Alternate years. Art and architecture from Medievalization of Roman Empire through High Gothic period.
ARTH 451. Art of the Italian Renaissance (3) Alternate years. Painting, sculpture and architecture of ltaly during the Renaissance, from the late 13th century through the 16 th century and Mannerism.
ARTH 453. Northern Renaissance Art (3) Alternate years. Painting, sculpture and graphic arts of Flanders, France, Germany, England and Spain during the 15 th and 16 th centuries.
ARTH 454. Baroque and Rococo Art (3) Alternate years. The painting, sculpture and architecture of Italy, Spain, France and the Low Countries in the 17th and 18th centuries.
ARTH 455. Art of the 19th Century (3) I. Painting and sculpture in 19th century, from neoclassicism through post-impressionism.
ARTH 456. Art of the 20th Century (3) 11. Painting and sculpture in 20th century Europe and America, from Fauvism to the present.

ARTH 458. Art of india and S.E. Asia (3) I. Art and architecture in India and S.E. Asia from the earliest times to present.
ARTH 459. Art of China and Japan (3) II. Art and architecture of China and Japan from earliest cultures to present.
ARTH 470. Independent Studies in Art History (1-3). Supervised individual problems in selected art history research for students who have shown proficiency and marked degree of independence in other art history coursework. May be repeated. Prerequisite: consent of instructor.
ARTH 495. Special Topics in Art History (1-3). innovative and intensive group studies in selected art historical research. Prerequisites announced for each offering. May be repeated.

## ART THERAPY (ART T)

ARTT 230. introduction to Art Therapy (2) I, il. Theories, practices and literature of the profession. Prerequisite: ART 102 or ART 103 or consent of instructor. Lab fee.
ARTT 330. Art Therapy: Methods and Theories I (3) I. Psychological, creative and educational models which provide toundation philosophy for art therapy practice; methods of using art experience for art therapy. Field observation and laboratory. Prerequisite: ART 230. Lab fee.
ARTT 331. Art Therapy: Methods and Theories II (3) li. Lecture and supervised field experience emphasizing relationship of art process, art therapy methods and special needs populations. Prerequisite: ART 330. Lab fee.
ARTT 470. Independent Studies in Art Therapy (1-3). Supervised individual problems in art therapy research for students who have shown proficiency and marked degree of independence in other art therapy coursework. May be repeated. Prerequisite: consent of instructor.
ARTT 488. Art Therapy: Practicum (10) I, II. Supervised art therapy practicum therapeutic art experience in selected mental health, medical or educational facility. Weekly seminar, Prerequisite: ART 331 or consent of instructor.
ARTT 495. Special Topics in Art Therapy (1-3) Innovative and intensive group studies in selected art therapy research. Prerequisites announced for each offering. May be repeated.

## Arts and Sciences (A\&S)

TA\&S 100. Seminar in Arts and Sciences (1-5) On demand. Interdisciplinary studies in arts and sciences or area of study meeting new trends in arts and sciences. May be repeated by consent of dean of college. Prerequisite: consent of instructor.
A\&S 300. Seminar in Arts and Sciences (1-5) On demand. Interdisciplinary studies in arts and sciences or area of study meeting new trends in arts and sciences. May be repeated by consent of dean of college. Prerequisite: consent of instructor.
A\&S 410. Anthropological Theory and Methodology (3) On demand. Anthropological theory and methodology from 19th century to the present.
A\&S 480. Anthropological Senior Seminar (3) On demand. Senior Seminar or directed field research.

## Astronomy (ASTR)

ASTR 201. Modern Astronomy (3) I, II, summer Recent astronomical discoveries; space travel Anong planets, birth and death of stars, superhovas, pulsars, black holes, $x$-ray stars, radio galaxies, quasars, extra-galactic phenomena, and origin of universe; some observational work.

ASTR 212. The Solar System (3) I, summer. Alternate years. Planetary, solar and space science. The moon, solar interior and atmosphere, solar/terrestrial relations, planetary structure and atmospheres, comets, asteroids, meteoroids, space exploration, origin of solar system.
ASTR 305. Life in the Universe (3) II. Älternate years. Possibilities for life on other planets and other star systems, methods for communicating with other intelligent life, movement of human life into space.

ASTR 307. Understanding the Cosmos (3) II. AIternate years. The universe as a whole, gravity black holes, structure of space; other galaxies and the universal redshift, clusters of galaxies and other large-scale structure; big bang and stead's state models; the three degree background radiation; first moments of creation.
ASTR 309. Astrophotography Laboratory (1)I. Alternate years. Practice in the techniques of astronomical observation and photography using small ( 8 inch) telescopes and 35 mm cameras. One three-hour laboratory. Open only to majors or minors in physics or astronomy. Lab fee.
ASTR 321. Recent Progress in Astronomy (2) I. Alternate years. Pulsar dynamics, gravitational ollapse and black holes, galaxies, large-scale fucture in the universe, active galaxies and quasars, cosmology. Two lecture-recitations. Prerequisite: PHYS 212; or PHYS 202 and 1 year of calculus. Not open to students with credit for PHYS 321.
ASTR 403. Stellar Structure and Evolution (3) II. Alternate years. Basic data, stellar interiors, theoretical models; advanced evolutionary states; red giants, white dwarfs, neutron stars, supernovas, black holes. Prerequisites: PHYS 301 and consent of instructor. Not open to student with credit for PHYS 403.
ASTR 470. Independent Study in Astronomy (12). On demand. introduction to research in astronomy; projects chosen in consultation with adviser, may include library and laboratory work. Prerequisite: consent of instructor.

## Biological Sciences (BIOL)

I BIOL 101. Environment and Man (3) I, II, summer. Basic ecology arid current environmental problems of air, water, and land pollution; human reproduction and population dy namics. Two one-hour lectures and one two-hour laboratory. Not accepted toward biology major or minor. Lab fee.
It B!OL 104. Introduction to Biology (4) I, II, summer. Basic concepts: the cell, metabolism, genetics, reproduction, development, evolution, ecology. Three one-hour lectures, one two-hour laboratory. Not accepted toward biology major or minor. Lab fee.
BIOL 106. Genetics and Society (3) II. FundaEntal concepts of human genetics, with emhasis on hereditary disease, family planning and the social and ethical aspects of genetic engineering, gene therapy and environmental destruction. Three one-hour lectures. Not accepted towards a biology major or minor.

BIOL 108. Life in the Sea (3) I. Shore and ocean environments, variety and adaptations of marine life. Observations of marine organisms in marine laboratory. Three one-hour lectures. High school biology recommended. Not accepted toward biology major or minor.
BIOL H109. Life in the Sea - Honors (4) I. Offered in conjunction with BIOL 108 (see above description). Emphasis on inter-disciplinary aspects and lab credit for marine laboratory study. Three one-hour lectures, one one-hour discussion and three hours lab arranged. Prerequisites: University honors standing and consent of instructor. Not accepted toward a biology major or minor.

- BIOL 110. Human Biology (2) I. Basic human anatomy and physiology; how human organs function, in health and disease; and organ architecture as it relates to function. Two one-hour lectures. Not accepted toward a biology major or minor.

I BIOL 204. Concepts in Biology I (5) I, II, summer (on demand). Introduction to ecological and evolutionary biology, Mendelian and population genetics, and the major groups of plants, animals and microbes. Three one-hour lectures, one three-hour lab and one two-hour lab. Field trips required. Lab fee.
IT BIOL 205. Concepts in Biology II (5) I, II, summer (on demand). Introduction to molecular and cellular biology, physiology and organ systems. Three one-hour lectures, one three-hour lab and one one-hour recitation. Lab fee.

- BIOL 220. Introduction to Horticulture (4) I. The care of cultivated plants including growth, development, propagation, pest control, pruning, grafting and basic landscape design. Two onehour lectures, two two-hour labs. Prerequisite: BIOL 104, or BIOL 204 and 205, or consent of instructor. Lab fee.
BIOL 270. Marine Closed Systems (2) I. Theories and techniques of maintaining and studying living marine animals in closed salt water systems, chemical and nutritional studies. One one-hour lecture-discussion and three hours of laboratory arranged. Prerequisites: BIOL 204 and CHEM 125 or equivalent and consent of instructor. Lab fee.
BIOL 301. Field Biology (3) II. Identification and natural history of local organisms. Two onehour lectures and one three-hour laboratory. Not open to arts and sciences biology majors except with consent of instructor. Prerequisite: three hours of biology. Lab fee.
BIOL 310 . Biology of Aging (2) I Alternate years. Biological aspects of normal aging at the cellular, tissue, and organismal levels. Two one-hour lectures. Prerequisites: BIOL 104 or BIOL 204 and 332 or BIOL 411 , or consent of instructor.
BIOL 311. Anatomy and Physiology for Health Professionals I (4) I. Anatomical and physiological aspects of integumentary, muscular, nervous and skeletal systems. Three one-hour lectures and one three-hour laboratory. Prerequisites: BIOL 205 and CHEM 116 or equivalents or consent of instructor. Credit not available to students with BIOL 331 or 332.
BIOL 312. Anatomy and Physiology for Health Proiessionals II (4) II. Anatomical and physiological aspects of circulation, respiration, digestion, excretion, endocrinology and reproduction. Three one-hour lectures and one three-hour laboratory. Prerequisite: BIOL 311 or consent of instructor. Credit not available to students with BIOL 331 or 332.

BIOL 313. Bacteriology (4) I, II, summer (on demand). Methods of isolation, culture, and identification; physiological. genetic, and applied aspects of microorganisms. Two one-hour hour lectures, two two-hour laboratories. Prerequisites: BIOL 204 and 205 and one year of chemistry. Lab fee.
BIOL 321. Economic Biology I - Insect Pests (3) I. Biology, ecology and control of urban and other pest insects and related arthropods; environmental effects and physiological actions of insecticides; methodology and equipment used in pest management. Two one-hour lectures and one two-hour lab/discussion. Prerequisite: seven hours of biology. Lab fee.
BIOL 322. Economic Biology II - Vertebrate Pests (3) II. Biology, ecology and control of vertebrate pest animals; types and physiological action of avicides and rodenticides; epidemiology of zoonoses. Two one-hour lectures and one two-hour lab/discussion period. Prerequisite: seven hours of biology. Lab fee.
BIOL 331. Human Anatomy and Physiology I (3) I, II. Integumentary, skeletal, muscular and nervous systems. Two one-hour lectures and one two-hour laboratory. Prerequisite: BIOL 104 or 205. Lab fee.
© BIOL 332. Human Anatomy and Physiology II (3) I, II. Circulatory, respiratory, digestive, excretory, endocrine, and reproductive systems. Two one-hour lectures and one two-hour laboratory. Prerequisite: BIOL 104 or BIOL 205 or consent of instructor. Lab fee.
BIOL 343. General Botany (3) I. Survey of plant kingdom; morphology, evolution and economic importance of major plant groups. Two onehour lectures and one two-hour lab. Prerequi~ site: four hours of biology. Lab fee.
BIOL 350. General Genetics (3) I, II. Theoretical and applied aspects of inheritance. Molecular, chromosomal, and population levels of heredity in both prokaryotes and eukaryotes. Three onehour lectures. Prerequisites: BIOL 204 and 205 or consent of instructor.
BIOL 352. Laboratory in Genetics (1) I, II. Materials, methods, and terminology of genetics through experiments, problems, and demonstrations. One three-hour laboratory. Prerequisite or corequisite: BIOL 350. Lab fee.
BIOL 354. Population and Community Ecology (2) I. Concepts of modern ecology. Fundamental ecological principles, life history patterns, structure and growth of populations, competition, niche theory, predation, succession, community structure and diversity. One one-hour lecture, one two-hour discussion. Prerequisites: BIOL 204 and 205 and MATH 131 or equivalent.
BIOL 400. Special Topics in Biology ( $1-3$ ) I, II, summer. Selected topics or subject areas in life sciences. Prerequisite: consent of instructor; maximum of two enrollments, each with different topic, permitted for credit.
BIOL 401. Introduction to Biological Research (1-4) I, II, summer. For advanced student who has shown proficiency and marked degree of independence in work. Individual registration. Prerequisite: four semesters of biology and consent of instructor. May be repeated once, but only four hours may be applied toward major in biology. Lab fee. May be taken S/U for major credit.
BIOL 402. Honors Thesis (3) I, II, summer. For students in the departmental honors program only. The thesis describes the student's inclependent research, previously conducted as BIOL 401 H . An approved public presentation of the research is required.

BIOL 404. Human Genetics (3) II. Alternate years. Essential principles of modern genetics with speciel emphasis on humans. Methods of human genetic analysis; screening and counseling; genetic aspects of public health; genetics and cancer. Two one-hour lectures and one two-hour laboratory. Prerequisites: BIOL 204, or permission of instructor.
eloL A05. General Parasitology (4) I, II. Morphologic, taxonomic, economic and other bioiogical aspects of parasites. Three onehour lectures and one two-hour laboratory. Prerequisites: BIOL 204 and 205 or consent of instructor, Lab fee.
B1OL A06. Arthropod Vectors and Parasites (3) II. Biology and identification of diseaseearying toxic, and parasitic arthropods. Two one-hour lectures and one two-hour laboratory. Prerequisites: BIOL 204 and 205. Lab fee.
3IOL 407. Cell Biology (4) I. Structure and physiology of cells, integrating the dynamics of cellular structures with metabolic functions and control. Two one-hour lectures and one four-hour laboratory. Prerequisites: BIOL 204 and 205 or consent of instructor. Lab fee.
DIOL 40s. invertebrate Zoology I (3) I. Classification, biology and physiology of lower invertebrates. Two one-hour lectures and one two-hour laboratory. Prerequisite: one course in biology or consent of instructor. Lab fee.
BIOL 410. Invertebrate Zoology II (3) II. Classification, biology, and physiology of invertebrates through lower chordates. Two onehour lectures and one two-hour laboratory. Prerequisile: one course in biology or consent of instructor. Lab fee.
BiOL 411. Animal Physiology (4) Il. General and comparative animal physiology with emphasis on vertebrate systems. Two onehour lectures, one three-hour laboratory and one one-hour recitation. Prerequisites: EIOL 204 and 205; organic chemistry and BIOL 407 recommended; or consent of instructor. Lab lee.
BiOL 412. Field Experience (6) Summer only. Biotic communities in central and western U.S.; observation, identification of plants, animals; quantitative field work. Individual problems arranged for advanced students to a maximum of nine hours. Prerequisites: ten hours of biology and consent of instructor.
B10 . 43 . Plant Systemalics (3) II. Elementary principles of plant identification, construction and use of keys and manuals, including winter plants, mosses, ferns, and spring flora. Two two-hour lecture-laboratories, one onehour discussion. Prerequisite: BIOL 204 or consent of instructor. Lab fee.
EIOL 415. Piant Anatomy (3) t. Development and mature structure of principal tissues of Vascular plants; basic patterns and modificaticns of root, stem, leaf and flower. Two onehour lectures, one three-hour laboratory. Prerequisite: BIOL 204 or 343 or consent of instrucior, Lab fee.
\$1OL 416. Worphology of Vascular Piants (3) 11. Comparative structure and evolutionary trends in vascular plants. Two one-hour lectures, one three-hour laboratory. Prerequisite: B1OL 204 or 343 or consent of instructor. Lab fee.
DiOL 517 . Plant Physiology (4) II. Plant growth and development, transport, photosynthesis, mineral nutrition, plant hormones and photoperiodism. Three one-hour lectures, one two-hour laboratory and additional laboratory by arrangement. Prerequisites: ten hours blology; one year of chemistry and BIOL 407 strongly recommended. Lab fee.

BIOL 419. Animal Histology (3) II. Microscopical anatomy of the vertebrates, origins of tissues and organs, relation of structure to function. Two one-hour lectures and one three-hour laboratory. Prerequisites: BIOL 204 and 205 or consent of instructor. Lab fee.

BIOL 420. Animal Behavior (3) II. Genetics, physiology, development and evolution of behavior from an ecological perspective. Two one-hour lectures and one three-hour laboratory. Prerequisites: BIOL 204 and 205. Lab fee.
BIOL 421. Microbiology (3) I. Eukaryotic and prokaryotic microbial life; methods of laboratory study, enrichment techniques and nutrition. Two one-hour lectures and one threehour laboratory. Prerequisite: BIOL 313 or consent of instructor. Lab fee.
BIOL 422. Terrestrial Ecology (3) I. Plants in relation to the terrestrial environment. Two one-hour lecture-discussion and one threehour laboratory. One weekend and one or more Saturday field trips required. Prerequisites: BIOL 204 and 205. Lab fee.

BIOL 424. Algology (4) I. Taxonomy, ecology and morphology of the algae; emphasis on fresh-water algae. One two-hour lecture and two two-hour laboratories. Prerequisites: BIOL 204 and 205. Lab fee.
BIOL 425. Limnology (3) I. Physical, chemical and biological aspects of aquatic habitats. One two-hour lecture, one three-hour lab, and one weekend field trip to upper Great Lakes. Prerequisites: BIOL 204 and 205. Lab fee and field trip fee.
BIOL 426. Pathogenic Microbiology (4) II. Morphologic, physiologic, and serologic characteristics of pathogenic microorganisms; their epidemiology; and the host-parasite interrelations resulting in infectious disease. Two one-hour lectures and two two-hour laboratories. Prerequisites: BIOL 313 and 439. (BIOL 439 may be taken concurrently.) Lab fee.
BIOL 431. Chordate Embryology (5) II. Early . developmental patterns in chordates; descriptive, comparative and theoretical considerations of embryology; early growth, development, form and pattern. Three one-hour lectures and two three-hour laboratories. Prerequisites: BIOL 204 and 205 or consent of instructor. Lab fee. .
BIOL 432. Comparative Anatomy of Chordates (5) I. Comparative anatomy of representative chordates; evolutionary significance of structural and developmental changes and relationships of all organ systems. Three onehour lectures and two two-hour laboratories. Prerequisites: BIOL 204, 205 or consent of in.. structor. Lab fee.

BIOL 433. Advanced Human Physiology (4) I, summer (on demand). Physiological principles underlying cellular, organ and organ system function in the human. Designed for registered nurses and students with basic training in physiology. Two two-hour lectures. Prerequisites: organic chemistry and BIOL 332 or 407 or 411 or equivalent.

BIOL 434. Paleobotany (3) II. Alternate years. Morphology, evolution, geological distribution of fossil plants. Two one-hour lectures, one two-hour laboratory and several field trips. Prerequisites: BIOL 416 and historical geology or consent of instructor. Lab fee.
BIOL. 435. Entomology (4) I. Biology of insects: structure, physiology, ecology, systematics, evolution, and importance to man. Two one-hour lectures and two two-hour laboratories or equivalent in field trips. Prerequisites: BIOL 204 and 205. Lab fee.

BIOL 438. Endocrinology (3) II. Physiological, metabolic actions of selected endocrine glands with emphasis on mammals. Two onehour lectures and one three-hour laboratory. Prerequisites: BIOL 411 and organic chemistry or consent of instructor; biochemistry recommended. Lab fee.
BIOL 439. Immunobiology (4) I Immune state in animals; laboratory work on detection and quantilation of antigens and antibodies. Two one-hour lectures, one three-hour laboratory and one one-hour laboratory-recitation Prerequisites: BIOL 204 and 205. BIOL 350 and biochemistry recommended. Lab fee.
BIOL 440. Aquatic Vascular Plants (3) I. Alternate years. Techniques and methods of collecting, identifying, preserving aquatic vascular plants; biology, ecology and geography of the flora with respect to the history since glaciation are included. Two one-hour lectures and one two-hour laboratory and some Saturday field trips. Prerequisites: BIOL 204, 205 and 414 or consent of instructor. Lab fee.
BIOL 443. Microbial Physiology (4) II. Chemical and physical compositions, nutrition, growth, metabolic activities and their regulation in microbial cells. Two one-hour lectures and two two-hour laboratories. Prerequisites: BIOL 313 and CHEM 308 or consent of instructor. Lab fee.
BIOL 446. Scanning Electron Microscopy (4) II. Theory and practice of scanning electron microscopy applicable to biological research. Critical point drying, sample coating techniques, transmitted electron detection. energy-dispersive x-ray microanalysis and computational analysis of data. Two one-hour lectures and two three-hour laboratories. Prerequisite: consent of instructor. BIOL 407 strongly recommended. Lab fee.
BIOL 447. Microbial Genetics (2) I. Molecular biology and genetic phenomena of bacteria and bacteriophage, mutagenesis and recombination. Two one-hour lectures. Prerequisite: four semesters of biology and consent of instructor; BIOL 350 and CHEM 308 recommended.
BIOL 449. Cytogenetics (3) II. Aiternate years. Structure, organization and behavior of chromosomes; their function, modification, evolution, and role in speciation. Two onehour lectures and one two-hour laboratory. Prerequisite: BIOL 350 or consent of instructor. Lab fee.
BIOL 451. Evolution (3) Il. Historical evidence for evolution. Modern evolutionary theory: modes of selection, speciation, complex adaptations, micro-evolutionary trends. One onehour lecture and one two-hour discussion. Prerequisite: BIOL 350.
BIOL 470. Readings in Biological Sciences (1) $I$, II, summer. Independent readings on topics of current or specialized interest in biology. Not more than two hours may be applied to major or minor requirements. Prerequisite: consent of instructor. May be taken SIU for major credit.
BIOL 472. Ichihyology (3) i. Alternate years, Life histories, systematics, physiology, ecology, evolution and biogeography of major groups of freshwater and marine fishes. Two one-hour lectures and one three-hour laboratory. Saturday and/or weekend field trips required. Prerequisites: BIOL 204 and 205. Lab fee.
BIOL 473. Mammalogy (3) I. Alternate years. Identification, natural history, evolution, zoogeography, ecology, physiology, behavior. with emphasis on Ohio mammals. Two onehour lectures and one three-hour laboratory. Prerequisites: BIOL 204 and 205. Lab tee.

BIOL 474. Marine Biology (4) II. Biological and oceanographic analysis of marine environment: ecology, populations, laboratory techniques. Three hours of lecture and three hours of laboratory arranged. Prerequisites: oné year of chemistry, invertebrate zoology and consent of instructor. Lab fee.

BIOL 475. Marine Biology Field Trip (1) II. Field trip to marine environment and research station with collection and study of living marine fauna and flora, oceanographic analysis of environments, study on sea-going vessel using trawl and dredge; discussions of marine research by laboratory staff; tour of fishery station. Prerequisite: BIOL 474. Consent of instructor and transportation fee required.
BIOL 476. Herpetology (3) I. Alternate years. Amphibian and reptile identification, habits, distribution, behavior. Two one-hour lectures and one three-hour laboratory or equivalent field work, all day and/or weekend field trip. Prerequisites: BIOL 204 and 205. Lab fee.
BIOL 477. Ornithology (3) II. Structure, physiology, behavior, ecology and evolution of birds; identification in field and laboratory. Two one-hour lectures and one three-hour laboratory or equivalent field work, all-day or weekend field trip. Prerequisite: seven hours of biology. Lab fee.
BIOL 478. Parasites of Marine Animals (6) Summer. Study of parasites of marine animals. Prerequisite: sixteen hours of biology including parasitology. Taught at Gulf Coast Research Laboratory.
BIOL 479. Marine Microbiology (5) Summer. Role of microorganisms in the ecology of oceans and estuaries. Prerequisites: general microbiology or bacteriology and consent of instructor. Taught at Gulf Coast Research Laboratory.
BIOL 480. Problems in Comparative Histology of Marine Organisms (1-6) Summer. Histological preparation for light and electron microscopy studies of marine organisms including structural changes during life cycles and histopathology of diseased tissues. Prerequisites and credits to be set by instructor and Registrar at Gulf Coast Research Laboratory.
BIOL 481. Marine Botany (4) Summer. Survey based upon local examples of principal groups of marine algae and maritime flowering plants, treating structure, reproduction, distribution, identification, and ecology. Prerequisites: BIOL 204 and 205 or consent of instructor. Taught at Gulf Coast Research Laboratory.
BIOL 482. Introduction to Marine Zoology (4) Summer. Introduction to marine environment with emphasis on local fauna. Weekly boat trips are made to collect specimens for laboratory study. Prerequisites: BIOL 204 and 205. Taught at Gulf Coast Research Laboratory.
BIOL 484. Marine Invertebrate Zoology (6) Summer. Anatomy, life history, distribution, and phylogenetic relationships of free-living marine invertebrates with emphasis on fauna of the Carolinian Region. Laboratory and field work included. Prerequisites: sixteen semester hours of biology and junior standing. Taught at Gulf Coast Research Laboratory.
BIOL 485. Marine Vertebrate Zoology and richthyology (6) Summer. Marine Chordata, including lower groups and mammals and birds with emphasis on fishes. Prerequisites: sixteen semester hours of biology and junior standing. Taught at Gulf Coast Research Laboratory.

BIOL 487. Special Problems in Marine Science (1-6) Summer. Supervised research on specific problems in all areas of marine science. Prerequisites and credits to be set by problem director and registrar at Gulf Coast Research Laboratory.
BIOL 488. Topics in Marine Science (3-6) Summer. Various marine courses such as marine ecology, salt marsh ecology, marine fisheries management, aquaculture, and others offered when taught by the Gulf Coast Research Laboratory staff. May be repeated for different titled topics as approved by the departmental marine science coordinator.

BIOL 489. Biology Internship (1-3) I, II, summer. For biological sciences majors in Cooperative Education program. Written report required. May be repeated with permission. Only three hours can apply toward biology major or minor. Prerequisite: consent of the departmental CEP representative. Graded S/U.
BIOL 490. Seminar (1) I, II, summer. Review of literature to acquaint student with research techniques and important work in various fields of biology. May be repeated, but only two hours may be applied toward a biology major. Prerequisite: ten hours of biology.

## Business Administration (BA)

BA 102. Introduction to Business (3) I, II. Market competition and change, nature and central role of management, our business environment. Open only to freshmen.

- BA 203. Business Communications (3) I, II, summer. Principles of effective communication in writing business messages such as letters, memos, resumes, and reports. Emphasis on written communication skills for use in business and public organizations. Prerequisite: ENG 112.
BA 305. Integrating Career and Family. For description, see HOEC 305.
BA 325. Organization and Structure of Health Care Services Industry (3) I. Broad dimensions and areas of health care services organizations, internal administrative processes; perspectives on comprehensive health planning and policy administration; environmental linkages to community health services agencies.
BA 390. Introduction to Multinational Business (3). Environment encountered by U.S. enterprises engaged in business abroad; business practices and policies for foreign operations; international organizations.
BA 403. Government and Business (3). Relations of all echelons of government to businessman; instances where government controls, regulates or otherwise exercises influence on actions of businessman.
BA 405. Business Policy and Strategy (3) I , II. Resource allocation through administrative policies; cases and simulation games. Prerequisites: senior standing and prior satisfactory completion of MGMT 300, MKT 300, FIN 300, OR 380 and MGMT 360.
BA 406. New Enterprise Formation (3). Entrepreneurship; systematic decision making in small companies.
BA 429. Health Care Internship (6) ! , II, summer. Specific internship in one of following areas of administration: hospital, nursing home, governmental health agency, voluntary health agency, health research project administration; and mental hospital administration; minimum of 20 credits of elective studies aimed at preparing for internship selected with advice and consent of adviser. Graded S/s.

BA 440. Management of International Operations (2). Accounting, finance, marketing, management, and operational policies; practices and strategies appropriate for foreign operations. Selected case studies for special problems. Prerequisite: BA 390.
BA 489. Business Internship (1-3). Not open to students with other internship credit in the College of Business Administration. Program must be approved in advance by college internship director. Work experience must be completed within last year prior to graduation. Graded S/U.
BA 491. Studies in Business Administration
(1-3) On demand. Indepth study of selected areas. Offered to individual student on lecture basis or in seminar depending on student needs and nature of material. May be repeated to eight hours.
BA 492. Studies in International Business
Administration (1-3) On demand. Independent study on subjects related to international business not otherwise offered in curriculum. Reading, report, and research assignments. May be repeated to eight hours.
BA 495. Reading for Honors in Business
Administration (1-3) I, II, summer. Supervised,
independent program of reading and study.
Prerequisites: 3.0 accumulative GPA and consent of department.

## Business Education (BUSE)

-BUSE 101. Business Mathematics (3) I, II.
Mathematics of finance, merchandising, and business ownership. Consumer application of business mathematics to banking, credit, interest, insurance, home ownership, wages, social security, and income taxes.
***BUSE 111. Keyboarding (3) I, II. Touch operation of alpha-numeric and symbol keys with emphasis on keyboarding accuracy for microcomputers, word processors, and computer terminals. Four class periods. At Firelands, four class periods plus two hours lab. Lab fee.
BUSE 202. Principles of Word/Information
Processing (3) I, II. Organization and operation of word/information processing installations with emphasis on language arts skills, electronic typewriters, machine transcription and human aspects of word/information processing. Prerequisite: BUSE 111 or its equivalent. Lab fee. At Firelands, four class periods.
-BUSE 210. Advanced Typewriting (3) I, II. Typewriting problems and projects; office production standards. Four class periods. Prerequisite: two semesters of high school typewriting or BUSE 111. At Firelands, four class periods plus two hours lab. Lab fee.
***BUSE 213. Beginning Shorthand (3) I, II. Gregg Series 90 shorthand. Introduction to theory; transcription and speed development from 60 to 80 wpm . Four class periods. Prerequisite: BUSE 111 or concurrent registration in BUSE 111. At Firelands, four class periods plus two hours lab. Lab fee.

- BUSE 215. Advanced Shorthand (3) I, II. Development of speed in recording dictation from 80 to 100 wpm and transcription skills. Open to students with storthand background in either Gregg or Century 21. Four class periods. Prerequisite: two semesters of high school shorthand or BUSE 213. At Firelands, four class periods plus two hours lab. Lab fee.
* BUSE 220. Data Processing (2) I, II. Processing of data using various printing and electronic calculators. Applications related to areas such as accounting, financing, and merchandising. Emphasis on development of speed and accuracy. Three class periods plus assigned laboratories. At Firelands, three class periods plus two hours lab. Lab fee.

SUSE 240. Business Froblems of the Consumer (3) 1. II. Relationship of business practices to consumer activities. Developing consumer competencies in insurance, credit, savings, invesiments, housing, and estate planning. Basic economic principles underlying consumer decision-making.

- EUSE 502. Word/Intomation Processing Applications (3) $1_{2} 11$. Uses, limitations, and production costs of various kinds of modern office equipment. Emphasis on text editing systens. Prerequisites: BUSE 111 or its equivalent and BUSE 202. Lab fee. At Firelands, four class periods plus two tab hours.
© EUSE 311. Diclation and Transcription (3) 1, II. Dictation at speeds of 90 to 120 wpm ; emphasis on rapid, accurate transcription Dictation from specialized fields - medical legal business, and industry. Open to stu dents with shorthand background in either Gregg or Century 21. Four class periods. Prerequisite: BUSE 215 or consent of instructor. At Firelands, four class periods plus two hours lab. Lab fee.
\$BUSE 314. Internship in Eusiness Education (1-2) t, il. Supervised experience in local offices or businesses. Sixty clock hours of work required for each hour of college credit. May be repeated up to three hours. No more than one hour of credit may be granted for work in any one office or business. At Firelands, 256 clock hours of work experience for each hour of credit, Graded S/U
tuse 321. Computer Data Processing (2) I, II. Computer organization and computer procramming; input-output options; assigned laboratories include keypunch, video terminal and solware applications.

GUSE 335 . Ofice and Records Management Systens (3) 1, H. Procedures for control of information and business records. Analysis of office systems, work activities, and automation for improvement of office operations.
GUSE 352. Basic Business in Secondary Schools (2) 1, II. Principles objectives, and methods of teaching basic business subjects; resource unit development. C/F hrs: 32.
©ute 354 . Accounting and Data Processing In Secondary Schoois (2) I, II. Principles, objectives, and methods of teaching accounting and data processing; review of the accounting oycle. C/F hrs: 26.
BUSE 356. Shorthand and Secretarial Practite in Secondary Schools (1) 1, 11. Principles, obfectives, and methods of teaching shorthand, transcription, and secretarial practice. C/F hirs. 30.

TUSE 358. Typeviriting and Clerical Practice in Secemdary Schools (1) I, th. Principles, objectives, and methods of teaching typewriting, and clerical practice. C/F hrs: 30.

BUSE 364. Distributive Education in Secondary \$chools (3) I, II. Principles, objectives, and methods of teaching vocational and relative subjact matter in distributive education.

BUSE 370. OWA Organlzation and Program Cocrination (3) I. Principles, objectives, and methods of teaching Occupational Work Adjustment, program philosophy, organization, coordination, student selection, and youth activities.
EUSE 395. Workshop in Business and Disnotbutive Education ( $1-3$ ) Summer. Areas of current interest to teachers in business and distrlbutive education. Possible areas include youth with special needs, cooperative educafion, vocational education for adults, intensive programs, post-secondary programs, and technical programs.

BUSE 401. Secretarial Administration (3) I, II. Intensive study of procedures, skills, and knowledges basic to secretarial administrative positions; refinement of secretarial-management operations and office simulations. Prerequisites: BUSE 210 and BUSE 215. Lab fee.

BUSE 441. Consumer Economics in the Schools (3) Alternate II, alternate summers. Need for consumer economics. Organization and integration of consumer economics in school programs. Consumer and business background information
BUSE 455. Administrative Management (3) I,
11. Principles and practices of managing office personnel and operations. Selecting, developing, motivating, and appraising office employees. Office layout and design, work measurement, and work standards.
BUSE 461. Development of instructional Materials in Distributive Education (2) !. Methods of developing teaching materials in distributive education.
BUSE 462. Coordination in Cooperative Vocational Education (2) II. Coordination in high school, post-high school, and adult education programs for vocational distributive education. Not open to students taking BUSE 468. C/F hrs: 14.

## BUSE 463. Community Planning in Adult

 Vocational Education (3) I. Identification of adult needs, procedures for organizing and promoting adult programs in vocational education, selecting and training adult leaders, and financing adult programs.BUSE 465. Development and Administration of Vocational Education (3) II. Vocational education as sponsored by federal, state, and local legislation.

## BUSE 468. Vocational Business and Office

 Education (4) I, II. Program construction, organization, improvement, implementation, evaluation, and development of program guides for both intensive and cooperative vocational business and office education. C/F hrs: 28.BUSE 469. OWA Curriculum and Instructional Procedures (3) II. Curriculum development for vocational work experience programs including instructional learning packets, course of study, teaching methodology, and techniques.
BUSE 470. Studies in Business and Distributive Education (1-2) I, Il. Offered on individual, seminar, or lecture basis. Treatment of selected areas in depth depending on student needs and nature of material. May be repeated up to four hours. Prerequisite: consent of instructor. Graded S/U.
**The student with two semesters of high school typewriting and/or shorthand should enroll in BUSE 210 and/or BUSE 215. Those who choose to enroll in lower level courses will not receive credit toward graduation

BUSE 497. Student Teaching (1-10) I, II. Classroom teaching under supervision on fullday basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs: 300. May be repeated. Graded S/U. Lab fee.

## Business Management Technology (BAT)

$\dagger$ BAT 100. Real Estate Principles and Practices (2) II, summer. Foundation for further study and partial preparation for securing a salesperson's license Contracts, financing, deed, title, escrow, closing estates, civil rights ethics, license law, leases, brokerage, total investment decision, appraisal fundamentals, and commercial-investment properties.
$\dagger$ BAT 101. Real Estate Law (2) I, II, summer.
Basic legal framework for subject of real estate. The legal system, estates in land, contracts for the sale of land, deeds, agency relationship, regulations covering brokers and salespersons, evidence of title, mortgages and other liens, civil rights, landlord-tenant, public control of land use, organized forms of multiple ownership, wills and estates.

## $\dagger$ BAT 102. Introduction to Business Tech-

 nology (4) I, II. Business technical process including structure of business and functions of marketing, production, finance, personnel, technical processes of control, and responsibilities of business. Three hours lecture, two hours field study.$\dagger$ BAT 113. Medical Office Procedures (3) I. Emphasis on medical assistant, administrative functions. Includes handing patient contact, medical record procedures, financial and mediocolegal responsibilities in relation to clinical settings.
$\dagger$ BAT 201. Human Resources in Management (4) I. Basic concepts, principles and functions of management and personnel administration. Acquisition, development, utilization and maintenance of an effective work force; recruitment and section, testing, interviewing, counseling, developing and compensating employees. Three hours of lecture, two hours field study.
$\dagger$ BAT 203. Production Management (4) II. Analyze operations of the firm. Fundamentals of production, design of production systems, operations, coordination and control of production activity, major analytical tools for management. Three hours lecture, two hours field study. Prerequisite or corequisite: STAT 211.
$\dagger$ BAT 205. Human relations in Business (4) it il. Principles of effective management of human resources. Analysis of reactions, interactions, attitudes and activities of persons within goal seeking organizations; leadership, morale, goal-oriented behavior, relationships between supervisors and subordinates. Three hours lecture, two hours field study.
$\dagger$ BAT 208. Advertising (3) II. Design, layout, production and placement of advertising, historical and cultural precedents of modern advertising. Prerequisite: BAT 204 or permission of Instructor.
†BAT 210. Principles of Banking (2) 1, II. Fundamentals of banking functions, language and documents of banking, check processing, teller functions, deposit function, trust services, bank bookkeeping and bank loans and investments.
$\dagger$ BAT 211. Money and Banking (3) I. Baslc monetary theory and policy, emphasis on function of the banking system in the economy; structure of commercial banking system, creation of bank deposits, Federal Reserve policy and operations. Treasury money market operations, the pricing of money, and international financing problems.
$\dagger$ BAT 212. Installment Credit (2) 1, II. Basic knowledge of installment credit and its administration; emphasis on establishing credit, obtaining credit information, and loan servicing and administration; inventory loans, rate structure and advertising.
$\dagger$ BAT 213. Real Estate Finance (3) ! , It. Home mortgage investment by savings and commercial banks; channeling of money into mortgages, home mortgage lendings, special purpose mortgages, and the administration of mortgage accounts.
$\dagger$ BAT 214. Banking Law (2) I, II. Consumer protection, real property, personal property and sales, the uniform commercial code, iegotiable instruments and bank collections, Arid secured financing.
†BAT 215. Real Estate Appraisal (2) I, II, summer. Three basic techniques of appraising market comparison, cost of replacement, and income capitalization. The appraising process, understanding value, basic valuation principles, general market analysis, sites and improvements analysis, market data approach, income approach, and reconciliation and the final value estimate. Prerequisites: BAT 100 and BAT 101 or permission of instructor.
$\dagger$ BAT 216. Real Estate Finance (2) I, II, summer. Instruments of real estate finance such as mortgages, lien and title theories, leases and land contracts. Other topics including mortgage payment patterns, single family properties, mortgage market, major lenders, government and real estate, and special topics. Prerequisites: BAT 100 and BAT 102 or permission of instructor.
†BAT 217. Real Estate Brokerage (2) II Alternate years. Operation of a brokerage business. Includes the opportunity to expand knowledge of broker-client relationship, office management, selection of sales personnel, training salespersons, and a policy and procedure manual for the brokerage office. Prerequisites: BAT 100 and BAT 101 or permission of instructor.
†BAT 218. Special Topics in Real Estate (2) II.
Alternate years. A sample property case study is covered. Other subjects include single famhousing design and construction, residenland development, condominiums and cooperatives, farm, rural, commercial, and industrial real estate, federal taxation of real estate, and federal, state, and local regulatory controls. Prerequisite: BAT 100, 101, 215, 216 or permission of instructor.
†BAT 250. Marketing Research (2) Summer. Secondary information sources and technique alternatives, sampling, response, and interpretive problems. Computer analysis introduced. Prerequisite: BAT 204 or consent of instructor.
†BAT 290. Studies in Business (1-3) I, II, summer. Business study projects, seminars and other forums in the fields of marketing, personnel, management, human relations, production, finance, computer science, law or economics. Prerequisites: sophomore standing and appropriate prior course work.
†BAT 291. Field Experience (1-3) I, II, summer. Ten weeks of work in an appropriate business field to be decided in consultation with student's adviser. Prerequisite: permission of work supervisor and adviser.

## Center for Academic Options (CAO)

CAO 124. State Government (1) Summer. Issues of government, governmental processes at local and state levels, societal and governmental influences on electoral process. For Boys State students.
10 131. Career and Life Planning (2) I; II, inmer. Strategies developed for career and the planning decisions. Assessment of values, interests, needs and skills helpful in selecting an academic major and relating that major to a career. Invesitigation of occupations and issues affecting career choice. Development of interview skills and resume preparation.

- CAO 201. Independent Studies (1-15) I, II, summer. Research or project designed by students under general supervision of faculty members. Open to any sophomore, junior or senior. Contact Center for Academic Options prior to registration. Graded S/U.
CAO 401. Independent Studies (1-15) I, II, summer. Research or project designed by students under general supervision of faculty members. Open to any sophomore, junior or senior. Contact Center for Academic
Options prior to registration. Graded S/U.


## Chemistry (CHEM)

No credit for two courses in any one of the following groups: CHEM 100, 104, 115, 125, 135; CHEM 126, 136; CHEM 116, 306, 341; CHEM $116,308,445$; CHEM 321, 454; CHEM 352, 405.

I CHEM 100. Introduction to Chemistry (3) I, II. Non-laboratory examination of basic chemical concepts and role of chemistry in modern society. For students not majoring in sciences. Not counted toward chemistry major or minor.
CHEM 104. Chemistry for Elementary Teachers (2) I, II. Non-laboratory examination of basic chemical concepts, vocabulary and history as well as role of chemistry in modern society. Not counted toward chemistry major or minor. Prerequisite: PHYS 101 or PHYS 104.
-CHEM 115. Elementary Chemistry (4) I, II. General chemistry and introduction to organic.chemistry. Not accepted toward chemistry major or minor. Three lectures, one three-hour laboratory. Prerequisites: two years of high school science; high school algebra or its equivalent. Lab fee.
CHEM 116. Elementary Organic and Biochemistry (4) II, summer. CHEM 115 continued. Not accepted toward chemistry major or minor. Three lectures, one three-hour laboratory. Prerequisite: CHEM 115. Lab fee.
I CHEM 125. General Chemistry (5) I, II, summer. Chemistry sequence for students majoring in sciences, the liberal arts or in premedical programs. Three lectures, one recitation, one three-hour laboratory. Prerequisite: high school chemistry, algebra, and geometry, or CHEM 115. (Credit for graduation for CHEM 115 or CHEM 125, but not both.) Lab fee.
I CHEM 126. General Chemistry (5) I, II, summer. CHEM 125 continued, including qualitative analysis. Three lectures, one recitation, one three-hour of laboratory. Prerequisite: " C " or better in CHEM 125 or CHEM 135. Lab tee.
ๆCHEM 135. General Chemistry (5) I. General chemistry sequence for well-prepared student. Three lectures, one recitation, one three-hour of laboratory. Prerequisites: high school chemistry and consent of instructor. Corequisite: MATH 130 or MATH 131. Lab fee.
ICHEM 136. General Chemistry (5) II. CHEM 135 continued. Emphasis on quantitative procedures in laboratory. Three lectures, two three-hour laboratories. Prerequisite: "C" or better in CHEM 135. Lab fee.
CHEM 199. Introduction to Elementary Organic Chemistry (1) I, II: Not accepted to ward chemistry major or minor. Provides a link between the CHEM 125-126 sequence and CHEM 116; concurrent with the last one-third of CHEM 115. Three lectures, one three-hour laboratory. Prerequisite or co-requisite: CHEM 125 and - consent of department.

CHEM 200. Bio-Organic Chemistry and You
(2) I, II. Non-mathematical course for nonscientist in topics of contemporary concern Effect of chemistry on society, chemistry for the consumer, regulatory agencies, chemistry in the news, and other topics in organic and biochemistry. Not open to freshmen; not accepted toward chemistry major or minor. No prerequisites.

- CHEM 201. Quantitative Chemical Analysis (3) I, II, summer. Theory and practice of quantitative analytical procedures, volumetric and gravimetric methods. Two lectures, one threehour laboratory. Prerequisite: C or better in CHEM 126. Lab fee.
- CHEM 306. Organic Chemisiry (4) I, II, summer. For students whose program does not require full-year course. Not accepted toward a chemistry major. Three lectures, one threehour laboratory. Prerequisite: CHEM 126 or CHEM 136. Lab fee.
-CHEM 308. Basic Biochemistry (3) II. Structure, chemical, physical, and metabolic properties of bioorganic molecules. For students whose program does not require full-year course. Prerequisite: CHEM 342 or C or better in CHEM 306; BIOL 104 and CHEM 201 recommended.
-CHEM 309. Elementary Biochemistry Laboratory (1) II. Basic biochemical techniques. One three-hour laboratory. Prerequisite or corequisite: CHEM 308 or CHEM 445. Lab fee.
CHEM 313. Special Topics in Chemistry (1-3) I, II, summer. Specific topics of current interest in chemistry. Not applicable toward minimum 32-hour major or 20 -hour minor. May be repeated with different topics.
CHEM 321. Survey of Instrumental Analysis (3) II. Elementary instrumental methods of analysis. Primarily for biology and med-tech majors. Two lectures, three hours of laboratory. Prerequisites: CHEM 201 and either PHYS 212 or PHYS 202. Lab fee.
CHEM 341. Organic Chemistry (5) I, summer. Structure and reactivity of organic substances. Four lectures, one three-hour laboratory. Prerequisite: CHEM 126 or CHEM 136. Lab fee.
CHEM 342. Organic Chemistry (5) II, summer. CHEM 341 continued. Three lectures, two three-hour laboratories. Prerequisite: "C" or better in CHEM 341. Lab fee.
CHEM 352. Physical Chemistry (3) I. For students whose program does not require fullyear course. Prerequisites: CHEM 201 (or CHEM 136) and MATH 131. Prerequisite or corequisite: PHYS 202 or PHYS 212.
CHEM 395. Workshop on Current Topics (1-3) Intensive course on selected topics. May be repeated if topics differ. Does not apply toward first 20 hours of minor or first 32 hours of major.
CHEM 402. Numerical Methods in Chemistry (1) II. Use of computers and numerical methods in chemistry; survey of computer graphics and microcomputer-based instrumentation in chemical research. Prerequisite or corequisite: CHEM 405.
CHEM 405. Physical Chemistry (4) I, summer. Thermodynamics and quantum chemistry. Prerequisite: CHEM 201 (or CHEM 136) and MATH 232, and either PHYS 212 or PHYS 202.

CHEM 406. Physical Chemistry (4) II, summer. CHEM 405 continued. Electrochemistry, kinetics, spectroscopy and molecular structure. Prerequisite: CHEM 405.

CHEM . 607 . Integrated Analytical and Physical Latoretory (2) 1. Principles of measurement; spectral, chromatographic and electroanalytical techniques; thermodynamic and kinetic measurements; computerized data acquisition. Two three-hour laboratories. Prerequisite or corequisite: CHEM 405. Lab tee.
CHEM 409. Imegrated Analytical and Physical Laboratory (2) II. CHEM 407 continued. Prerequisite: CHEM 407; prerequisite or corequisite: CHEM 406. Lab fee.

Cfitin 413 . Undergraduate Research in Chempatry (1-3) I, II, summer. Independent study and research. Three to nine hours of laboratory, ons hali-hour conference each week. Not applicable toward minimum requirements of major or minor. Prerequisite: consent of instructor, 20 hours of CHEM or consent of department, 2.5 minimum overall GPA. May be repeated, but no more than six hour credit may be applied toward degree.
CHETM 442. Organic Reaction Mechanisms (3) n. Fundamentals of organic reaction mechanisms and methods for their elucidation. Prerequisite: CHEM 342. Prerequisite or corequisite: CHEM 405.
CHEMA An5. General Biochemistry (3) I. Structure, function, chemical and physical properties of bioorganic molecules, Prerequisites: CHEM 342 and either CHEM 352 or CHEM A06, or permission of instructor.
CHEM A46. Biochemistry Laboratory (1) I. Experimental techniques in biochemistry. Three-hour iaboratory. Prerequisite or corequisite: CHEM 445. Lab fee.
CHEW 447. General Biochemistry (3) II. Metabolism, energetics, and regulation of bioorganio molecules. Prerequisite: CHEM 445.
CHED 4 49. Advanced Diochemistry LaboraTory (2) i. Research techniques in biochemistry. Two three-hour laboratories. Prerequisite: CHEM a46 or permission of instructor. Lab fee.
CHEM 453. Environmenial Chemistry (2) 1. Alternate years. Sources, reactions, transport, and fates of chemical species in water, soil and air environments. Prerequisites: CHEM 136 (or CHEM 201), CHEM 306 (or CHEM 342), and CHEM 352 (or PHYS 202).

CHEMM 454. Instrumental Methods of Analysis (3) II. Theory of instrumental methods of analysis including electroanalytical, spectroscopic and chromatographic methods. Prefequisite: CHEM 408 or consent of instructor.
CHEFA 463. Advanced Inorganic Chemistry (4) 1. Chemical bonding, stereochemistry, acic-base chemistry, periodicity, nonmetal and transition metal chemistry, organometallic and bionorganic chemistry. Prerequisite: CHEM 342, CHEM 406.
CHEM 466. Spectroscopic Methods in Organic Chemistry (2) 1. Organic structure determination by spectroscopic techniques, with emphasis on infrared, ultraviolet, and nuciear magnetic resonance spectroscopy, and mass spectrometry. Also includes a brief introduction to related spectroscopic methods. Prerequisite: CHEM 342. Prerequisite or corequisite: CHEM 405.
CHienh 567 . Environmental Toxicology (4) 1. Limited to students in environmental toxicology planned program or by permission of instructor. Three lectures, one three-hour laboratory.
Chteß 458. Environmental Toxicology (4) II. CHEM 467 continued. Three lectures, one three-hour laboratory. Prerequisite: CHEM 467:

CHEM 483. Advanced Topics in Chemistry (1-3) I, li, summer. Rigorous study of specific topics of current interest. Not applicable toward minimum 32 -hour major or 20 -hour minor. May be repeated with different topics. Prerequisite: CHEM 342 or consent of instructor.
CHEM 499. Physical Chemistry (1 or 3)
Summer. Special structure to permit nonBGSU students who have completed one or two quarters of physical chemistry to take selected parts of CHEM 405-406. Prerequisites: Same as CHEM 405, and 406, plus consent of department.

## Chinese (CHIN)

CHIN 101. Beginning Chinese I (4) I. Introduction to Mandarin Chinese, the official standard language of China and Taiwan. Development of the four skills: listening, speaking, reading and writing. Three class periods weekly and intensive work with tapes and text.
CHIN 102. Beginning Chinese II (4) II. CHIN 101 continued. Three class periods weekly and intensive work with tapes and text. Prerequisite: CHIN 101 or equivalent.
CHIN 201. Inlermediate Chinese I (4) I. CHIN 102 continued. Grammar and character writing review; continued development of the four skills. Three class periods weekly and intensive work with tapes and text. Prerequisite: CHIN 102 or equivalent.
CHIN 202. Intermediate Chinese II (4) II. Chin 201 continued. Three class periods weekly and intensive work with tapes and text. Prerequisite: CHIN 201 or equivalent.

CHIN 480. Selected Topics in Chinese (1-3) On demand. Topics chosen from Chinese literature, culture or thought to meet curriculum needs and student requests. May be repeated to six hours with different topics.

## College Student Personnel (CSP)

CSP 480. Seminar in College Student Personnel (1-3) II. Analysis of issues, practices, and trends in post-secondary student personnel work.
CSP 481. Introduction to Residence Liie for the Paraprotessional (1) II. Philosophy, skills, competencies of program development and management of university residence units.
CSP 482. Peer Advising Skills (1) I, II. Development of fundamental human relations skills used by peer advisers; listening, interviewing, information sharing, decision making and problem solving.
CSP 485. Peer Advising Practicum (1-2) I, Il. Supervised peer advising experience in appropriate predesignated setting. May be repeated with approval of department. Prerequisite: CSP 482 or consent of instructor. Graded S/U.

## Communication Disorders (CDIS)

CDIS 121. Personal Remediation (1) I, II, summer. Students having speech, language, or hearing problem requiring remedial treatment urged to take advantage of services offered by speech and hearing clinic. No credit toward graduation. Additional fee: $\$ 25$. Graded $\mathrm{S} / \mathrm{U}$.

- CDIS 223. Introduction to Communication Disorders (3) I, II, summer. Normal speech and language development, description and etiology of various communication disorders, i.e., articulation, voice, stuttering, etc.

CDIS 224. Phonetics (2) I, II. Sounds of spoken English, their production and recognition. Applications to techniques in speech pathology and habilitation of the hearing handicapped. Prerequisite: CDIS 223 or CDIS 471 or concurrent with CDIS 223.
CDIS 301. Speech and Hearing Science (4) I, II. Anatomical and physiological principles of the speech and hearing mechanisms including acoustics and the acoustic theory of speech production and perception. Prerequisites: CDIS 223 and CDIS 224 or concurrent with CDIS 224.
CDIS 311. Articulation Development and Disorders (3) !, II. Development, diagnosis, and therapeutic techniques for problems of articulation. Clinical observations required. Prerequisite: CDIS 223 and CDIS 224.
CDIS 321. Voice Disorders and Cleif Palate (2) l. Definition and description of normal and disordered voice. Techniques for evaluation and. therapy. An introduction to the disorders of cleft palate. Prerequisite: CDIS 301.
CDIS 331. Neurogenic Disorders of Communication (3) I. Basic principles of neuromotor development and their relation to speech processes. Etiology, diagnosis and treatment of developmental and acquired neurogenic speech disorders. Prerequisite: CDIS 301 and CDIS 311; non-majors must obtain consent of instructor.
CDIS 341. Stuttering (2) II. Definition, description, development and maintenance of stuttering; approaches to assessment and treatment in children and adults. Prerequisites: CDIS 321, junior standing, and PSYC 305 or consent of instructor.
CDIS 351. Language Acquisition, Assessment and Remediation (4) I, II. Normal acquisition patterns and stages, mechanisms of acquisition, techniques for effective evaluation and survey of therapy programs and techniques. Practicum experience with preschool language group. Prerequisites: CDIS 301.
CDIS 361. Introducifon io Diagnostic Audiology (3) I. Audiometric pure-tone testing. methods, immittance testing procedures, otologic pathologies, and associated hearing problems. Prerequisite: CDIS 301.
CDIS 401. Prepracticum in Communication Disorders (2) I, II. Introduction to clinical setting; student will be involved in planning. observing, and assisting in therapy. Two lectures, two observation periods per week. Prerequisites: CDIS 311 and CDIS 351 , or CDIS 351 concurrent with CDIS 401, and 2.25 GPA. C/F hrs.: 20.
CDIS 411. Diagnosis and Assessment of Communication Disorders (4) I, II. Clinical techniques and theory relating to the appralsal and diagnosis of communication disorders in children and adults. Practical experience in evaluation and report writing. Prerequisites: CDIS 361 and CDIS 401. C/F hrs. 15.
CDIS 421. First Practicum in Communication Disorders (2) I, II, summer. Supervised clinical experience with children and aduls. Two lectures and two clinical periods per week. Prerequisites: CDIS 401 and $411,2.5$ GPA in CDIS courses, 40 approved observation hours, and consent of instructor. C/F hrs.: 45.
CDIS 431. Second Practicum in Communication Disorders (2) I, II, summer. Supervised clinical experience with children and aduits. Two lectures and two or more clinical periods per week. Prerequisites: CDIS 421, 2.5 GPA in CDIS courses, and consent of instructor, C/F hrs.: 45.

CDIS 434. Teaching Beginning Speech to the Deaf (2) I. Speech development of deaf. Analysis of auditory, tactile, proprioceptive and visual aspects of speech sounds. Relative difficulty of producing speech sounds and teaching them. Prerequisites: EDSE 461, 464. C/F hrs.: 15.

CDIS 436. Teaching Advanced Speech to the Deaf (2) II. Review and comparison of methods in teaching speech to deaf. Common problems in speech classes for deaf. Speech sounds and their maintenance and correction as integral part of academic curriculum. Prerequisite: CDIS 434. C/F hrs.: 15.

CDIS 451. Language Principles and Practices for the Special Education Professional (4) I, II. Introduction to language patterns of normal children related to the acquisition of pragmatics, syntax and semantics. Relationship of these patterns to assessment and remediation procedures and strategies in atypical populations.

## CDIS 461. Introduction to Rehabilitative

 Audiology (4) II. Rehabilitation of the hearing impaired. Amplification systems, speech reading, auditory training, speech perceptionlanguage problems of the hearing impaired. Prerequisite: CDIS 361.CDIS 471. Introduction to Communication Disorders for the Classroom Teacher (3) I, II, summer. Identification, etiologies, and charac teristics of communication disorders. Suggestions for classroom management of communication disorders. Not open to student with credit for CDIS 223.
CDIS 481. Organization and Management of School Speech-Language-Hearing Programs (3) I, II. Planning and implementing programs in schools for speech-language and hearinghandicapped pupils. Clinician's roles and responsibilities. Grade of "C" or better in this course to qualify for student teaching. Prerequisites: all CDIS courses.

CDIS 490. Independent Study in Communication Disorders (1-3) I, II, summer. For students who wish to do intensive study in communication disorders independently, or in conjunction with courses regularly offered. May be repeated. Prerequisite: consent of instructor and program chair.
CDIS 492. Student Teaching ( $1-10$ ) I, II. Classroom teaching under supervision on fullday basis. Conferences and seminars supplement program. Required for elementary and/or kindergarten-primary certification. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs: 300. May be repeated. Graded S/U
CDIS 497. Student Teaching (1-10) I, Il. Classroom teaching under supervision on fullday basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Fee: $\$ 5$ per credit hour. Eligibility requirernents must be met. C/F hrs.: 300. May be repeated. Graded $S / U$.

## Computer Science (CS)

- CS 100. Computer Basics (3) I, II, summer. Computer technology and related social issues. Students do programming using BASIC language. Hardware, software, applications in diverse areas. Problems concerning computerized services, data banks, governmental controls. Credit allowed for at most one of the following courses: CS 100, CS 130, MIS 200. Not recommended for students with prior programming experience. Credit not applicable toward major or minor in computer science. Prerequisite: one year of high school algebra or MATH 095 or 096. Lab fee at Firelands.
- CS 101. Introduction to Programming (3) I, II, summer. Algorithms; programming in Pascal, introduction to computer organization; structured programming techniques. Several programming assignments required
Prerequisite: two years of high school algebra or MATH 095 or 096. At Firelands, CST 101 must be taken concurrently for students with no other CST or CS or MIS 200 credit. Lab fee at Firelands.

CS 130. Computer Concepts (3) I, II. Computer technology and related social issues. Students will use microcomputer software for various applications (text editing, statistical analysis, etc.). Hardware, software, applications in diverse areas. Problems concerning computerized services, databanks, governmental controls. Credit allowed for at most one of the following courses: CS 100, CS 130, MIS 200.
-CS 180. Introduction to Programming (1-3).
Programming techniques in particular language. Credit not applicable toward major or minor requirements. May be repeated to three hours if topics differ.
-CS 201. Assembler Language Programming (3) I, summer. Basic computer organization; data representations; addressing techniques. IBM 370 assembler language. Prerequisite: Grade of "C" or better in CS 101. Lab fee at Firelands.
CS 202. Systems Programming (3) I, II. Principles of systems programming, including reentrancy and I/O concepts. Subroutines and macros. Techniques for developing loaders, assemblers, and macro processors. Large implementation project required. Prerequisite: Grade of C or better in CS 201
CS 205. Advanced Programming Techniques (3) I, II, summer. Additional Pascal features. File processing, including sequential and random files. Recursion. Large program development. Introduction to data structures. Interactive debugging. Prerequisitẹ: grade of C or better in CS 101.
-CS 260. Business Programming Principles (3) I, II, summer. Assembler language programming; hardware/software technology. Does not apply to major or minor in computer science. Not open to students with credit for CS 201. Prerequisite: MIS 200 or CS 100.

CS 281: Transition to BASIC (1). Programming in BASIC for students who know Fortran or Pascal. Credit not applicable toward major of minor in computer science. Not open to students with credit for CS 100. Prerequisite: CS 101.

CS 282. Transition to Fortran (1) II. Programming in Fortran for students who know Pascal. Credit not applicable toward major or minor in computer science. Prerequisite: CS 101.
CS 305. Data Structures (3) I. Implementation and applications of commonly used data structures, including stacks, queues, trees, and linked lists. Storage management; hashing techniques; searching and sorting. Use of Pascal language, including pointer variables. Prerequisites: Grades of C or better in CS 201 and CS 205.

CS 306. Programming Languages (3) II. BNF description of programming languages. Significant features of existing programming languages. Structure and comparison of languages for numeric and nonnumeric computation. Languages studied typically include SNOBOL and APL. Prerequisite: CS 205.

CS 307. Computer Organization (3) II. Components of digital computer hardware; flipflops, registers, adders,'memory devices Computer system organization: control structure, addressing, interrupts, $/ / 0$. Prerequisite: CS 201.

CS 313. Elementary Mathematical Logic (3). Propositional and predicate logic; nature of mathematical proof; applications to mathematics and computer science. Not open to students with credit for MATH 313. Prerequisite: MATH 222 or consent of instructor.
-CS 360. COBOL Programming (3) I, II, summer. COBOL programming language and techniques for use; report generation; table handling; sorting; sequential and random-access data files; debugging techniques; COBOL standards. Prerequisite: Grade of " $C$ " or better in CS 101 or CS 260. At Firelands must be taken concurrently with CST 221. Lab fee at Firelands.

CS 380. Special Topics in Computer Science (1-3). Detailed study of a particular computer system or programming language which is not covered elsewhere in the curriculum. May be repeated if topics differ. Prerequisite: CS 205. (Additional prerequisites, if any, will be announced.)
CS 390. Practicum in Computer Science (1-6). For students working in internship or co-op programs. Written report required. Does not apply to major or minor in computer science. May be repeated to six hours. Prerequisite: consent of department. Graded S/U.

CS 407. Advanced Computer Organization (3). I. Evolution of computer systems. Detailed studies of several selected computer organizations; comparison of functional components and overall designs. Prerequisite: CS 307.
CS 408. Operating Systems (3) II. Structure of operating systems. Physical input-output, buffering, interrupt processing. Memory, processor, device, information management; resource management interdependencies. Job and processor scheduling. Concurrent programming. Prerequisite: CS 202 and CS 205.
CS 409. Language Design and Implementation (3) I. Fundamental concepts of languages. Processors, data, operations, sequence control data control, storage management, syntax, translation. Prerequisites: CS 202 and CS 306.

CS 410. Formal Language Theory (3) I. Various types of languages (context-sensitive, contextfree, regular). Discussion of recognition devices such as pushdown automata, linear bounded automata, and Turing machines. Some topics of current interest. Prerequisite: MATH 222 or consent of instructor.

CS 425. Computer Graphics (3) I. Graphic I-O devices; 2-dimensional and 3-dimensional display techniques; display processors; clipping and windowing; hidden line removal; data structures for graphics. Prerequisites: CS 201 and 205 and MATH 222.

CS 428. Microcomputer Systems (3) II. Architecture of microcomputers; programming techniques for small computers; operating systems; //O techniques. Detailed study of a specific microcomputer system. Prerequisite: CS 202.
CS 429. Data Communication and Networks (3) II. Communication equipment; device protocols; network configurations; encryption; data compression and security. Private, public, local and satellite networks. Prerequisite: CS 202. Prerequisite or corequisite: CS 307.

CS 440. Optimization Techniques (3) I. Linear programming, game theory, PERT, network analysis; duality theory and sensitivity analysis; applications; Computer programs written to implement several techniques. Prerequisites: CS 101 and MATH 222.
CS 442. Techniques of Simulation (3) II. Principles of simulation and application of simulation languages to both continuous and discrete systems. Prerequisites: CS 205 and MATH 247

Cs 451. Numerical Analysis (3) 1. Development of numerical methods that are efficient, accurate, and suitable for high-speed digital computation; zeros of polynomiai and transcendental functions; numerical differentiation and integration; solution of linear systems by direct and iteratve methods. Selected algorithms pro grammed for solution on computer. Prerequisites: CS 101 and MATH 332 . Not open to studenis with credil for MATH 451.
© 5 4sz. Mumanical Analysis (3) II. 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, numerical solution of partial differential equations. Prerequisites: CS 101 and MATH 337. Not open to siudents with credit for MATH 452.

Cs 46\%. Database Management Systems (3) I, II, summer Logical aspects of database processing. Concepts of organizing data into integrated database. Hierarchical, network, and relational approaches studied. Prerequisise: CS 360.
CS .664. Sofhware Development (3) 1. In-depth study of all aspects of software development process: user requirements, specifications, design, coding, testing, maintenance, documentation, management. Team development of large software project Prerequisite: Grade of C or better in CS 305.

CS 480. Seminar in Computer Applications (1-3). Prerequisite: consent of instructor. May be repeated to six hours.

CS 490. Independent Project (1-3). Readings and /or computer implementations in area of interest to individual student Does not apply to mafor or minor in computer science. May be repeated to six hours. Graded S/U.

## Compuier Science Technology (CsT)

†CST 101. Computer Soffware Selection (1) 1, 11. Easic course in computer literacy that explores the use of computers, general terminology, investigation of several application packages including a spread sheet, word processing and at least one specific industry application.
tCST 171. Terminal Operations (1) I, II, summer. Remote eniry terminals, operatingsystems, commanding line, operation of local -terminal interpreter related to operation of RJE; visits to operation site. Three hours of laboratory. Hours arranged. Prerequisites: enrolment in CST program and permission of instructor.
+CST 22t. Systems and Procedures I (1) Analysic of business information systems; designing a business system; file design, audit conirols. Techniques for implementing basic systeme documentation, and business forms control. One hour lecture, two hours laboratory. Must be taken concurrently with CS 360 . Lab tee.
†CST 231. Techniques of APG Programming (3) $\mathrm{H}_{\text {s }}$ summer. Basic elements in programming techniques using the RPG II Language. Further work on file organization, table lookup, JCL, chaining, records, and error analysis. A problem-oriented language to maximize time spent on solutions rather than machine charscteristics. Two hours lecture, seven hours laboratory. Lab fee.
+CST 232. Systems and Procedures II (4) II.
Continued study of principles in the design and application of data processing systems in business. Analysis of cost controls, operations research, and the integrated management information system. Two hours lecture, seven hours laboratory. Prerequisites: CST 221 and CS 360, or consent of instructor. Lab fee.
†CST 250. Diagnostic Assembler (3) Summer. A survey of assembler language programming techniques for use on microcomputers. Instruction will reflect the use of the Z-80 and 8085 microprocessors. Lab fee
+CST 260. Advanced Electronic Data Processing (4) $I$, Il, summer. Extended programming techniques using the BASIC language and word processing; accessing files, arrays, systems analysis, system design, string operations, layout forms and structured programming. Two hours lecture, seven hours laboratory. Prerequisite: MIS 200 or CS 104. Lab fee.
†CST 291. Student Intern Program (2) I, II, summer. Ten weeks of paid field work in data processing applications under the supervision of a governmental, industrial, or private business concern. Prerequisite: permission of instructor.

## Construction Technology (CONS)

(Additional costs for materials in all laboratory courses)
CONS 235. Introduction to Construction (3) I,
II, summer. Basic concepts of construction techniques used today; includes office organization, building construction techniques, surveying, building materials, plan reading and estimating. Four hours of lecture and laboratory. Prerequisite: high school math. Sophomore standing recommended.
CONS 306. Light Building Construction ! (3) I, II. Methods and materials involved in framing and enclosing residential and light commercial buildings. Manufactured and prefab components and structures; codes, plans and specifications; estimating and types of contracts and subcontract work for the small builder. Four hours of lecture and laboratory. Prerequisite: CONS 235 or consent of instructor.

CONS 307. Land Planning and Development (3) I, II. Land planning, zoning, and community and sub-division design; subsurface utility systems, transportation systems, and other environmental considerations. Four hours of lecture and laboratory. Prerequisite: CONS 235, MATH 121 or equivalent.

CONS 318. Construction Surveying (3) II, summer. Classroom/field study of surveying equipment, such as, surveyors steel tape, transit and level. Emphasis on measuring distances, horizontal angles and vertical angles, determining elevations, calculating areas, layout of curves, cut and fill, building foundations, and mapping. Four hours of lecture and laboratory. Prerequisites: CONS 235 and good math background in algebra and trigonometry or TECH 121.
CONS 320. Computer Application in Construction (3) I, II. Course deals with applied computer applications of construction programs in the areas of materials, methods and management. Prerequisites: admission to construction program, CONS 335, CS 101 or knowledge of BASIC language.

CONS 335. Commercial and Industrial Construction (3) I, II. Basic considerations or materials used in construction of commercial and civil complexes. Foundations and sitework soils and concrete. Four hours of lecture and laboratory. Prerequisite: CONS 235 and DESN 301.

CONS 337. Heafing, Ventilating, and Air Conditioning Systems (3) II. Mechanical systems that provide heating, ventilation, air conditioning cooling of bulldings and in production processes. Experience with conventional and solar mechanical systems; determining losses, make-up, sysiem sizing, control. Methods, materials and problems encountered in installing systems stressed. Four hours of lecture and laboratory. Prerequisite: ET 191 or CONS 235 or permission of instructor.
CONS 406. Light Building Construction Il (3) II. Advanced course in building construction; necessary materials, methods, and devices used in interior finishing of both residential and commercial facilities. Four hours of lecture and laboratory. Prerequisites: CONS 306 and CONS 335 or consent of instructor.
CONS 425. Introduction to Construction (3) I, II, summer. Basic concepts of construction techniques used today; includes office organization, building construction techniques, surveying, building materials, plan reading and estimating. Four hours of lecture and laboratory. For transfer students only.
CONS 435. Commercial, Industrial and Civil Construction (3) II. On demand, Advanced course in design consideration of methods and materials used in construction of reinforced concrete and steel frame buildings, pavements, sewers and airfields. Four hours of lecture and laboratory. Prerequisites: CONS 335, DESN 243, CONS 337.

CONS 437. Construction Equipment (3) 1. On demand. Equipment factors as related to construction operations. Ownership and operating costs and productivity of major construction equipment; frequent down-time items. Four hours of lecture and laboratory. Prerequisites: ET 191 and CONS 235.
CONS 439. Estimating and Cost Control (3) II. and on demand. Take off and costing and pricing for typical construction project. Preparation of final bid document including all materials, labor, equipment and overhead costs, and profit margin. Four hours of lecture and laboratory. Prerequisite: CONS 335.
CONS 440. Consiruction Contracting (3) 1 . On demand. Project scheduling and control, bidding theories, safety in construction industry, construction contracts. Four hours of leeture and laboratory. Prerequisites: 20 hours of $300 / 400$ level courses in CONS technology and senior standing.
CONS 490. Problems in Construction Technology ( $1-3$ ) On demand. For advanced students wanting to conduct intensive study of selected problems in construction technology. Prerequisite: consent of college. Graded S/U.

## Creative Writing

ENG 205. Craft of Poetry (2) I. Traditional and contemporary poetry; emphasis on way poetry is made. Required for majors and minors in B.F.A. creative writing program. Prerequisite: ENG 112.
ENG 206. Craft of Fiction (2) II. The way fiction works, impluses creating it, how it turns out Emphasis on style and form in traditional and contemporary fiction as way of understanding meaning. Required for majors and minors in B.F.A. creative writing program. Prerequisite: ENG 112.

ENG 208. Creative Writing (3) I, II. Principles of poetic composition and fiction writing. Analysis of contemporary models and practice in original composition.
ENG 209. Creative Writing Workshop (3) I, II. Supervised writing in poetry and fiction; group discussions; concentration on shorter forms. May be repeated once. Prerequisite: " B " or better in ENG 208.

ENG 308. Creative Writing (3) I, II. Imaginative writing, fiction and poetry. Class discussion and individual conferences. Prerequisite: " B " or better in ENG 209 or approval of instructor. May be repeated once.

ENG 407. Writer's Workshop (3) I, II. Analysis of contemporary creative writing models, and original composition, emphasis on fiction and poetry. Creative writing majors repeating course required to do special project. Prerequisite: " $B$ " or better in ENG 308 or approval of instructor. May be repeated once.

## Criminal Justice (CRJU)

CRJU 210. \|ntroduction to Criminal Justice (3) I, summer. Philosophical, historical, operational aspects of criminal justice agencies and processes in a framework of social control in a democracy. Crime and corrections problems and response of criminal justice agencies to them
CRJU 220. Criminal Justice Organization and Administration (3) I. Organization and management applied to criminal justice agencies, law enforcement, corrections and courts. Theoretical and practical aspects of management factors such as organization, decision making, values, human relations, ówer. Prerequisite: CRJU major.

CRJU 230. Investigations: Theory and Practice (3) II. Role of the investigator in various types of investigations - criminal, civil, personal history and liability. Techniques of evaluation and preservation of data, sources of information; processes of specializated investigations. Prerequisite: CRJU major.
CRJU 3XX. Security Administration (3) II.
Security systems found in retail, industrial and governmental agencies; legal framework for security operations; detailed presentations of specific security programs. Prerequisite: CRJU major:
CRJU 395. Workshop-Current Topics (1-3).
May be repeated. Any semester. Special topics or issues in criminal justice, primarily of a current or unique interest to students/practitioners. Prerequisites: CRJU 210, junior standing or permission of the instructor.

## CRJU 470. Independent Study in Criminal

Justice (1-3) I, II, summer. Student designs and carrries out study or special project in area of interest. Prerequisite: consent of instructor. May be repeated.

CRJU 480. Senior Seminar in Criminal Justice (3).I, II, sumrner. Consideration and evaluation of selected policies and practices in criminal justice field, both law enforcement and corrections; attempt to integrate criminal justice field and to focus on common problems and concerns. Problems of theoretical and ractical nonconvergence. Individual research herests explored, formalized, reported. fequired of all CRJU majors. Prerequisites: senior standing and.completion of 25 hours of CRJU core courses.

CRJU 491. Practicum ( $\dagger-12$ ) I, II, summer.
Experience working in a criminal justice agency under both practitioner and academic supervision. Emphasis on practice rather than observation. May be repeated. Prerequisite: permission of program director and completion of ENG 112 or equivalent. Lab fee. Concurrent enrollment in other courses not permitted. Graded S/U.

## Design Technology (DESN)

(Additional costs for materials in all laboratory courses)
-DESN 104. Design and Engineering Graphics I (3) I, II, summer. Design as process and engineering graphics as vehicle to communicate problem solutions. Documented design analysis, sketching, and instrument drawing applied to design problems involving industry and technology. Four hours of lecture and laboratory.
$\dagger$ DESN 202. Mechanical Design (5) II Alternate years. Design and selection of mechanical elements, fasteners, power transmission devices, hydraulics systems, manuals, catalogs, and publications utilized. Consideration of economy, loading conditions, stresses, deformation, fits and finishes in design. Three hours lecture, six hours laboratory. Prerequisites: DESN 104 and PHYS 201.

DESN 204. Design and Engineering Graphics II (3) I, II, summer. Application of design analysis and engineering graphics to problems dealing with mechanical production design. Use of working drawings to communicate design solutions for surface development, jig and fixture, and tool and die design. Dimensioning and graphic techniques. Four hours of lecture and laboratory. Prerequisite: DESN 104.

## †DESN 205. Tool, Die, Jig and Fixture Design

 (4) II alternate years. Importance and economics of tooling designed for mass production; topics include jigs, dies, design and construction emphasis placed on die design problems and solutions. Field visits to die stamping plants. Two hours lecture, six hours laboratory. Prerequisite: DESN 104. Lab fee.DESN 243. Statics and Strength of Materials (3) I, II. Fundamentals of statics including vectors, centroids, moment of inertia, free body diagrams, and structural systems; strength of materials including the study of simple and combined stress, bending, shear, and torsional stress. Four hours of lecture and laboratory. Prerequisite: good math background in algebra and trigonometry or TECH 121.
DESN 301. Architectural Graphics I (3) I, II, summer. Architectural design and construction; development and use of elevation, plan, detail, and perspective drawings in planning and designing residential, business and industrial structures. Four hours of lecture and laboratory. Prerequisite: DESN 104 or permission of instructor.

DESN 304. Mechanical Design (3) I. On demand. Engineering graphics principles applied in design of structures, machines, production systems. Standard manuals and commercial catalogs used. Four hours of lecture and laboratory. Prerequisite: DESN 204.
DESN 305. Technical Illustration (3) II. Technical illustration for design presentation, assembly, repair and advertising. Variety of equipment, materials and techniques to accomplish various pictorial representations and design illustrations. Four hours of lecture and laboratory. Prerequisite: DESN 104

DESN 314. Design and Engineering Graphics I (3) I, II, Summer. On demand. Each semester and summer. Design as process and engineering graphics as vehicle to communicate problem solutions. Documented design analysis, sketching, and instrument drawing applied to design problems involved industry and technology. Four hours of lecture and laboratory. For transfer students only. Obtain permission of department.

DESN 336. Structural Design (3) II. On demand. The study of numerical methods to determine the reactions, shearing force, and bending stress necessary to size structure members. Emphasis on floor framing systems columns, connections in steel, concrete, and timber according to design codes. Four hours of lecture and laboratory. Prerequisite: DESN 243.

DESN 404. Computer Aided Design (3) II.
Even numbered years. Study and application of computer graphics systems to the design process. Use of interactive methods for design purposes with plotted or video output.
Programming subroutines for graphics, two and three dimensional views, and surface generation. Four hours of lecture and laboratory. Prerequisites: DESN 104, CS 101.

DESN 436. Planning and Design of Industrial Facilities (3) II even numbered years, summer Planning, estimating, design, and modeling of industrial facilities with consideration of management, personnel, production, aesthetics, and environment. Four hours of lecture and laboratory. Prerequisite: DESN 301
DESN 450. Architectural Graphics II (3) II. Odd numbered years. Man made environment considered through advanced problems in architecture and the related graphics of presentation. Four hours of lecture and laboratory. Prerequisite: DESN 301.
DESN 452. Design in Industry (3) I even numbered years. System approach applied to solution of one and two dimensional product design problems; emphasis on feasibility in production and use. Prerequisites: ART 212, DESN 104, DESN 204, DESN 404.

DESN 455. Engineering Design (3) I odd numbered years. Problems in engineering design in such areas as human factors, value engineering, CPM/PERT which require advanced engineering graphics for solution Four hours of lecture and laboratory. Prerequisite: DESN 304
DESN 490. Problems in Design Technology (1-3). On demand. For advanced students wanting to conduct intensive study of selected problems in design technology. Prerequisite: consent of college. Graded S/U.

## Economics (ECON)

ECON 100. Development of the American Economy (3) I, II. Study from colonial times to present to provide perspective for understanding current economic problems. How Americans lived, changes in population and income distribution, agriculture, industry, technological change, labor, transportation, money and banking, foreign trade, role f governiment.
ECON 200. Introduction to Economics (3) I, II. Alternative economic goals; economic growth, full employment, price stability, fair income distribution, economic security, economic freedom, consumer sovereignty, efficiency. Recommended for students taking only one ECON course. Not open to student required to complete ECON 202.

ECON 202. Principles of Economics (3) 1, 11.
Demand and supply; price theory; product and factor markefs; income distribution; comparative systems; current problems and public policy. Fecommended before ECON 203. Prerequisite sophomore standing.

ECON 203. Principles of Economics (3) I, II. American economy, national income and employment, banking system, monetary and fiscal policy; economic growth and development; international economics. Prerequisite: sophomore standing. ECON 202 recommended.
ECON S02. Intermediate Microeconomic Theory (3) i, II. Theory of demand, of the firm, of production and distribution; economics of pure competition. Factor price determination. Prerequisites: ECON 202 and ECON 203. Normally students should not take both ECON 302 and ECON 304.
ECOM 303. Intemediate Macroeconcmic Theory (3) I, II. Concepts and measurement of nathonal income. Analysis of forces determining level of national income and employment, price level, and rate of economic growth. Prerequisites: ECON 202 and ECON 203.

ECON 304. Managerial Economics (3) I, II. Application of economic theory to decision-making problems of the firm; demand analysis and sales foreasting; theory of production and cost analysis; pricing practices and policies; capital budgeting. Prerequisites: ECON 202 and ECON 203 and STAT 212. Normally students should not teke both ECON 302 and ECON 304.
ECON 311. Money, Banking, and Public Policy (3) I, II. Nature and functions of money and commercial banking system. Means of monetany regulation and control. Role of money and monetary policy in affecting total economic activity. Prerequisites: ECON 202 and ECON 203.
CCON 321. Labor Economics (3) I, II. Economics of manpower employment and labor market; labor organizations, collective bargaining, regulation of labor by government, wage determination, unemployment and social security. Prerequisites: ECON 202 and ECON 203.

FCON s23. Poverty, Unemployment, and Income Maintenance (3) II. Structural and cyclical unemployment, alternative responses to poverty evaluation of training programs and welfare schemes. Prerequisites: ECON 202 and ECON 203.

ECON 331. Public Finance (3) 1, II. Survey of government finance. Public expeditures, taxation, and debt, emphasis on federal level. Prerequisites: ECON 202 and ECON 203 or consent of instructor.
ECON 332. State and Local Government Finance (3) | or il. Economic functions of state and local governments; revenue sources, expenditures, debt, and intergovernmental fiscal relaüons. Prerequisites: ECON 202 and ECON 203 or consent of instructor.
ECON 351. Intemational Trade and Finance (3) 1. Structure and regulation of foreign trade, mechanics of international finance, new elements in U.S. foreign trade. Prerequisites: ECON 202 and ECON 203.

ECON 400. Mathematics for Economists (3)) I. Elementary mathematical methods and basic applications to economic theory. Not recommended tor students who have had MATH 231 or above.
ECON 501. Miathematical Economics (3) It. Economic theory in mathematical context; microeconomic and macroeconomic models, their structure and analysis. Constrained optimization. Prerequisites: ECON 400 or equivalent of calculus. and ECON 302 or ECON 303.

ECON 402. Econometrics (3) II. Statistical techniques used to measure economic data and to test validity of theoretical models. Prerequisites: STAT 212 and ECON 400, or equivalent; or consent of instructor.

ECON 404, Business Conditions (3) II. Components of gross national product, statistical measurement of business tluctuations. Determinants of the level of economic activity. Keynesian, monetarist and other theories of business cycles. Methods of macroeconomic forecasting. Prerequisites: ECON 303 or ECON 311, and STAT 212.

ECON 414. Monetary and Fiscal Policy (3) II. Objectives, means, and analysis of monetary and fiscal control; effect on total economic activity. Prerequisite: ECON 303 or ECON 311.
ECON 422. Labor Relations Policy (3) I. Economic effects of government policy towards organized labor. Collective bargaining implications of pertinent federal and state legislation. Prerequisite: ECON 203.
ECON 423. Labor-Management Relations (3) II. Employer-employee relations; collective bargaining process; conciliation, mediation, arbitration procedures. Prerequisite: ECON 203.
ECON 424. Income, Wages, and Weliare: Analysis and Policy (3) On demand. Theories of income and wage determiaations. Effect of employers and labor organizations and economic effects of various income policies. Prerequisites: ECON 202 and ECON 203.
ECON 425. Health Care Economics (3) On demand. Economic analysis of health care delivery system in U.S. Consumer's demand for health care, supply of health care by physicians and hospitals, evaluation of policy issues relating to health care. Prerequisites: ECON 202 and ECON 203
ECON 435. Economics of Energy and the Environment (3) On demand. Methods and research techniques applicable to energy and environmental problems; evaluation of alternative public economic policies for energy and environmental control. Prerequisites: ECON 202 and ECON 203
ECON 436. Economics of Public Expenditures (3) 1. Purposes and economic effects of governmental expenditures; budgeting techniques and their effect on resource allocation. Prerequisites: ECON 202 and ECON 203.

ECON 441. Real Estate Finance and Capital Markets (3) II. Market factors affecting residential property values, private sources of funds, role of governmental agencies in residential markets. Prerequisites: ECON 202 and ECON 203. Not for arts and sciences credit.

ECON 447. Economics of Regulated Industries (3) II. Historical development of public regulation of certain industries, including transportation; methods of regulation and evaluation of public policy towards regulated industries. Prerequisites: ECON 202 and ECON 203
ECON 451. International Economics (3) I. Theory of international economics; international trade as factor in national income; significance of international investment, public policies to promote trade, internaional economic cooperation. Prerequisite: ECON 341 or consent of instructor.

ECON 452. International Monetary Economics (3) II. Alternative international monetary systems emphasis on present system. Prerequisites: ECON 311 and ECON 351, or consetn of instructor.
ECON 454. Economic Development (3) I. Obstacles to and current efforis for promotion of economic growth in emerging nations. Prerequisite: ECON 202 or consent of instructor.

ECON 460. Regional Economics (3) I. Location and land use theories, central place theory, tools of regional analysis, regional growth theory, and regional public policy issues. Prerequisites: ECON 202 and ECON 203.
ECON 462. Urban Economics (3) II. Urban spatial theory and analysis, economic analysis of urban problems including poverty, housing, transportation, the environment, and public finance. Prerequisites: ECON 202 and ECON 203.

ECON 471. Industrial Organization: Study of Business Size and Compelition (3) II. Forces that lead to bigness and resulting impact of big ness on competition; public policy, including regulation, designed to cope with business size Prerequisite: ECON 202 or consent of instructor

ECON 472. Comparative Economic Systems (3) II. Economic structures, conditions, problems, and policies in a selection of countries. Prerequisites: ECON 202 and ECON 203 or consent of instructor.

ECON 473. History of Economic Thought (3) I.
Development of economics and economic analysis from Adam Smith to J.M. Keynes. Prerequisites: ECON 202 and ECON 203.
ECON 475. Economics of Public Education (13). Education as investment in human capital; financing of education and relationship to federal monetary and fiscal policies and to state and local government finance. Prerequisites: ECON 202 and ECON 203 or consent of instructor.
ECON 476. Seminar in Contemporary Economic Problems (3) On demand. Interesied students should consult with chair of depariment.

ECON 491. Studies in Economics (1-3) On demand. Treatment of selected areas in depth. Offered to individual on lecture basis or in seminar depending on students needs and materials May be repeated to six hours.
ECON 495. Reading for Honors in Economics (3-6) I. II. For economics major with accumulative GPA of 3.0; normally culminates in treaties or comprehensive examination which must receive approval of department. Consult department chair. Prerequsite: consent of department.

## Education Curriculum and Insiruction (EDCI)

EDCI 100. Developmental Reading: Compre hension, Vocabulary, and Study Skills (2) 1, 11, summer. Designed to improve study habits and basic skills of vocabulary and comprehension efficient notetaking, time management, testtaking and critical thinking. Must score at AOth percentile or above on standardized reading test to pass course. Clinic/lab required: 15 hrs Lab fee: $\$ 10$.
EDCl 101. Speed Reading (2) 11, summer. Designed to improve study-type reading speed; leisure reading speed; adjusting reading speeds to purposes, material difficulty, and background experience of reader. (Minimum score of 260 words per minute with 60th percentile comprehension on reading speed test is necessary to receive " C " in course.) Prerequisite: departmental testing or successful completion of EDCl 100. Clinic/lab required: 15 hrs . Lab fee: $\$ 15$.
EDCI 202. Exploring the Profession (2) 1, 11. Supervised experience in schools with seminar sessions on campus. Students spend one-half day per week for five weeks in each of two school settings working as teacher participants; possible participation in elementary and secondary settings. One session per week held as seminar on campus analyzing teacher roles with introduction to study of education and discussion of classrooms in settings such as urban, surburban, and rural. Speech and Hearing Screening Test required to be taken during course, C/F: 57.

EDCI 2:2. Early Childhood Education Compet ency Development I (2) I. Analysis of identified performance competencies for professionals who work with young children. Creating safe and healthy learning environment for infants and toddlers that helps build child's selfconcept. One one-and one-half hour seminar weekly plus clinical/field: 33 hrs. Prerequisite: HOEC $\$ 23$.

EDCI 321. Early Childhood Education Competency Development (2) II. Analysis of identified performance competencies for professionals who work with young children. Carrying out supplementary responsibilities related to children's program, applying child management techniques and beginning to initiate activities that advance preschool child's self-concept as well as physical and intellectual competence. One one-and one-half hour weekly plus C/F: 33 hrs. Prerequisite: EDCI 221.
EDCl 350. Classroom Application of Methodology (2) On demand. General teaching methods applied to specific content areas, classroom management, management and organization techniques, working with parents, evaluation of children and self, and lesson and unit plans. Classroom teaching will be supervised and evaluated by the University instructor. MEP only. Prerequisites: MATH 241 and 242, EDFI 302, EDCI/EDFI 202.
EDCI 351. Social Studies in the Elementary School (3) I, II, summer. The teaching of social studies in K-6. Objectives, content, learning experiences, instructional resources, evaluation of teaching, learning in the classroom. Must obtain a minimum grade of C prior to student teaching. Prerequisite: EDCI/FI 202, EDFI 302. C/F hrs.: 30.
EDCI 352. Mathematics Methods for the Elementary School (3) I, II, summer. Teaching contemporary mathematics in grades K-6. Objectives, curriculum, materials of instruction, methods of teaching and evaluation. Minimum grade of $C$ required prior to student teaching. Prerequisites: EDFI/Cl 202, EDFI 302 and MATH 241, 242. C/F hrs: 30.

EDCI 353. Science in Elementary Schools (3) I, II, summer. Teaching of science in grades K-6. Objectives, curriculum, materials of instruction, methods of teaching, and evaluation. Must obtain a minimum grade of C prior to student teaching. Prerequisite: EDFI/FI 202, EDFI 302. C/F hrs: 30.
EDCI 355. The Teaching of Reading in the Elementary School (3) I, II, summer. The basic theory of developmental reading including teaching procedures, setting objectives, designing curriculum, utilizing instructional materials and evaluation. Prerequisite: EDCI/FI 202, EDFI 302. Must obtain a minimum grade of C prior to student teaching. C/F hrs: 30.
EDCI 356. Language Arts in the Elementary School (3) I, II, summer. Teaching the language arts; emphasis on language acquisition, developmental procedures in guiding growth in oral and written expression, listening, literature, and handwriting. Minimum grade of $C$ required prior to student teaching. Prerequisite: EDCI/FI 202, EDCl 302. C/F hrs: 30.
EDCI 357. Kindergarten-Prímary Curriculum and Methods (3) I, II, summer. Objectives, curriculum, instructional and resource materials, methods. Laboratory experience in
kindergarten-primary education. Should precede semester of student teaching. Prerequisite: EDFI 302 or EDFI 342. C/F hrs: 30.

EDCI 359. Individualization of Reading Instruction in Classroom (3) I, II, summer. Use of diagnostic measures and materials to aid teacher in developing individual student's learning and reading capabilities. Behavioral objectives, organization of classroom, sequencing skills, developing own materials and diagnostic teaching Prerequisite: EDCI 355. C/F hrs: 25.

EDCI 360. Content Reading for Specialized Subject Areas (2) I, II, summer. Designed for preservice teachers seeking certification in specific subject areas at elementary and/or secondary levels. Participants become acquainted with reading needs of students in content area class. Prerequisites: early field experience and EDFI 302. C/F hrs: 30.
EDCI 365. Computer Utilization in the Classroom (3) I, II, summer. Impact of the microcomputer on educational methods and applications in the classroom. Evaluation and modification of software. Introduction to instructional programming through tracing and hands-on experience.
EDCl 370. General Teaching Methods in Secondary Schools (2) I, II, summer. General processes and issues that form the basis of instruction in all content areas; development of strategies and teacher behaviors associated with effective instruction; critical elements of planning, implementing, evaluating instruction, application of those elements in clinical/field setting. Prerequisites: EDCI 202 or EDFI 202 and EDFI 302. C/F hrs: 35.
EDCI 371. English in Secondary Schools (3) I, II. Philosophies of, experiences in, and methods of teaching English in secondary schools. Prerequisites: ENG 380, ENG 381, EDCI 370, EDFI 302 and senior standing. C/F hrs: 40.
EDCI 372. Speech in Secondary Schools (3) I, II. Principles, objectives, instructional and resource materials, and methods for teaching of speech in secondary schools. Prerequisites: EDFI 302, EDCI 370, and senior standing. C/F hrs: 40.
EDCI 373. Teaching Foreign Language in the Schools I (3) I, II. Principles of second language learning; theory and practice of K-12 curriculum, development of fundamental skills and abilities in teaching listening, speaking, reading, writing in foreign language; techniques of instruction planning; concepts of teaching culture. Prerequisites: EDCI/FI 202, EDFI 302 and junior standing. C/F hrs: 30.
EDCI 374. Mathematics in Secondary Schools (3) I, II. Principles, objectives, curriculum, materials, and methods of teaching mathematics in secondary schools. Prerequisites: EDCI 370, EDFI 302 and senior standing. C/F hrs: 40.
EDCI 375. Science in Secondary Schools (3) I, II. Principles, objectives, curriculum, instructional and resource materials, and methods of teaching science in secondary schools. Prerequisites: EDCI 370, EDFI 302 and senior standing. C/F hrs: 40.
EDCI 376. Social Studies in Secondary Schools (3) I, II. Principles, objectives, curriculum, instructional and resource materials, and methods of teaching social studies in secondary schools. Prerequisites: EDCI 370, EDFI 302 and senior standing. C/F hrs: 40.

EDCI 378. Journalism Methods for High School Teachers (3) I, II. Principles, objectives, curriculum, materials, methods of teaching mass media in secondary schools. Prerequisites: EDCI 370, EDFI 302 and senior standing. C/F hrs: 40.

EDCI 395. Workshop on Current Topics (1-3) On demand. Intensive educational experience on selected topics related to skill development, content update, or materials development. Typicaliy, an all-day or similar concentrated time format. Requirements usually completed within time format. May be repeated on approval of adviser.
EDCI G420. Developmental Reading in the Content Area (3) I, II, summer. Orients the teachír to the developmental reading process as it applies to the various subject matter areas, including diagnosis and prescription, vocabulary, word analysis, comprehension, and study skills. Prerequisite: EDFI 302, content methods course or consent of instructor.
EDCI 423. Investigations in the Teaching of Mathematics (3) I, II, summer. Research in mathematics education as it affects elementary schools. Curricular trends reflecting basic mathematical skills appropriate for elementary schools. Examination and analysis of materials for teaching mathematics. Prerequisite: EDCI 352. C/F hrs: 30.

## EDCI 424. Investigations in Teaching of

 Elementary Social Studies (3) On demand. Seminars in the teaching of social studies. Indepth study of values education, the interdisciplinary approach, problem solving techniques, and the role of social studies in controversial issues. Each can be taken alone but recommended that 3 of the 4 be completed. Prerequisite: EDCI 351.EDCI 425. Investigations in the Teaching of Language Arts (3) On demand. Investigation of language arts in the elementary school, the nature and interrelationships of the various components, objectives for teaching, and development and evaluation of language learnings, materials, and methodology. Prerequisite: EDCl 356.

EDCI 426. Investigations in the Teaching of Elementary Science (3) On demand. Analysis of the science concepts and principles which are developed; nature of materials and methodology and designs of evaluation procedures. Prerequisite: EDCI 353 recommended.

EDCI 429. Teaching Foreign Language Skills, in the Schools II (3) II. Advanced-level skills and abilities in teaching listening, speaking, reading and writing in foreign languages as applied to the K-12 curriculum, classroom management, testing and evaluation, individualized instruction, and culture. If taken for graduate credit, a research paper is required. Prerequisite: EDCI 373. C/F hrs: 30.

EDCI G471. Directing Speech Activities in High School (3) Summer. Administration of secondary cocurricular speech programs in forensic events, mass media, and theatre. Prerequisite: B.S. in speech education or EDCI 372, IPCO 204, THEA 241, 243 and 341.

EDCI 490. Problems in Education (1-3). On demand. For advanced student wanting to conduct intensive study of selected problems in education. May be repeated to six hours; undergraduate credit only. Prerequisite: consent of department. C/F hrs: 20.
EDCI 492. Student Teaching ( $1-10$ ) I, II. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required for elementary and/or kindergarten-primary certification. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs: 300. May be repeated. Graded S/U.
EDCI 497. Student Teaching (1-10) I, II. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs: 300 . May be repeated. Graded S/U.

## Educational Administration and Supervision (EDAS)

EDAS 395. Wrorkshop on Current Topics in EDAS (1-3) On demand. Study, readings, activities, projects, development of materials related to needs of EDAS undergraduate. Topics vary semester to semester. May be considered for protessional growth. Graded S/U.
EDhS 409. Organization and Administration of Education in American Society (3) I, II, III. Local, state, and federal involvement in American education as related to society. Teacher interrelatonships; classroom management, school firance, legal issues, job placement and proiessional relations, teacher evaluation, school-community relations, current educational issues and politics of education as related to societal control. Prerequisites: EDFI 302 and junior status. C/F hrs: 20.
EDAS 413. Administration of School Discipline and Surient Behavior Problems (3) On demand. Student behavior problems and school discipline in educational setting; methods for analyzing problem behavior; comprehensive positive process approach to dealing with student behavior problems and school discipline.
cDAS 469. Witrkshop in Teacher's Role in Stafi Problems (1) On demand. Acquaints teachers in prepatation and beginning teachers with staff problems in public schools; teacher's role related to other teachers, supervisors and administrators.
EDAS 490. Problems in Educalion (1-3). On demand. For advanced student wanting to conduct intensive study of selected problems in education. May be repeated to six hours; undergraduate credit only. Prerequisile: consent of department.
Ebå\$ 492. Student Teaching (1-10) I, II. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required for elementary and/or kindergarten-primary certification. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs: 300 May be repeated. Graded S/U.
EDAS 697, Sudent Teaching ( $1-10$ ) i, Il. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. CfF hrs: 300. May be repeated. Graded SIU.
EDAS 498. Workshop in Community Relations (3) On demand. Available teaching resources in the community and how they can be utilized efficiently in teaching; production of teaching units, resource files, other materials which eftectively impiement use of community resources.

## Edicational Founclations and Inquiv (EDFI)

EDF1 202. Exploring the Protession (2) 1, II. Supervised experiance in schools with seminar sessions on campus. Students spend one-half day per week for five weeks in each of two school settings working as teacher participants; possible participation in elementary and secondary seting. One session per week held as seminar on campus analyzing teacher roles with introduction to study of education and discussion of classrooms in settings such as urban, suburban and rural. Speech and Hearing Screening Test required to be taken during course Cross-listed in EDCI. C/F hrs: 57.

EDFI 302. Educational Psychology (3) I, II, summer. Theory and research on learning, development, personality, and motivation applied to educational processes in various learning environments. Some field or clinical work. Prerequisites: PSYC 201 and sophomore status. C/F hrs: 20.
EDFI 342. Psychology of Childhood (3) I, II, summer. Behavior and development of children through elementary school age. Prerequisite: PSYC 201. EDFI 302 recommended.
EDFI 395. Workshop on Current Topics ( $1-3$ ) On demand. intensive educational experience on selected topics related to skill development, content update, or materials development. Typically, an all-day or similar concentrated time format used. Requirements usually met within time format. May be repeated on approval of adviser.

## EDFI 402. Assessment and Evaluation in

 Education (3) I, II, summer. Assessment and evaluation applied to instructional procedures; construction of assessment tools; interpretations of assessment results. Prerequisites: EDFI 302. C/F hrs: 20.EDFI 408. Education in a Plurallistic Society (3) I, II, summer. Ideas and assumptions in education. Development of dynamic and personal philosophy of education. Prerequisites: EDFI 302. C/F hrs: 10.

EDFI 411. Teachers' Role in Guidance (3) On demand. Human relations and classroom management practices which teachers may use to meet affective and cognitive learning needs of students; practical application counseling and guidance techniques and strategies which encourage positive ciassroom climate. Prerequisite: senior standing.
EDFI 412. Education of Disadvantaged (2) On demand. Effects of socioeconomic deprivation on educational performance; teaching techniques appropriate to needs and characteristics of disadvantaged student. Prerequisites: education methods and EDFI 302.
EDFI 415. Spaceship Earth Seminar (3) On demand. Integrating, synthesizing, environmental education seminar for upperclass and graduate students. Using inquiry approach, participants consider relationships of humankind with total environment.
EDFI 416. Philosophy of Environmental Education (3) On demand. Concepts and processes of environmental education including theories such as Toledo model, Strand approach, Environmental Studies Project, Boudder, and other representative model.
EDF1 417. Urban Educalion (2) On demand. Research, methods, and concepts from sociology and psychology discussed as basis for critically analyzing current educational practices, programs, and policies of urban schools. Resource people used. Library and field research required. Prerequisite: commitment to, or at least serious interest in, urban education.
EOFI 429. Assessment of Young and Atypical Children (3) I, II, summer. Concepts and principles of measurement and instruments used in assessing young and atypical children; integration of measurement and instruction. Prerequisite: EDF1 302. C/F hrs: 20.
EDFI 460. Sex Role Stereotyping and Sex Discrimination in Education (2) On demand. Education as influential institution and process in society in terms of sexism in educational materials, curriculum, structure; federal, state, local policy responses to this concern; consideration and development of other policies for action regarding sex equity in education.

EDFI 481. Leadership Training in Behavior Analysis Program ( $1-5$ ) On demand. Prepares individuals to function as group leaders in academic, year-long, inservice behavior analysis program. Prerequisite: permission of instructor and enrollment in behavior analysis program.
EDFI 482. Direct Study of the Child (1-5) On demand. Part of behavior analysis program. A child studied using predetermined framework.
EDFI 490. Problems in Education (1-3). On demand. For advanced student wanting to conduct intensive study of selected problems in education. May be repeated to 6 hours; undergraduate credit only. Prerequisite: permission of instructor.
EDF1 492. Student Teaching (1-10) I, fl. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required for elementary and/or kindergarten-primary certification. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs: 300. May be repeated. Graded S/U.
EDF1 497. Student Teaching ( $1-10$ ) i, 11. Ciassroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs: 300 . May be repeated. Graded SIU.

## Electronic Technology (ET)

(Additional costs for materials in all laboratory courses)
†ET 100. Energy Codes and Regulations (1) II. Various federal, state and local codes which pertain to engineering iechnology; OSHA regulations, National Electric code and various EPA regulations. One hour of lecture.
$\dagger$ ET 147. Electricity (3) I, II. Electron theory, DC circuit components; RLC circuits; power circuit concepts; 3 phase elecric power; introduction to the use of electrical instruments. Two hours of lecture, four hours of laboratory. Prerequisite: TECH 121 , or equivalent. Lab fee.
$\dagger$ ET 148. Electronics (3) II, summer. Electronic devices, solid state and vacuum tube; application of electronic devices for power supplies, amplifiers, digital gates, oscillators and instruments. Two hours of lecture, four hours of laboratory. Prerequisite: ET 147. Lab fee.
ET 191. Energy, Power, Instrumentation and Control (3) I, II, summer on demand. Principles of automated systems, how machines work and emphasizing energy, power, measurement, and controlling devices. Four hours lecture/ laboratory.
$\dagger$ ET 201. Energy Production and Conservation Systems (2) Il. Principles, major elements, efficient operation of each part of a power plant system. One hour lecture, three hours laboratory. Prerequisite: ET 147 or consent of instructor.
ET 240. Electricity (4) I, summer on demand. Electron theory; DC and AC units and theory; circuit component; circuit analysis techniques; RLC circuits; power concepts; use of test instruments. Two and one half hours of lecture and three hours of laboratory. Prerequisite: TECH 121 or MATH 128 or equivalent.

ET 241. Electronics (4) II, summer on demand. Electronic circuits, both analog and digital, plus semiconductors. Design and application of power supplies, amplifiers oscillators, and digital gates to communication, instrumentation, and process control. Two and one half hours of lecture and three hours of laboratory. Prerequisite: ET 240 or permission of instructor.
-ET 244. Communication Circuits (3) II odd numbered years. Communication circuits including telecommunication; amplifiers; amplifier design, components and applications, oscillators, communication components and principles of receivers and transmitters. Four hours of lecture and laboratory. Prerequisite: ET 241 or permission of instructor.

- ET 245. Communications Systems (3) I even numbered years. Applications of principles of communications circuits to large and complex systems including telecommunication. Techniques of transmission and radiation of electromagnetic energy applied to pulse, television, and micro-wave systems. Four hours of lecture and laboratory. Prerequisite: ET 241 or equivalent.
$\dagger$ ET 247. Electrical Measurement and Instrumentation (3) II. Electrical measurement and instrumentation devices, transducers and elements; principles underlying their design and use. Two hours of lecture, four hours of laboratory. Prerequisite: ET 148. Lab fee.
$\dagger$ ET 248. Industrial Equipment and Controls (3) I. Automation and industrial control principles. Study and application of typical devices such as time control switches, motor controls, servo-mechanisms, photo-electric switches.
Two hours of lecture and four hours of laboratory. Prerequisite: ET 148. Lab fee.
$\dagger$ ET 249. Digital Electronic Components and Systems (3) I. Basic digital system logic analysis and synthesis techniques; number systems and codes; Boolean algebra and circuit minimization techniques. Characteristics of modern digital integrated circuit components. Two hours of lecture and four hours of laboratory. Prerequisite: ET 148. Lab fee.


## $\dagger$ ET 290. Experimental Studies in Industrial

 Education and Technology (1-3) I, II, summer. Experimental study projects, seminars and workshops dealing with topics in industrial technology.ET 300. Electric Machinery Controls (3) I or II, Summer on demand, even numbered years. Electric motors, generators, assorted controls; operating characteristics, selection, testing of direct current single and three-phase machinery. Four hours of lecture and laboratory. Prerequisite: ET 191.
ET 357. Electrical Power Transmission (3) II. Power converters, polyphase distribution systems including conductors, transformers, voltage regulation, protection, control phasing, and metering. Electrical codes, methods, and materials used in electric installation. Problems in electrical construction work. Four hours of lecture and laboratory. Prerequisite: ET 191.

ET 358. Digital Electronics (4) I, summer on demand. Digital integrated circuit devices with medium and large scale applications. Digital families, their functions, use of specification oheets, discussion of digital system. Five hours of lecture and laboratory. Prerequisite: ET 241 or PHYS 201.

ET 392. Energy Power Instrumentation and Control (3) I, II, summer on demand. Principles of automated systems, how machines work and emphasizing energy, power, measurement, and controlling devices. Four hours of lecture and laboratory. For transfer students only. Obtain permission from department.

ET 441. Instrumentation (3) I, summer on demand. Industrial instrumentation. Measuring of mechanical, fluid, and electric phenomenon, transducers, recorders, indicators and controllers. Principles underlying their design and applications. Four hours of lecture and laboratory. Prerequisite: ET 191 or consent of instructor.
ET 442. Digital Computer Analysis (3) II, summer on demand. Organization and construction of mini-micro computers, machine language programming, interfacing, including developing logic design, selection of integrated circuits, assembly, testing and system diagnostic testing procedures. Four hours of lecture and laboratory. Prerequisite: ET 358 or consent of instructor. Lab fee at Firelands.
ET 443. Solid State Devices (3) II even numbered years, summer on demand. Semiconductor devices, operational amplifiers, SCR, unijunction and FET transistors. Theory of operations, manufacturing procedures, parameter specifications, performance, testing and applications. Four hours of lecture and laboratory. Prerequisite: ET 241 or consent of instructor.
ET 453. Digital Computer for Process Control (3) II, summer on demand. Industrial process control utilizing mini and/or micro computers. Organization and operation of computers, various process control modules (A/D and D/A), signal conditioning and converting, and design of process control system. Four hours of lecture and laboratory. Prerequisite: ET 191 or consent of instructor.

ET 490. Problems in Electronic Technology (1-3) On demand. For advanced students wanting to conduct intensive study of selected problems in electronic technology. Prerequisite: consent of college. Graded S/U.

## English (ENG)

ENG 100. English as Foreign Language (4) I, II.' For student whose native language is not English. Development of skills in listening, speaking, reading, and writing standard American English. Placement on basis of proficiency tests. Though it may be necessary for student to repeat course, only four hours of credit counted toward graduation. Graded S/U.
ENG 110S. Developmental Writing (2) summer only. Development of skills in sentence structure, edited American English usage, mechanics, paragraph and short essay construction. Placement through departmental pretesting. Students must complete course and departmental proficiency examination successfully to receive $S$ and to be eligible to enroll in ENG 111; students who receive No Record must enroll in ENG 110. No more than 6 hours from ENG 110S, ENG 110, ENG 111 and ENG 112 may be applied toward graduation. Graded S/No Record.
ENG 110. Developmental Writing (5) I. Development of skills in sentence structure, edited American English usage, mechanics, paragraph construction; basic expository writing; emphasis on organizing and developing coherent essay of approximately 500 words for college-educated audience. Placement through departmental pretesting. Student must complete course and departmental proficiency examination successfully to receive $S$ and to be eligible to enroll in ENG 112; students who receive No Record must enroll in ENG 111. No more than 6 hours from ENG 110, ENG 111, and ENG 112 may be applied toward graduation. Graded S/No Record.

- ENG 111. Introduciory Writing (3) I, II. Basic expository writing; emphasis on organizing and developing coherent essay of approximately 500 words for college-educated audience. Placement through departmental pretesting or unsuccessful completion of ENG 110. Students must complete course and departmental proficiency examination successfully to receive S. No more than 6 hours from ENG 110, ENG 111, and ENG 112 may be applied toward graduation. Graded S/No Record.
- ENG 112. Varieties of Writing (3) I, II. Expository writing including research paper, emphasis on analytical writing based on critical reading. Placement through departmental pretesting or successful completion of ENG 110 or ENG 111. Student must complete course and departmental proficiency examination successfully to receive passing grade. Graded A, B, C/No Record.
T ENG 150. Response to Literature (3) I, II. A general education course emphasizing discussion of humanistic themes based on student responses to readings in fiction, drama, poetry and nonfiction. Not accepted toward English major or minor. Prerequisite: enrollment in or completion of ENG 111.
ENG 190. Introduction to English Study (1) II. Explanation of options for study and careers in English, introduction to faculty, planned cultural activities. Required for English majors, recommended for minors. Graded S/U.

I ENG 200. Introduction to Literature: various topics, Short Story, Literature and Film, Science Fiction, Fanlasy, Women in Literature, Black Literature (2,3) I, II. A general education course with emphasis on humanistic themes and basic literary concepts. Some topics for 2 hours, most for 3. Can be repeated once if topics differ. Not accepted for English major or minor. Prerequisite: enrollment in or completion of ENG 112.

ENG 201. Literature and Writing (4) I, II. Literary interpretation and criticism of poems, short stories, novels and plays. Study of the literary elements and forms of composition about literature. Extensive expository writing. Required for all English majors/minors before third-year courses. Prerequisite: ENG 112.

- ENG 205. Craft of Poetry (2) I. Traditional and contemporary poetry; emphasis on way poetry is made. Required for majors and minors in B.F.A. creative writing program. Prerequisite: ENG 112.
ENG 206. Craft of Fiction (2) II. The way fiction works, impulses creating it, how it turns out. Emphasis on style and form in traditional and contemporary fiction as way of understanding meaning. Required for majors and minors in B.F.A. creative writing program. Prerequisite: ENG 112.
- ENG 207. Intermediate Writing (3) I, II. Work on developing mastery of the rhetorical principles of planning, executing and revising prose. Emphasis on strengthening analytical writing, both expository and argumentative; valuable for writing on the job. Prerequisite: ENG 112.
ENG 208. Creative Writing (3) I, II. Principles of poetic composition and fiction writing. Analysis of contemporary models and practice in original composition.
- ENG 209. Creative Writing Workshop (3) I, II. Supervised writing in poetry and fiction; group discussions; concentration on shorter forms. May be repeated once. Prerequisite: " $B$ " or better in ENG 208.
© ENG 251. Writing About Films (3) II. Same amount of writing as in ENG 207; deals entirely with film theory, films, film scripts, novels on which films are based, and film reviews. Equivalent of ENG 207. Prerequisite: ENG 112
geng 261. Masterpieces of Wond Literature (3) I Major works of world literature to 1400 , including such authors as Homer, Confucius, Aeschylus, Sophocles, Plato, Aristophanes, Virgil, and Dante. Prerequisite: any ENG literature course or ENG 112.
FeENG 262. Masterpieces of World Literature (3) I, II. Major works of world literature since 1400 , incluaing such authors as Montaigne, Cervantes, Goethe, Hugo, Balzac, Dostoevski, and Kafka. Prerequisite: any ENG literature course or ENG 112.
IENG 264. English Literature Survey to 1700 (3) I. Major authors in the context of major literary traditions from Anglo Saxon times through the Restoration; introduces historical approach to the study of literature. Prerequisite: any ENG IIterature course or ENG 112.
ๆIEMG 265. English Literature Survey, 1700-1900 (3) II. Major authors in the context of major literary traditions from the eighteenth century through the Victorian Age; introduces historical approach to the study of literature. Prerequisite: any ENG literature course or ENG 112.
IENG 266. American Literature Survey to the Civil War (3) I. Roots of American literary traditions and growth of national independence of expression: religious, political, philosophical sources of American imagination based on texts of representative writers Including Edwards, Paine, Irving, Cooper, Poe, Bryant, Emerson, Thoreau, Hawthorne, Whitman, Melville. Prerequisite: any ENG literature course or ENG 112.

II ENG 267. American Literature Survey, Civil War to World War I (3) I, II. Literary patterns of idealism, skepticism, and emergent materialism based on texts of representative writers such as Dickinson, Twain, James, Howells, Wharton, and Norris; literary movements such as localcolorism, realism, and naturalism. Prerequisite: any ENG literature course or ENG 112.
ENG 268. 20th Century Masterpieces of American and British Literature (3) I, II. Seminal works of modern and contemporary literature, seen in relation to the social and human problems of the age. Prerequisite: any ENG literature course or ENG 112. Not accepted toward English major or minor.
ENG 269. Canadian Fiction (3) H. Short stories and novels by leading Canadian authors from English-speaking areas, with major emphasis on recent writers, Titles are chosen to represent the diversity of expression from various regions, with some attiention to women's concerns as well as Indian, Eskimo and ethnic views. Prerequisite: any ENG literature course or ENG 112.

- ENG 272. Literature of Minorities (3) I. Minority literary expression: alms, methods and accomplishments. Prerequisite: any ENG literature course or ENG 112.
ENG 290. Language Study (3) II. Aspects of form and style in language: structure, usage, semantics; language change and cultural convention; social and regional dialects. Prerequisite: sophomore standing. Not applicable for state certification requirements.
ENG 291. Language Study for Eementary
Teachers (3) On demand. Structure of English; emphasis on linguistic basis of reading, speling, and other language arts concerns. Prerequisite: ENG 112.

ENG 295. Telecourse on Current Topics in
English (1-3) On demand. Selected topics within the discipline. Includes departmentally supervised presentations via television complemented by seminars and/or other student-instructor means of interaction on a group or individual basis.
ENG 300. Themes in Literature (3) On demand. Literary treatment of single theme, such as hero and heroine in literature, youth and age, love and death, innocence and experience, war and peace, wealth and poverty, etc. Prerequisite: any ENG literature course and ENG 112. May be repeated once if themes differ.
ENG 301. Shakespeare (3) I, II. Representative comedies, history plays, tragedies and tragicomedies, and sonnets. Designed for student with no previous Shakespeare courses. Prerequisite: any ENG literature course and ENG 112. Lab fee.
ENG 306. Bible (3) I. English Bible as literary classic; its development and influence on literary cuilure. Prerequisite: any ENG literature and ENG 112.

## -ENG 307. Great Books (3) On demand. Books

 not usually studied in other courses; organized according to topic such as love, war, or death, or according to genre such as fantasy, science fiction, or romance, or according to works of one or two writers such as Tolkien. Prerequisite: any ENG literature course and ENG 112.'ENG 308. Creative Writing (3) I, II. Imaginative writing, fiction and poetry. Class discussion and individual conferences. Prerequisite: "B" or better in ENG 209 or approval of instructor. May be repeated once.
ENG 320. Modern Poetry (3) I. English and American poetry and European poetry in translation from 1900 to 1945; writers and works significantly influencing development of poetic forms. Required for creative writing major. Prerequisite: any ENG literature course and ENG 112.

ENG 322. 19th Century American Fiction (3) I. Short stories and novels. Includes Poe, Hawthorne, Melville, Twain, James and Crane; minor writers including regional humorists. Prerequisite: any ENG literature course and ENG 112.

- ENG 323. Modern Fiction (3) I, II. Emphasis on the novel; American and English works as well as works in translation from 1900 to 1945; works which represent development of forms of fiction. Required for creative writing major. Prerequisite: any ENG literature course and ENG 112.
© ENG 325. Modern Drama (3) I. Great plays by Ibsen, Chekhov, Shaw, O'Neill, and others; dramatist's insights into human condition. Prerequisite: any ENG literature course or THEA course and ENG 112.
ENG 330. Contemporary Poetry (3) II. Cross section of English and American poetry and European poetry in translation, mostly written since 1945; writers and works representing major trends in development of poetry. Required for creative writing major. Prerequisite: any ENG literature course and ENG 112.
- ENG 333. Contemporary Fiction (3) II. Cross section of American and English fiction and European fiction in translation, mostly written since 1945; works representing major trends in development of fiction. Required for creative writing major. Prerequisite: any ENG literature course and ENG 112.

ENG 335. Contemporary Drama (3) II. Plays since 1945 by American, British and European dramatists (in translation); new techniques, thematic trends, and aspects of human condition revealed through plays. Prerequisite: any ENG literature course or THEA course and ENG 112.
-ENG 342. Children's Literature (3) I, II. Reading and evaluation of books for children from nursery school through junior high school; novels, folklore, informational literature, poetry, and bibliographical sources. Not open to student with credit for L\&EM 342. Prerequisite: any ENG literature course and ENG 112.
ENG 343. Literature for Adolescents (3) I, II. Reading and evaluation of books for junior and senior high school students; emphasis on fiction; also biography and other nonfiction, folkfore, myth, poetry. Prerequisite: any ENG literature course and ENG 112.
ENG 380. Introductory English Linguistics (4) 1 , II. Structure of English through recent tinguistic theories and related topics such as dialects, usage, dictionaries. Prerequisite: sophomore standing.
ENG 381. Grammar and Writing (3) I, il. Application of grammatical models (traditional, structural, and transformational) to the teaching of writing. Prerequisite: ENG 380.
ENG 385. Studies in Literature-Film (3) On demand. Problems in film's relationship to literature; definitions and theory; specific films and Jiterary works. May focus on author, genre, or historical period. May be repeated once if topics differ. Prerequisite: any ENG literature course and ENG 112.
ENG 388. Introductory Technical Writing (3). Application of basic forms of writing for business, industry and government. Requires writing instructions, definitions, descriptions and reports. Prerequisites: junior standing and permission of instructor.
ENG 389. Professional Editing (3) I. Editing technical, scientific and other professional writing, such as proposals, reports, journal articles, conference proceedings and books. Includes introduction to managing editorial services. Prerequisites: junior standing and permission of instructor.
ENG 400. Chaucer (3) I. The Canterbury Tales, Troilus and Criseyde, and such dream-vision poems as The Book of the Duchess and lyrics, in Middle English. Prerequisite: any ENG literature course and ENG 112.
ENG 401. Shakespeare II (3) Alternate years. Shakespeare's dramatic technique in tragedy, comedy, or history play. Prerequisite: ENG 301.
ENG 402. English Medieval Literature (3) Alternate years. Poetry, prose, and drama including such works as Beowulf (selection), Pearl, The Wakefield Plays, and The Prick of Conscience read in Old and Middle English or in translation. Prerequiste: any ENG literature course and ENG 112.
ENG 403. 16th Century English Poetry and Prose (3) Alternate years. Renaissance literature, including great sonnets, early novels, Spenser's Arthurian epic. Skeltor's satires and Marlowe's erotic love poetry. Prerequisite: any ENG literature course and ENG 112.
ENG 404. 17th Century Writers (3) Alternate years. Poetry and prose from 1600 to 1660; Donne, Jonson, Herrick, Herbert, Vaughan and Marvell, Bacon, Browne, Hobbes, and Bunyan. Prerequisite: any ENG literature course and ENG 112.

ENG 406. English Renaissance Drama (3) Alternate years. English drama (except Shakespeare) before 1642; including Marlowe, Jonson, and Webster; reading in antecedent forms andl traditions. Prerequisite: any ENG literature course and ENG 112.
ENG 407. Writer's Workshop (3) I, II. Analysis of contemporary creative writing models, and $\therefore$ Jinal composition, emphasis on fiction and poetry. Creative writing majors repeating course required to do special project. Prerequisite: "B" or better in ENG 308 or approval of instructor. May be repeated once.
ENG 408. Milton (3) Alternate years. Paradise Lost, Paradise Regained, and Samson Agonistes and selected minor poems and prose. Prerequisite: any ENG literature course and ENG 112.
ENG 410. English Restoration and 18th Century Drama (3) Alternate years. Restoration features heroic drama, pathetic tragedy, and libertine comedy; 18th century sentimentality and laughing comedy. Stage and theatre design, historical and social background. Prerequisite: any ENG literature course and ENG 112.
ENG 411. 18th Century Writers (3) Alternate years. Prose and poetry from Restoration, Augustan, and Johnsonian periods; neoclassical and preromantic writers; Dryden, Swift, Pope, Johnson, Boswell. Prerequisite: any ENG literature course and ENG 112.
ENG 415. English Novel: Defoe to Austen (3) Alternate years. Defoe, Richardson, Fielding, Smollett, Sterne, Austen, and contemporaries. Prerequisite: any ENG literature course and ENG 112.

ENG 416. English Novel of 19th Century (3) AIternate years. Bronte, Dickens, Hardy and other novelists of Victorian England. Beginnings of modern society, its problems and possibilities, and development of novel as a unique modern form. Prerequisite: any ENG literature course and ENG 112.
ENG 417. Romantic Writers (3) Alternate years. English poetry and prose from 1789-1832; Blake, Wordsworth, Coleridge, Byron, Shelley, Keats. Prerequisite: any ENG literature course and ENG 112 .
ENG 418. Victorian Writers (3) Alternate years. Prose and poetry of Carlyle, Mill, Tennyson, Browning, Arnold, the Pre-Raphaelite poets and successors. Prerequisite: any ENG literature course and ENG 112.

ENG 419. Modern British Writers (3) Alternate years. British writers from 1900 to 1945: Joyce, Lawrence, Conrad, Forster, Woolf, Yeats, O'Casey, Shaw, Auden. Prerequisite: any ENG literature course and ENG 112.
ENG 420. Modern American Writers (3) II. Major American writers from 1900 to 1945: Eliot, Pound, Stein, Frost, Stevens, O'Neill, Hemingway, Fitzgerald, Faulkner. Prerequisite: any ENG literature course and ENG 112.
ENG 423. Women's Studies in Literature (3) I. Topics such as women poets or women novelists, depiction of women in works by men, feminist criticism; primarily British and American writers. May be repeated once if topics differ. Prerequisite: any ENG literature course and ENG 112.
ENG 430. American Transcendentalism (3) Alternate years. Major writers of Transcendentalist movement and social and philosophical background of their time; Emerson and Thoreau. Prerequilite: any ENG literature course and ENG 112.

ENG 435. Hawthorne and Melville (3) Alternate years. Major works of Hawthorne and Melville and background of the age. Prerequisite: any ENG literature course and ENG 112.
ENG 442. Studies in Children's Literature (3) Alternate years. Problems in children's literature; history, criticism, trends, individual authors, types. Not open to student with credit for L\&EM 442. Prerequisite: ENG 342 or permission of instructor.

ENG 456. Critical Writing (3) Alternate years. Writing from various critical perspectives such as biographical, textual, psychological, mythical, analytical. Prerequisite: any ENG literature course and ENG 112.
ENG 470. Directed Readings in Language and Literature (1-4) I, II. For advanced student or small group of students to work independently in specialized subject not covered by existing courses. Prerequisite: junior standing; six hours of ENG beyond 112; written description of the proposal prepared by student and signed by proposed instructor, to be submitted to undergraduate curriculum committee in English prior to end of preceding semester.
ENG 480. Studies in English or American Literature (3) Intensive study of author, literary school, genre, or theme. May be repeated once if topics are different. Prerequisite: any ENG literature course and ENG 112.
ENG 481. Advanced English Linguistics (3) Alternate years: Intensive study of topic in English linguistics. Topics announced in advance and vary from section to section and semester to semester. May be repeated if topics clearly different. Prerequisite: ENG 380 or premission of instructor.
ENG 482. History of English Language (3) Alternate years. Changes in sounds, grammar, usage, and meaning from Old English to present. Prerequisite or corequisite: ENG 290 or 380.
ENG 483. Advanced Writing (3) I. Expressive, expository and argumentative writing. Development of rhetorical skills such as invention, arrangement and style in discourse. Required of prospective English teachers and highly recommended for students who plan to write as part of their careers. Prerequisite: junior standing.
ENG 484. The Writing Process (3) I, II. Traditional and modern theory and practice of rhetoric and composition; examination of the ways writers gather and organize knowledge, assess their audience, control style and revise.
ENG 485. Writing Film Criticism (3) On demand. Principles and assumptions underlying approaches to film criticism as revealed in commentaries and critiques; application of these principles to writing film criticism. Prerequisite: ENG 201 or ENG 207 or ENG 208 or ENG 251, or permission of instructor.
ENG 488. Technical Writing (3) I, II. Professional course designed for practical application in business, industry, and sciences. Prerequisite: senior standing or approval of instructor.
ENG 489. Internship in Technical Writing (1-9) I, II, summer. Full-time technical writing internship for 15 weeks in industrial publications office under supervision of professional publications director. Available only for students with exceptional skill in technical writing, with approval and recommendation of technical writing staff. Prerequisites: ENG 488 and approval of technical writing staff. Graded S/U.
ENG 495. Honors Reading (3). For superior major or minor who wants to pursue common studies determined by interests of group looking toward granting of honors in English. Prerequisite: consent of instructor.

ENG 498. Senior Project Tutorial (1 and 3) I, II. Student selects faculty member to guide work on topics such as major author, theme, period, genre or linguistics. Student works over the first semester of his/her senior year on research module and topic selection (1 hour credit); research and writing done during the second semester ( 3 hours credit). One to three students may work with one faculty member. Prerequisites: senior standing and 20 hours of English.

## Environmental Health (ENVH)

ENVH 401. Waste Management and Disposal
(2) I. Problems of disposing of wastes generated by various segments of community; sources of material, levels of authority and responsibility, and alternatives for disposal.
ENVH 402. Air and Noise Pollution in Community (3) II. Sources and effects of air and noise pollutants; various methods of monitoring, evaluation, and control; elements of development and implementation of control systems.
ENVH 404. Organization of Public and Environmental Health Services (3) II. Concepts and philosophy of public health as reflected by national, state, regional, and local programs. Prerequisite: junior status; instructor's permission if not an environmental major or health and community services student.
ENVH 408. Environmental Considerations in Occupational Health (3) Summer. Prevention and control of occupational health and safety hazards through improvement of working environment; applicable laws and standards; key concepts in recognition and evaluation of potential hazards.
ENVH 470. Special Problems in Environmental Health (1-2) I, II, summer. Student designs and carries out study or special project in area of interest. Prerequisite: program director's permission. May be repeated.
ENVH 491. Practicum (1-12) I, II, summer. Experience working under supervision in selected environmental, public health, or health planning agencies or industries with environmental health units; emphasis on practice rather than observation. May be repeated to 12 hours; minimum of six hours required for students in environmental health program. Prerequisites: instructor's permission, at least junior status. Graded S/U.

## Environmental Studies (ENVS)

ENVS 101. Approaches to Environmental Studies (2) I, II. Environmental issues and concepts. Students consider past, present and possible future environments as they relate to the quality of life. Overview of career opportunities in environmental fields and development of skills in evaluation of environmental problems.
ENVS 301. Environmental Problems (3) I. In-depth study of specific environmental problems. Current and historic responses are examined through research and review of source materials. Investigation of traditional viewpoints and development of a nationial and international environmental consciousness are included.
ENVS 401. Environmental Strategies (2) II. Investigation of positions of organizations, institutions and government agencies relating to current environmental issues. Development of strategic models that address such concerns as toxic substances, water resources, pesticides and energy use through research, analysis and perception sampling techniques.

ENVS 402. Environmental Impact Statements (3) Alternate years. History, philosophy and concepts of environmental impact statements and assessments and their relationship to environmental controversies. Review of specific documents, development of evidential information and fechniques of environmental arbitration are included.

## Environmental Health Technology (ENVT)

tESVT 124. Enuirommental Regulation (2) II. Basic foundations of environmental law; historic precedents, current legislation, environmental impact statements and how to testify in a court of law.
tEqVT 160. Environmental Sanitation (2) I. Communicable disease control, individual water and sewage treatment, swimming areas, and solid and liquid waste disposal. One hour of lecure and three hours of laboratory and held study.
TENVT 211 . Eiological and Chemical Examinafion of Water (6) II. Quantitative and qualitative analysis of bacteria, algae, common aquatic organisms and chemical composition of water, wastewater, and bottom materials. Four hours of lecture and six hours of laboratory. Prerequisite: one semester of laboratory CHEM or consent of instructor. Lab fee.
HENVT 222. Water and Wastewater Treatment (4) ! Introduction to water supply and treatment and wastewater treatment and disposal. Three hours of lecture and four hours of laboratory and field study. Prerequisites: one semester of laboratory CHEM, PHYS 201 and MATH 127, or consent of instructor. Lab fee.
TEMUT 223. Wastewaler Package Treatment (1) II. Operator personnel and inspectors of package type extended aeration plants the basic concepts of routine operations, maintenance, process conitrol, and safety. Twentyeight hours of lecture.
fenvT 22s. Environmental Health and Protec*ion (4) II. Basic concepts in ergonomics, noise, vibration, illumination effects of temperature and radiation uses and protectlon. Three hours of lecture and three hours of laboratory and field siudy. Prerequisites: one semester of laboratory CHEM, PHYS 201, and MATH 127, or consent of instructor.
+EWVT 226. Insthuional Healh and Sanitation (2) II. Elementary inspection techniques of marinas, housing, schools, temporary residences, trailer parks, and migrant labor facilities, and food and milk protection. One hour of lecture and three hours of field study. Prerequisites: ENVT 160 and 280, or consent of instructor.
†ENVT 280. Air Pollution Surveillance and Control (4) L. Introduction to the fundamentals of industrial toxicology, air pollution, and industrial hygiene surveillance, monitoring, analysis, and control. Three hours of lecture and three hours of laboratory and field study. Prerequisites: One semester of laboratory CHEM, PHYS 201 and MATH 127, or consent of instrucior. 1 ab fee.
 ples of ventilation; includes design and evaltuation of general, dilution, and local exhaust ventilation systems. One hour of lecture and three hours of laboratory. Prerequisite: ENVT 260 or consent of instructor.
tENVT 270. Occupational Satety and Hygiene (4) I. Accident prevention and investigation, fire, electrical and laboratory safety, personal protective equipment, biohazard control, and occupational health inspection techniques. Three hours of lecture, three hours of field study.
†ENVT 272. Hazard Recognition (2) II. Hazard recognition in the work environment with special emphasis on construction and factory operations. One hour of lecture and three hours of field study.
$\dagger$ ENVT 280. Food Manager Certification (1) I. Microbiology, inspection techniques, safety analysis, prevention of food-borne diseases, Ohio food service laws and planning and equipment review. Twenty-eight hours of lecture.
$\dagger$ ENVT 290. Experimental Sfudies in the Environment (1) I, II, summer. Environmental study projects, workshops, seminars and computer simulation classes dealing with air, water, or land resource utilization and planning.
$\dagger$ ENVT 291. Student Field Experience (3) I, II, summer. Eleven weeks of field work in environmental health under the supervision of a regulatory agency or a private industrial concern and the director of environmental health at Firelands College. Prerequisite: permission of supervisor.

## Ethnic Studies (ETHN)

\$ETHN 101. Introduction to Ethnic Studies (3) I, II, summer. Introduction to imponant views about ethnic groups and ethnic relations in America. Included are ethnic group reviews needed to understand the effect of ethnicity upon the individual, family, church, education and employment.

ETHN 110. Introduction to Latinos in the
United States (3) I, II. Latino experience in the United States; cultures, life experiences and the limited political, educational, socio-economical opportunities of this minority.
ETHN 120. Int̂roduction to Black Studies (3) I, il, summer. Introduction to the black experience with special emphasis upon but not limited to the cultural experience of the United States.

ETHN 205. European Ethnic Americans (2) I, summer. Immigration experience of several European groups in the U.S. and their cultural adaptation thereafter. Specific groups to be studied might include Irish, Polish, Italian, Jewish and German Americans.
ETHN 210. Chicanos in American Society (3) II, summer. The Mexican-American culture and its place in American society. Topics include family, migration, religion and others.
ETHN 215. History of the Mexican Americans (3) I. History of Mexican Americans from the Texas Revolution, Mexican American War to the present
IETHN 220. African Literature (3) I. Creative and critical writing in the English language by writers of African descent. Also writers from the Caribbean.
ETHN 300. Topics in Ethnic Studies (3) I, II, summer. On demand. The study of special ethnic topics of interest to students provided as a part of regular offering.
ETHN 304. Ethnic Groups in America (3) I, II, summer. Anthropological survey of some of the ethnic and regional groups in America. Discussion of both their traditional and contemporary cultures. Prerequisite: SOC 101 or SOC 231, or lower-level ETHN course.

ETHN 308. Origins of Chicano Cullure (2) I, II. Origins of Mexican American culture and its contributions to art and folklore.

ETHN 310. Mexican Culture (3) II. The culture of Mexico in the 20th century with emphasis on economics and the national experience as reflected in the family, religion, arts and other select facets of the culture.
ETHN 312. West Atrican Literature and Nationalism (3) II. Contributions made by West African writers to the rise of national consciousness in West Africa.
ETHN 395. Workshop on Current Topics (1-3) I, II, summer. Comprehensive study of America's ethnicity with special emphasis upon the three ethnic groups in northwest Ohio: AfroAmericans, Mexican Americans, and Polish Americans. Particular emphasis will be placed upon development of relevant curriculum pertaining to the ethnic groups studied.
ETHN 410. Contemporary Mexican-American Social Thought (3) il. The study of ideas that have guided the Mexican people and how they affect the quality of life of MexicanAmericans today.
ETHN 415. Novels of Chinua Achebe (2) II. Study of Chinua Achebe, one of the foremost writers from English-speaking West Africa.
ETHN 470. Readings in Ethnic Studies ( $\ddagger-2$ ) 1 , II, summer. Individual extensive readings in consultation with instructor in fields of special interest. May be repeated. Prerequisite: consent of instructor. May or may not partially fulfill group requirements.
ETHN 480. Seminar in Ethnic Studies (3) I, II, summer. Specific content areas offered depends on demand and interest of staff. May be repeated three times. Prerequisite: consent of instructor. May or may not partially fulfill group requirements.
ETHN 489. Field Study in Ethnic Studies (2-8) I, II, summer. Placement of students in a variety of agencies or businesses, which are reievant to the study of ethnicity or research/ study outside of Bowling Green. Prerequisites: junior standing; 6 hours of upper division ethnic studies courses relevant to the study; and permission of instructor. Graded SIU.

## Finance (FIN)

FIN 200. Personal Finance (3) I, II. Primarily for non-business majors. Personal financial management; borrowing sources and costs; auto, property and life insurance; homeownership financing: personal investment strategy, and long-range personal financial planning. Not open to juniors and seniors majoring in business administration.

- FIN 300. Business Finance (3) I, II, summer. Acquisition and allocation of funds in business enterprise. Fundamentals of financial analysis, working capital management, capital budgeting, financing sources: debt, equity and term financing, valuation. International financial management. Prerequisites: ECON 202, ACCT 222 and STAT 211.
FIN 330. Principles of Investment (3) I, II. investment process related to commitment of funds in securities. Risks and rewards of different investment media. Investment analysis and timing, types of securities, basic portiolio construction and evaluation. Prerequisite: FIN 300 or permission of instructor.

FIN 342. Real Estate Administration (3) II, summer. Investment decision making in land resource use, appraisal and investment analysis. Real estate location and markets. Real estate property rights, financing, taxation and valuation. Accepted by Ohio Real Estate Commission as one of two required courses for the licensing exam. Prerequisite: FIN 300 or permission of instructor.
FIN 360. Financial Institutions (3) I, II. Institutions which participate in money and capital markets; markets for corporate securities, real estate finance, federal government and agency obligations, and state and local government obligations. Prerequisites: FIN 300 and ECON 311.
FIN 425. Financial Management in Health Care Services (3) I. Application of financial management principles; funds flow analysis; forecasting and budgeting; benefit/cost considerations and financial analysis; government subsidy implications for capital budgeting; sources of capital, planning capital structure. Prerequisite: FIN 300.
FIN 433. Security Analysis (3) I. Selecting securities for investment objectives. Appraisal of investment risks for specific securities; valuation and suitability for purchase, retention, or sale; appropriateness for stated portfolio objectives. Prerequisite: FIN 330.
FIN 436. Portfolio Management (3) II. Additional topics in security analysis. Theory and practice of portfolio construction and review; practical applications in portfolio management. Prerequisite: FIN 433.
FIN 450. Problems in Financial Administration (3) I, II. Case method approach to problems in procurement, administration, allocation and control of funds. Prerequisite: FIN 300 (ACCT 322, ACCT 332, or ACCT 337 recommended).
FIN 461. Bank Management (3) I, summer. Management principles in banking. Management of funds sources, and their allocation among reserves, loans, and investments and its impact on bank liquidity and profitability. Depositors' services and credit and lending analysis practices. International banking. Prerequisites: FIN 300 and ECON 311.
FIN 491. Studies in Finance (1-3). On demand. In-depth study of selected areas. Offered to individual students on lecture, seminar, or independent study basis depending on student needs and nature of material. May be repeated to six hours. Graded S/U.

## French (FREN)

Entering students who had French in high school should take the placement test during summer preregistration or prior to enrollment in a course.
IT FREN 101. Elementary French I (4) I, II.
Beginning oral-aural study; attention to grammar. Four class periods and scheduled oral practice each week.
ITFREN 102. Elementary French II (4) I, II, III. FREN 101 continued. Four class periods and scheduled oral practice each week. Prerequisite: FREN 101 or one year of French in high school.
IFREN 111. French Cultural Series I (4) I, II. French culture; development of language awareness for reading comprehension. Disjcussion in English. No laboratory.
IFREN 112. French Cultural Series II (4) I, II. FREN 111 continued. Prerequisite: FREN 101 or FREN 111 or one year of French in high school. No laboratory.
$4 \uparrow$ FREN 201. Intermediate French I (3) I, II. Grammar review; development of the four skills. Three class periods and laboratory practice each week. Prerequisite: FREN 102 or two years of French in high school.
I $\uparrow$ FREN 202. Intermediate French II (3) I, II. FREN 201 continued. Three class periods and scheduled laboratory each week. Prerequisite: FREN 201 or three years of French in high school.

- FFREN 211. French Cultural Series III (3) I, II. Development of reading comprehension in French using cultural materials concerning France and Francophone areas. Conducted in English. Prerequisite: FREN 102 or FREN 112, or two years of French in high school.
qFREN 212. French Cultural Series IV (3) I, II. Continuation of FREN 211. Prerequisite: FREN 201 or FREN 211 or three years of French in high school.
FREN 284. French Canadian Life Through Literature (3). Selected authors studied in translation. Use of a socio-critical approach enables students to discover the particularity in the - French Canadian expression of the American experience.
FREN 350. Problems in Translation (3). Practical work in translingual rendering of expository texts, stressing vocabulary building and critical reading. Prerequisite: FREN 202 or 212.

FREN 351. French Composition and Conversation I (3) I. Intensive grammar review for development of oral and written skills. Prerequisite: FREN 202.
FREN 352. French Composition and Cónversation II (3). Continued development in oral and written expression. Prerequisite: FREN 202.

FREN 353. French Diction (3). French pronunciation; syllabification, stress, linking, intonation. Prerequisite: FREN 202.
FREN 355. French Linguistics (3) I. Sound system and grammatical structures of modern French; practical application. Prerequisite: FREN 202.

FREN 361. Introduction to French Literature (3). Development of French literature from Middle Ages to present. Prerequisite: FREN 202.

FREN 371. French Civilization I (3). Political social, intellectual, artistic life of French people from prehistoric times to Industrial Revolution; study of geographic and ethnic divisions. Prerequisite: FREN 202.
FREN 372. French Civilization II (3). FREN 371 continued; political, social, inteliectual, artistic life of modern France and Francophone areas. Prerequisite: FREN 202.
FREN 389. Contemporary Touraine (3) III. Individual research projects culminating in term paper dealing with some aspect of region of Touraine. Prerequisite: FREN 202. Offered only abroad.
FREN 451. Advanced Composition and Conversation (3). Development of fluency and accuracy in written and oral skills at an advanced level. Prerequisite: FREN 351 or 352.

FREN 453. Advanced French Diction (3). Continued study of pronunciation, stress, and intonation. Prerequisite: FREN 353.
FREN 454. Translation Workshop (3). Intensive practice in translating technical and literary texts. Emphasis on French to English translation. Intended to prepare student for certification by a professional translators organization. Prerequisite: FREN 350.

FREN 458. Career French I (3). Terminology used in commercial operations, economics, international trade; emphasis on business correspondence; some translation. Prerequisite: FREN 351 or FREN 352.
FREN 459. Career French II (3). Advanced study of the economic and administrative structures in France and in Francophone areas, with intensive concentration on related technical language. Prerequisite: FREN 458.
FREN 464. Seventeenth Century French Literature (4). Baroque and classical French literature. Prerequisite: FREN 361.
FREN 470. Independent Readings in French (1-3). Readings for the advanced student who wishes to study a particular author or period, or problem in language or civilization. Prerequisite: consent of department chair and instructor.
FREN 474. Eighteenth Century French Literature (4). Literature of the Enlightenment. Prerequisite: FREN 361.
FREN 484. Nineteenth Century French Literature (4). Literature of France of the nineteenth century, including Romanticism, Realism and Naturalism. Prerequisite: FREN 361.
FREN 488. French Literature: Advanced Studies (3). Intensive study of author, literary school, genre or a selected theme. May be repeated if topics clearly differ. Prerequisite: FREN 361.
FREN 494. Twentieth Century French Literature (4). Contemporary French and Francophone novel, theatre and poetry. Prerequisite: FREN 361.

## Geography (GEOG)

If GEOG 121. World Geography: Eurasia and Africa (3) I, II. Geographical analysis of selected topics in Asia, Africa, and Europe. Ecological aspects of cultural, political, and economic problems. Open only to freshmen and sophomores.
ITGEOG 122. World Geography: Americas and Pacific (3) I, II. Geographical analysis of selected topics in Americas and Pacific world Ecological aspects of cultural, political, and economic problems. Open only to freshmen and sophomores.
$\bullet$ GEOG 125. Weather and Climate (3) I, II. Atmospheric elements and controls; earth-sun relationships, weather components, weather prediction, and climatic types and distribution. Two one-hour lectures, one-hour demonstration-discussion.
-GEOG 126. Vegetation and Soils (3) I. Physical geography, distribution and classification of vegetation and soil representation of earth on maps. Two one-hour lectures, one-hour discussion-demonstration.
-GEOG 127. Land Form Development and Distribution (3) II. Physical geography; processes of land form development, world-wide distribution of land forms, and U.S. physiographic features and regions. Two one-hour lectures, one-hour demonstration-discussion.
-GEOG 213. Meteorology (3) I, II. Physical processes of atmosphere and relationship to daily weather pattern. Two one-hour lectures, one two-hour laboratory.
-GEOG 225. Resource Distribution and Economic Activity (3) I, II. Ways in which man has developed natural and human resources to meet economic needs; resulting patterns in economic landscape.
T $\$$ GEOG 230. Cultural Geography (3) I, II. Geographic influences upon population distribution, religion, dietary patterns, economics, others.

GEOG 300. Topics in Geography (3) On demand. Experimental courses considered part of regular offering.
GEOG 321. Introduction to Map CommunicaWion (3) I. Practical map planning and construction; basic cartographic theory and use of dratting materials and equipment.
GEOC 322. Themalic Cartography (3) Il. Thematic mapping of quantitative data and map reproduction; with emphasis on isarithmic and choropleth maps. Two hours of lecture and two hours of lab.
CEOe 323. Research Methods (3) On demand. Geographic research techniques; quantitative methods of describing and analyzing spatial distributions.
GEOG 325. Population Geography (3) II Spacial analysis of size, distribution, density, migration, age-sex composition, and dynamic factors of change in major world population regions and sub-regions.
GEOC 32G. Planning Services for the Eiderty (3) Il. Planning and development of services and programs to meet the needs of an aging society; particular emphasis on housing and transportation problems and services.
GEOC 327. Delivery of Social Services: Geographic Perspectives (3) Alternate years. Delivery of social services to subnational geographic areas; design and monitoring of delivery systems by examining specific social programs and problems, as those related to poverty, crime, health and elderly.
GEOG 331. Principles of Conservation Ecolagy (3) 1, 11. Principles necessary in considering environmental problems and application to various aspects of conservation; interdisciplinary approach combining social, biological, and physical sciences.
GEOC 333. Ceography of Recreation and Tourism (3) \&. Spatial aspects of outdoor recreation; assessment of present and future recreational resources; space for urban and rural areas, accessibility of these resources, governmental policies, and tourism.
GEOG 3gan. Geography of Diseases (3) On demand. Past and present spatial distribution of diseases; cultural and environmental impacts in distribution, transmission, and ceuses of diseases in different regions of world.

GEOG 335. Geography of Human Migrations (3) . Causes and consequences of selected historical and contemporary human migrations, both international and internal; spatial analysis of characteristics of migration streams and places of origin and destination.
GEOG 337. American Indian (3) II. Past and present spatial aspects of native American population in United States and Canada; distributions, migrations, economies, land tenure, cultures, art, rural-urban settlement, impact upon cultural and physical landscapes.
GEOG 341. Soviet Union (3) II. Description and imterpretation of geographic factors related to present development.
CEOS 342. Eastern Europe (2) On demand. Nations of eastern Europe; description and interpretation of geographic factors related to present development.
CEOC 343. Westem Europe (3) 1, 11. Geographic aspects in understanding present-day status of countries of Western Europe.
GEGC 3.34. Eiastern asia (3) I. Problems and factors influencing development of countries of eastern Asia; emphasis on China and Japan.

GEOG 345. Southern and Southeast Asia (2) On demand. Countries extending from Philippine islands to Pakistan; different cultures; utilization of resources, future opportunities, and problems of development.

GEOG 346. Middle Easi (3) I. Contemporary problems of Middle East; petroleum develop ment and impact on society, food needs. population problems, and spatial characieristics of religious and linguistic groups.

- GEOG 347. Atrica (2) On demand. Geographic factors influencing development of African countries.
GEOG 349. Latin America (3) I. Problems related to contemporary development of societies of Latin America.
GEOG 350. Anglo-America (3) II. Problems and factors influencing development of U.S. and Canada.
GEOG 351. Ohio (3) I, 11. Historical, physical, economic and social problems related to development of Ohio.
GEOG 400. Special Topics in Geography (3) On demand. Experimental courses considered part of regular offering.
GEOG 402. Regional Economic Geography (3) I or II. Problems of subnational areal units in county and regional planning, poverty pockets, delivery of services; emphasis on individual projects.
GEOG 404. Climatology (3) I or II. Fundamentals and applications; drought, water resources, human comfort, health, architecture; short- and long-term climatic changes.
GEOG 405. Meteorology and Man (3) On demand. Sociological, political, planning and legal aspects of atmosphere as natural resource. Prerequisite: GEOG 125 or GEOG 213.

GEOG 410. Field Techniques (3) On demand instruction and practice in techniques of field data collection and interpretation. Physical and cultural elements of landscape investigated; emphasis on rural land use systems.
GEOG 411. Theoretical Cartography (3) Alternate years. Analysis of cartographic research. Four hours per week: two hours lecture or discussion and two hours of laboratory. May be repeated once upon consent of instructor. Prerequisite: GEOG 322 or consent of instructor.
GEOG 412. Use and Interpretation of Aerial Phoiographs (3) I. Sources, types, characteristics, uses, and limitations of aerial photographs. Training in use of standard equipment for stereoscopic viewing and height measurement.

GEOG 413. Introduction to Remote Sensing (3) II. Principles and procedures used to obtain information about natural and cultural features through imagery derived from photographic, multispectral, and side-looking airborne radar sensor systems. Prerequisite: GEOG 412 or consent of instructor.

GEOG 422. Computer Mapping (3) II. Map construction and display of geographical data using the computer. Prerequisite: CS 101 or consent of instructor.
GEOG 425. Food Resources and Rural Development (3) On demand. Changes and trends in availability, production, and consumption of food resources; related rural problems such as pollution, zoning, recreating, and future expectations of rural areas by urban populations.

GEOG 426. The American City (3) I. Internal organization of cities. Ecological and land use problems, ghetto development, urban-economic base, urban sprawl, and intra-urban delivery of services.
GEOG 427. Genetic and Regional Analysis of Physical Landscapes (3) On demand.
Selected aspects of physical geography (excluding meteorology and climatology); in depth analysis of man's natural environment. Prerequisites: GEOG 126 and GEOG 127 or consent of instructor.

GEOG 433. Soil Classification and Mapping (3) II. Classification of soils; use of soil survey equipment; preparation of soil type, slope and erosion maps of assigned areas. Prerequisite: GEOG 126 or permission of instructor.

GEOG 436. Topics in Community and Area Development (3) Alternate years. Field analysis of various problems and topics of urban and rural areas. Prerequisite: GEOG 402 or GEOG 426 or consent of instructor.
GEOG 442. Conservation: Resources and Regional Development (3) On demand. Problems of area development in relationship to cultural, economic, and physical resources; obstacles to present development, needed changes, and polentials for future growth.
GEOG 451. Historical Geography of Anglo. America (3) On demand. Reconstruction of natural environment of U.S. and Canada; how different groups perceived environment and used available resources; emphasis on how man has modified earth's surface.
GEOG 452. Geopolifics (3) II. Geographic factors influencing development of states and interrelationship of these countries.
GEOG 460. Hydrology (3) I or II. Water's role in geography, environmental systems. Hydrologic phenomena analyzed on basis of scientific interdependence, phases of hydrologic cycle, practices and applications, and socioeconomic aspects. Prerequisite: GEOG 125 or GEOG 126 or GEOG 127.
GEOG 471. Oceanography (3) On demand. Geographic aspects of oceanography.
GEOG 489. Internship (3) L, 11. Provides practical experience in applied geography, such as land use planning; urban and rural planning; recreational, regional, and environmental planning; and location of industrial, commercial, and health service facilities. May be releated. Only six hours may be applied to GEOG major or minor; additional hours are for general electives. Graded $\mathrm{S} / \mathrm{U}$.
GEOG 490. Special Problems in Geography (1-3) On demand. Readings and research on varied topics to suit needs of student,

## Geology (GEOL)

T-GEOL 100. Introduction to Geology (3) I, 11, summer. The earth; physical and historical geology; including economic, social, and environmental aspects. Not open to geology majors and minors. Credit not given for both GEOL 100 and GEOL 101 or GEOL 104.

GEOL 101. Earth Science (3) I, II, summer. Survey of earth's geology, oceanography, meteorology, and place in the universe. Credit not given for both GEOL 101 and GEOL 100 or GEOL 104.
If GEOL 104. Physical Geology (4) I, II, summer. Introduction to the science of geology, common rocks and minerals, physical processes operating on and in the earth, land forms, and geologic structures. Three lectures and one two-hour laboratory. Credit not given for both GEOL 104 and GEOL 100 or GEOL 101. Lab fee.

I GEOL 105. Historical Geology (4) I, II, summer. Introcluction to the history of the earth and its inhabitants. Three lectures and one two-hour laboratory. Lab fee.
f) GEOL 205. Geologic History of Man (3) I. Evolution, distribution, way of life, and geologic history of prehistoric hominids.

GEOL 300. Mineralogy (3) I. Minerals; the chemistry, crystallography, identification, classification, association and genesis of the rock-forming and economic materials. Two lectures and one three-hour laboratory. Prerequisite or corequisite: GEOL 104 and CHEM 125 or CHEM 135.

GEOL 301. Lithology (3) II. Identification, classification and origin of igneous, sedimentary and metamorphic rocks. One lecture and two two-hour laboratories. Prerequisite: GEOL 300.
-GEOL 304. Geology of the National Parks (4) II, alternate years and summer. U.S. regional geology as illustrated in the national park system. Three lectures and one two-hour laboratory. Prerequisite: GEOL 100 or GEOL 104.
© GEOL 305. Life of the Geologic Past (4) Summer only. Study of fossils and the factors that influence the progressive development of life through geologic time. Three lectures and one two-hour discussion-demonstration laboratory. For nonscientists; not open to geology majors in the B.S. program; not open to students with credit for GEOL 315. Prerequisite: GEOL 100 or GEOL 101 or GEOL 105. Lab fee.

GEOL 306. Rocks and Minerals (4) Summer only. Non-technical study of earth materials as illustrated by gems, minerals, and rocks.
Two lectures and two two-hour laboratories. Not open to geology majors in B.S. program. Credit not given for GEOL 306 and GEOL 300. Prerequisite: GEOL 100 or GEOL 104. Lab fee.

GEOL 307. Sedimentary Petrology (3) I. Classification, origin, megascopic identification, and laboratory analysis of sedimentary rocks Two lectures and one two-hour laboratory. Prerequisite: GEOL 301.
GEOL 308. Principles of Stratigraphy (3) II. Principles of stratigraphy, methods of correlation, and reconstruction of depositional environments. Prerequisites: GEOL 105 and GEOL 301.

GEOL 309. Structural Geology (3) II. Identification and interpretation of geologic structures; mechanical principles of deformable bodies, fracture and faulting, flow and folding; elementary concepts of tectonics. Two lectures and one three-hour laboratory. Prerequisites: GEOL 104, PHYS 201 or PHYS 211, and MATH 129 or equivalent.
GEOL 310. Geomorphology (3) II. Nature and classification of landforms and processes that produce them; geomorphic systems in relation to varied geologic structures, rocks, and climates. Two field trips required. Prerequisite: GEOL 104.

GEOL 315. Invertebrate Paleontology (3) I. Classification, evolution and paleoecology of the fossil invertebrates. Two lectures and one two-hour laboratory. Field trips required. Not open to students with credit for GEOL 305.
GEOL 3.22. Human Environmental Geology (3) I. Aspects of geology critical to wise use of buman environments. One half-day field trip required. Credit not given for the B.S. degree in geology. Prerequisite: GEOL 104.

GEOL 393. Field Methods (3) I. First half of semester only. Use of instruments and methods applied to field problems in geology. Open to students planning to take GEOL 493 or GEOL 494. One four-hour session. Two field trips required. Prerequisite: consent of instructor.

GEOL 401. Economic Geology (3) I Alternate years. Classification and genesis of metallic ore deposits illustrated by study of classic areas. Two lectures and one three-hour laboratory. Field trip required. Prerequisites: GEOL 309 and GEOL 301.

GEOL 411. Optical Mineralogy (2) I. First half of semester only. Optical properties and methods of studying natural substances with a polarizing-light microscope. Two two-hour discussion-laboratories. Prerequisite: GEOL 300.

GEOL 412. Advanced Historical Geology (3) II. Regional and stratigraphic geology, including classical areas in North America and Europe. Prerequisites: GEOL 308 and GEOL 315.

GEOL 416. Petroleum Geology (3) I. Alternate years. Principles and methods involved in the exploration for oil and gas. Two lectures and one three-hour laboratory. Prerequisites: GEOL 308 and GEOL 309.
GEOL 418. Geology of Ohio (3) I. Alternate years. Bedrock and surficial geology of Ohio; state's economic-mineral resources. Two lectures and one two-hour laboratory. Three full-day field trips required. Credit not given for the M.S. degree in geology. Prerequisites: GEOL 100 or GEOL 104 and GEOL 105.
GEOL 419. Vertebrate Paleontology (3) II. Alternate years. Fossil vertebrates and their morphology, classification and evolution. Two lectures and one two-hour laboratory. Credit not given for both GEOL 419 and GEOL 305. Prerequisite: GEOL 100 or GEOL 101 or GEOL 105 or BIOL 104.

GEOL 420. Environmental Aspects of Geology (3) I. Contributions of geological concepts to environmental concerns. One halfday field trip required. Credit not given for both GEOL 322 and 420. Prerequisites: GEOL 104 and GEOL 310 or consent of instructor.
GEOL 423. Tectonics U.S.A. (3) II. Examination of major structural/physiographic provinces in the 48 contiguous states from the standpoints of the nature and origin of major structural features and plate tectonic concepts. Prerequisites: GEOL 308 and GEOL 309.

GEOL 424. Igneous and Metamorphic Petrology (4) II. Classification, mode of occurrence and genesis of igneous and metamorphic rocks. Three lectures and one three-hour laboratory. Prerequisite: GEOL 411.
GEOL 425. Microinvertebrate Paleontology (2) II. Alternate years. Fossil microinvertebrates; morphology, phylogeny, classification and identification. Two two-hour discussion and laboratory sessions. Prerequisite: GEOL 315 or consent of instructor.
GEOL 431. Introduction to Geochemistry (3) I. Principles of mass action, acidity, solubility, and introductory thermodynamics; applications to natural systems. Prerequisite: CHEM 126.

GEOL 432. Geophysics (2) II. Earthquake seismology; gravity, magnetic, and temperature fields of earth; paleomagnetism; radioactive dating; plate tectonics. Prerequisites: GEOL 309, PHYS 211, and MATH 131; or consent of instructor.

GEOL 433. Stratigraphic Chorology (3) I:
Biochronology, evolution, and distribution of fossil faunas through geologic time. Two lectures and one two-hour laboratory. Prerequisite: GEOL 315 and GEOL 308.
GEOL 472. Marine Geology (3) II. Alternate years. Processes, sediments, and organisms of modern marine environments; interrelationships and expression in rock record. Prerequisite: consent of instructor.

GEOL 473. Field Experience in Marine Geology (1) II. Alternate years. Field experience in marine environments as related to geologic record. Prerequisite or corequisite: GEOL 472, consent of instructor.
GEOL 475. Workshop in Seismology (1) I, II. Supervised program in theory of seismology, operation of seismological observatory, interpretation of seismic records. May be repeated to four hours. Prerequisite: consent of instructor. Graded S/U.
GEOL 480. Seminar in Geology (2) I, II. Study of selected topic. May be repeated to four hours. Prerequisite: consent of instructor.

GEOL 483. Coastal Marine Geology (3) Summer only. A study of inshore and nearshore geological processes, sedimentation patterns, and landform development. Prerequisites: physical and historical geology. Taught at Gulf Coast Research Laboratory under their number GEOL 431.

GEOL 490. Geological Problems (1-3) I, II, summer. Individual work for student who has shown proficiency and marked degree of independence in work. May be repeated to four hours. Prerequisite: consent of instructor.
GEOL 493. Field Experience (6) Summer only. Recognition and study of geologic structures, landforms, and rock units in the field. Written report required. Not open to B.S. geology majors. Prerequisites: GEOL 104 and GEOL 105, or GEOL 304 and consent of instructor. Lab fee.
GEOL 494. Field Geology (6) Summer only. Principles and practice of field geology and geologic mapping. Final map and report required. Prerequisites: grade of C or better in both GEOL 308 and GEOL 309, and consent of instructor. Lab fee.
GEOL 496. Field Course in Modern Marine
Environments (1-6) Summer only. Field study of shallow-water marine environments. Prerequisite: consent of instructor.
GEOL H499. Honors Thesis (3) I, II, summer. For students in the departmental honors program only. The thesis describes and presents the results of independent research, which normally is completed under GEOL H490. Graded S/U.

## German (GERM)

Entering students who had German in high school should take the placement test during summer preregistration or prior to enrollment in a course.
GERM 100. Introduction to Language Study: German (1) II. Comparison and contrast of cognate vocabulaty, structure and syntax of English and German; interrelationship between language and culture. Not open to students who have completed GERM 102.
TGERM 101. Elementary Language and Culture I (4) I, II. Cultural approach to beginning language study in the four skills: listening, speaking, reading, writing: Four class periods and laboratory practice each week.
IGGERM 102. Elementary Language and Culture II (4) I, II. GERM 101 continued. Four class periods and laboratory practice each week. Prerequisite: GERM 101, or by placement.

- $\operatorname{cen}$ 解 117. Beginning Conversational

Cemman I (2) I. Basic conversational German. Suggested as a supplemental course to accompany GERM 101, or may be taken independenily. Not open to students who have completed GERM 102.
CEFM T18. Beginning Conversational Geman II (2) II. Basic conversational German continued. Prerequisite; GERM 117 or GERM 101 or permission of instructor. Not open to students who have begun or completed GERM 201.

TCERPA 131. Beginning Reading German (3) II. Development of reading skills, including attention to major problems of syntax and vocabulary. Not open to majors or minors, nor to students who have taken GERM 102.
§GERPM 201. Intermecliate Cerman I (3) I, I. Grammar review; development of the four skills. Three class periods and laboratory practice each week. Prerequisite: GERM 102, or by placement.
HGEFWH 202. Intermediate German II (3) I, Ii. GERM 201 continued. Three class periods and laboratory practice each week. Prerequisite GERM 201, or by placement.
CETRTH 217 . Intermediate Conversational Cerman \& (2) I. Practice in conversation at the intermediate level. Suggested as supplemental course to accompany GERM 201, or may be taken independentiy. Not open to students who have begun or completed GERM 317. Prerequisite: GERM 118 or 102 or permission of instructor.
CERTH 218. Intermediate Conversational Geman II (2) II. GERM 217 continued. Not open to students who have begun or completed GERM 318. Prerequisite: GERM 217 or 201 or permission of instructor.
GEFAM 231. Scientific and Technical Reading (3) I. Development of reading and translating proficiency in scientific, technical and expository prose. Vocabulary building, analysis of syntax and grammar for reading purposes. Prerequisite: GERM 102 or equivalent.

GGERM260. Modern German Literature in Transtation (3) II. Readings in English of intemationally known authors from Germanspeaking countries. May include Katka, Mann, Hesse, Precht, Grass and others. Course does not count towards a German major or minor.
Gepin 300. Introduction to Study Abroad (1) il. Preparation for study abroad. Limited to Salzburg and German Exchange Program participants. Course does not count towards German major or minor. Graded S/U.
Genth 311 . Introduction to Literature: 20th Century (3) I. Representative authors of the 20 th century, development of reading skilis and vocabulary necessary for discussion of literature. Prerequisite: GERM 202, or by placement.
Gevin 313. Introduction to Liferature: 18th and tenh Centuries (3) II. Major authors and repreeentative works of the 18 th and 49th cenfuries; literary movement as reflection of cuiture; development of reading skills. Prerequisile: GERM 202, or by placement.
GERM 315. German Culture and Civilization (3) I, II. Cultural-historical treatment of the social, intellectual and artistic life of the German-speaking peoples from medieval times to Worid War II. Lectures, audio-visual presentations, and readings in English.

GERM 316. Contemporary German Lite (3) I. Lecture-reading course on contemporary East and West Germany. Rebuilding and development of the two German states from 1945 to the present: political, economic and social systems, geography, education, mass media, inter-German relations, patterns of daily living. Lectures and readings in English.
GERM 317. Composition and Conversation I (3) I. Extensive practice in speaking and writing German. (May be repeated for credit in AYA Salzburg Program.) Prerequisite: GERM 202, or by placement.
GERM 318. Composition and Conversation II (3) II. GERM 317 continued. (May be repeated for credit in AYA Salzburg Program.) Prerequisite: GERM 317 or permission of instructor.
GERM 319. German Phonetics and Pronunciation (1) II. Theory and practice of German pronunciation; introduction to phonetic principles. Prerequisite: GERM 102.
GERM 331. Workshop in Translation (3) II. Smail group work in German to English translation of scientific, technical or business writing, or other types of expository prose in the student's specialty. May be repeated to six hours with different projects. Prerequisite: GERM 231 or GERM 201 or permission of instructor.
GERM 360. Literature in Translation (3) On demand. Variable topic course on German fiterature in translation; may center on authors, periods, genres or themes. May be repeated to six hours with different topics. Prerequisite: previous literature course in any department, or permission of instructor. Course does not count fowards a German major or minor.
GERM 380. Topics in German Language, Thought or Culture (1-3) On demand. Topic chosen to meet curriculum needs and student requests. May be repeated to six hours with different topics. Prerequisite or corequisites: GERM 317 and GERM 311 or 313 or 331.
GERM 407. Classical Age of German Literature (3) Aliernate years. Selected works from classical period of German literature, especially the writings of Goethe and Schiller. Prerequisites: GERM 311 or 313 , GERM 318 .
GERM 409. German Romanticism (3) Alternate years. Major authors of the romantic era; introduction to the theoretical and philosophical representatives. Prerequisites: GERM 311 or 313, GERM 318.
GERM 411. Modem German Drama (3) Alternate years. Selected major representatives of modern German drama from Hauptmann to the present. Prerequisites: GERM 311 or 313, GERM 318.
GERM 412. Modern German Prose (3) Alternate years. Selected major representatives of prose fiction from about 1900 to the present. Prerequisites: GERM 311 or 313, GERM 318.
GERM 415. The German Film (3) On demand. Cultural and literary aspects of German film; emphasis may be on important developments in German filmmaking, thematic aspects of film, or on interrelationships between literary and cultural phenomena and the film.
GERM 417. Advanced Composition and Conversation (3) I. Development of increased facility in speaking and writing. (May be repeated for credit in AYA Salzburg Program.) Prerequisite: GERM 318 or permission of instructor.

GERM 418. Stylistics, Syntax and Structure of German (3) II. Practice and problems of writing style and syntax. Descriptive study of grammatical structures, contrastive analysis of English and German. (May be repeated for credit in AYA Salzburg Program.) Prerequisite: GERM 318 or permission of instructor.
GERM 419. German Drama Workshop (3) On demand. Practical advanced linguistic training through active participation in theatrical projects; advanced phonetics; methods of utilizing dramatic productions as part of forelign language instruction. Prerequisite: GERM 417 or permission of instructor.

GERM 431. Advanced German-English Translation (1-2) On demand. Analysis and application of translating techniques; attention to levels and areas of style. Intensive general practice followed by work on individual projects. May be repeated to six hours with different projects. Prerequisites: six hours from GERM 317 and/or GERM 318 and/or GERM 331.

GERM 432. Advanced English-German Translation (1-2) On demand. Analysis and application of translating techniques; expansion on working vocabulary and idiomatic basis in German. Treatment of structural differences between ianguages through error analysis. General practice; individual projects. May be repeated to six hours. Prerequisites: six hours from GERM 317 and/or GERM 318 and/or GERM 331.

GERM 480. Selected Topics in German (1-3) On demand. Topic chosen from literature, culture or language to meet curriculum needs and student requests. May be repeated to six hours with different topics. Prerequisites: GERM 318 and two courses from GERM 311, 313, 331, 380.
GERM 482. Introduction to Germanic Linguistics (3) On demand. Derivation of modern Germanic languages from Proto-Indo-Eutopean. Classification and history of the Germanic language group. Development of the German language to New High German. Prerequisites: GERM 202 or permission of instructor.
GERM 491. Studies in German (1-3). Independent study project for advanced students in German. May be repeated to six hours with different projects. Prerequisite: arrangement with instructor and consent of department chair prior to registration.

## Gerontology (GERO)

GERO 100. Seminar in Gerontology (1-5) 1, 1 . Interdisciplinary study of special topics in gerontology. May be repeated by consent of the director of the gerontology program. Prerequisite: consent of instructor.
GERO 400. Special Topics in Cerontology ( $1-3$ ) On demand. Independent study on subject matter related to gerontology not otherwise offered. May be repeated. Prerequisite: consent of program director.
GERO 410. Administration (2) I. Administration of human service agencies with aging clients. Goal setting, staffing, evaluation, budgeting and organizational structures. Prerequisite: senior standing.
GERO 411. Principles of Nursing Home Aciministration (2) II. A capstone course for prospective nursing home administrators to assist them in the integration and concepts necessary for successful operation of a facility. Required of all gerontology majors who have selected the nursing home administration option. Open only to those students who have achieved senior standing in the nursing home administration option.

GERO 420. Proposal Writing (2) I. Funding potential, methods, design and proposals in human service agencies. Prerequisite: senior standing.
GERO 440. Seminar in Gerontology (1-5) I, II. Interdisciplinary study of special topics in gerontology. May be repeated by consent of the director of the gerontology program. Prerequisite: consent of instructor.

GERO 491. Practicum in Gerontology (2-10) I, II, summer. Experience in working under supervision in selected agencies providing services to the aged. Emphasis on practice rather than observation. May be repeated. Prerequisites: enrollment in gerontology program or permission of program director; junior or senior standing; 2.00 GPA prior to registration. (Note: for those students who intend to use this course to satisfy the administrator in training requirement of the Board of Examiners of Nursing Home Administrators, a 2.25 GPA no later than one semester prior to registration for this course is required.) Graded $\mathrm{S} / \mathrm{U}$.
GERO 493. Practicum Seminar (1) I, II, summer. Analysis of problems and experiences encountered in practicum. Prerequisites: permission of program director and GERO 491. Graded S/U.

## Health and Community Services (HCS)

HCS 100. Seminar in Health and Community Services (1-5) On demand. Interdisciplinary study of special health or community service topics. May be repeated. Prerequisite: consent of dean's office.
HCS 440. Seminar in Health and Community
Services (1-5) On demand. Interdisciplinary
study of special health or community service topics. May be repeated. Prerequisite: consent of dean's office.
HCS 491. Field Experience in Parasitology and Medical Entomology (3) I, II, summer. On demand. Field or clinical experience in one or more public health, industrial, or agricultural locations. May be repeated at different stations, but not for credit toward graduation beyond first registration. Prerequisite: approval of program director. Graded S/U.
REHB 401. Introduction to Rehabilitation Counseling (3). Characteristics and principles of the rehabilitation process; disabilities and agencies serving the disabled.

## Health Education (HED)

- HED 109. Personal and Community Heallh (3) I, II, summer. Basic personal and community health concepts, values and practices. Not open to students with credit for HED 209.
HED 209. Advanced Concepts in Personal and Community Healith (3) I, II. Detailed study of factors that influence personal and community health in a contemporary society. Primarily for health education and physical education students.

HED 215. Wellness ( 3 ) I, II, summer. Elements and principles of developing a wellness lifestyle. Personal assessment in behavioral change techniques will be used to enhance health behavior. Not open to students with credit for HED 109.

HED 230. Humanizing Health Education (1) I. The theories and methods of values clarification, affective learning, and transactional analysis as they relate to the pre-service health education student. Prerequisite: sophomore standing.

HED 301. Women's Health (2) II. Health topics of special interest and importance to women. Open to all students; Prerequisite: HED 338 highly recommended.

HED 313. Cardiopulmonary Resuscitation and Advanced First Aid and Safety (3) I, II, summer. Provides knowledge and training in the prevention and treatment of accidents, injuries and procedures of basic life support. Satisfactory completion may result in American Red Cross certification. Participation in skill practice required. Fee $\$ 7.50$.
HED 314. Instructors Advanced First Aid and Emergency Care (1) II. Successful completion may lead to advanced instructor's certificate by the American National Red Cross. Prerequisites: Junior standing and valid American Red Cross advanced first aid certificate.

HED 338. Concepts of Human Sexuality (3) I, II, summer. Information and concepts of human sexuality, including the physiological, social, psychological, moral and legal aspects. Prerequisite: junior standing or consent of instructor.

HED 340. Drug Use/ Abuse (3) I, II. Knowledge regarding the ambiguity of drugs in society. Physical, psychological and social ramifications of drug use/abuse will be discussed. Prerequisites: HED 209 and junior standing or consent of instructor.
HED 346. Health Education for the Elementary School Teacher (3) I, II, summer. Content and techniques for teaching personal and community health in the elementary school.
HED 348. Instructional Techniques in Health Education K-12 (3) I, summer. (On demand.) Principles, planning methods, materials, resources and human relations of teaching health. C/F hrs.: 4.

HED 362. Driver Education-Basic Instructor's Course (3) I, summer. First of two courses required to qualify student to organize, administer, and teach driver education in Ohio. Fee \$15. Prerequisites: junior standing and driver's license. C/F hrs.: 5.
HED 393. Practicum in Health Education (3) I, II. Practical experience in the preparation and presentation of health education instruction. Requirements include placement in a public school setting, on campus classroom work and regularly scheduled seminars. Prerequisites: HED 348 and HED 313. C/F hrs.: 147.
HED 395. Workshop on Current Topics (1-3). On demand. Intensive educational experience on selected topics related to skill development, content update, or materials developed. Typically, an all-day or similar concentrated time format. Requirements usually completed within time format. May be repeated on approval of adviser. Prerequisite: as decided by instructor.
HED 409. School Health Services and School Environment (3) I, II, summer on demand. Consideration of school health services and school environment, including principles, organization and administration of: health appraisal, health counseling, communicable disease control, educational adjustments, emergency programs, record keeping and a safe school environment. Prerequisite: junior standing. C/F hrs.: 20.
HED 462. Driver Education-Advanced Instructor's Course (3) II, summer. Second of two courses required to qualify a student to organize, administer and teach driver education in the Ohio secondary schools. Prerequisite: HED 346. Fee: $\$ 20 . \mathrm{C} / \mathrm{F}$ hrs.: 15.

HED 470. Independent Study in Health Education (1-3). On demand. An in-depth study project of a topic of particular significance to the student. Project must be approved by project supervisor and program area chair prior to registration. May be repeated.
HED 480. Seminar in Teaching Controversial Issues in Health Education (2) II, alternate years. Teaching methods and procedures in discussing human sexuality, controversial life styles, addictive elements and contemporary issues of controversy such as death education, nutrition, the healing arts, child abuse, and socialized health care. Prerequisite: junior standing. C/F hrs.: 5.

HED 481. Seminar in Healith Education (2) II, alternate years. Discussion of issues and problems faced by the school health educator: content comprehension and organization; instructional dilemmas encountered in student teaching; evaluative procedures specific to total health program. Prerequisites: junior standing, health education major or minor:
HED 492. Student Teaching ( $1-10$ ) I, II. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required for elementary and/or kindergarten-primary certification. Fee: $\$ 5$ per credit hour. Eligibility requirement must be met. C/F hrs.: 300. May be repeated. Graded S/U.

HED 497. Student Teaching (1-10) I, II. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs.: 300. May be repeated. Graded S/U.

## History (HIST)

\#HIST 151. World Civilizations (3) I, II. Comparative study of selected Western and Asian civilizations in terms of how and why economic, social, political, and intellectual factors shaped and defined history of ancient and medieval worlds.
\#HIST 152. The Modern World (3) !, II. Comparative study of how and why selected economic, social, political, and intellectual revolutions of the modern world have transformed and are shaping contemporary European and non-Western cultures.

I HIST 205. Early America (3) I, II. Selected constitutional, intellectual, political, and social developments that defined and shaped America between its first European settlement and the end of the Civil War and Reconstruction.
I HIST 206. Modern America (3) I, II. How and why selected economic, intellectual, political, and social developments transformed postCivil War America and shaped 20th-century American society.
HIST 240. Historical Perspectives on American Cullure (3). Interdisciplinary study of the historical development of selected aspects of American culture with emphasis on the relationships between historical events and cultural expression. Recommended for students electing history/American studies for general education or group requirements (same as AMST 240). May be repeated.
I HIST 280. Asian Civilizations (3) I. East and South Asian civilizations, including China, Japan, Korea, Vietnam and India. Comparative study of Asian tradition and modern transformation. Aimed at understanding Asia's rich historical experience and its diverse cultural, socioeconomic and political development.
©HIST 2gi. Sudies in Mistory (1-3). Introduc-
tory approaches to history. Content and therre vary with instructor. For students electing history for general education or group requirements.

HST 30f. American Military History (3) I, 11 . Development of American military institutions, policies, strategy, tactics from American Revolution to present.
HIST 302. Grime, Poverty, and Violence in 19th Century (3) II. Development of criminal justice systems in England, France, and U.S. impact of differing national cultures on emergence and development of professional police in these countries.

HET so3. Wond War II (3) I. How and why Atlantic-European, Mediterranean, and Pacific-Asian theaters of war produced global dynamics in three acts: 1. 1939-1942 - German and Japanese expansion, innovative tactics, 2. 1942-43-mobilization and technology, propaganda and intelligence, air and sea war; 3. 1944-45 - U.S. and U.S.S.R. counterexpansion, grand strategy, and politics of war.
HST 304. The Eble as History: The New Testarnent (3) II. Based on modern Biblical scholarship; analyzing the New Testament as a historical medium reflecting the cultural matix of Greco-Roman Palestine, conveying the eschatological message of Jesus through his disciples, and maneuvering the evangelical mission of the early Christian church.

HET 30s The Bhble as History: The Oid Testament (3) i. Major problems relating to text, content, and context of Old Testament as historically interpreted in modern Biblical scholarship; keyed to demonstrating authenicity of evidence, integrity of explanation, and contintity of experience found in Bible.
WhST 306. History of Ohio (3) I, II, Precolonial background, early expioration, settiement; Northwest Territory; Ohlo in French and indian War, American Revolution, War of 1812, Ohio's place in national development.

SHIST 307. Afo-American History (3) I. History of biacik Americans from African origins, slavery, and emancipation through rural Southern and 20th century urban experiences.

WST 309. Latin America Setore Independence (3) L Latin-American history treating these phases: pre-Columbian; discovery and conouest; colonial; wars of independence. Role of indigenous and European cultures in development of Latin America.

HiSt 310. Modern Latin America (3) il. Common and unique social, economic, political, and intellectual features of Latin American hations and Latin America in world affairs.

HISE 311 . United States-Latin American Reiahors, 1810 -Present (3). Development of the Western Hemisphere idea, Panamericanism, Dollar Diplomacy, The Good Neighbor Policy, cooperation in World War II, the Cold War, the role of muitinational corporations and U.S. response to social change in Latin America.
Mist315. Slavery in the Americas (3). African slave trade and various slave societies which that traffic gave birth to in Western hemisphere. Emphasis on Cuba, Jamaica, Brazil, and American South.

HIST 316. Famine and Revolution in Peasant Nations: Historical Roots (3) II. Indonesia as model to understand problems facing peasant nations in Asia, Africa, and Latin America. European imperial penetration and traditional peasant values; why peasant societies are vulnerable to periodic famine. Revolutionary changes that have transformed England, Russia, Japan, and China to understand what changes must take place if industrialization is to succeed in peasant nations.
HIST 320. Social History of American Medicine (3). Leading theorists; major social and public policy determinants of health care in America from 1780 to present.
HIST 323. History of American Journalism (3) I, II. American journalism from colonial newspapers to multimedia age, emphasizing 20th century.
HIST 325. Business History of the United States (3) II. American business in its historical setting from 1607 to present. Interaction between economic and political forces in explaining unique role private enterprise has played in American life.
HIST 326. Women in American History (3) II. Major issues and movements in American history that have involved women from colonial period to modern times.
HIST 330. Practicum in History (2). A series of practical exercises for prospective teachers of history and social studies at the primary and secondary levels that demonstrates how to identify, select, and organize historical data from available school-system materials (especially textbooks) for effective classroom treatment of topics and themes. Strongly recommended as a supplement to EDCI 351 or 376.

HIST 337. The Vietnam War (3) II. The American experience in Vietnam from several perspectives: origins of the war and U.S. escalation; media coverage, public optinion and anti-war movements; U.S. withdrawal and communist victory; the war in retrospect as seen in American popular culture, political debate and foreign policy.

HIST 338. American Environmental History (3). Three centuries of changing American attitudes and actions toward natural environment, rise of conservation movement and development of ecological perspective.
HIST 340. World of the Bible (3). Major civilizations of ancient Near East (Mesopotamia, Egypt, Syria, and Israel); defining, comparing, and contrasting Oriental and Biblical social traditions as embodied in respective institutions, art, literature, religion.
HIST 357. English Origins of American Law (3) II. Medieval and early modern English history; origin and growth of legal and constitutional docirines, instututions, and procedures important to understanding American legal system.

HIST 360. Major Personalities of 20th Century (3) II. Biographical Study of individuals whose lives made substantial changes in aspects of modern society, examined both as individuals and as representatives of major movements of 20th century.

HIST 363. French Revolution and Napoleon (3) II. Impact of French Revolution on society of Old Regime; formation of revolutionary creed; Great Revolution, Jacobin Republic, Thermidor; Napoleon and principles of 1789.

HIST 367. Hitter's Germany: Rise and Fall of Nazism (3) l. Major developments in Germany from defeat in 1918 through collapse in 1945 and recovery in Cold War era. Weimer Repubic, Hitler, Third Reich, post-war reactions and conditions; keyed to causes and effects of Nazi totalitarianism and racism.
HIST 370. The Soviet Union in the Twentieth
Century (3) I. Survey and analysis of the development of Soviet social, political and economic systems in the twentieth century. Designed to provide an understanding of the USSR today.
HIST 377. 20th Century Eurcpe (3) l. European historical development in 20th century; major forces, events, and experiences that have shaped Europe and its place in contemporary world.

HIST 381 . United States and Asia (3). U.S. relations with China, Japan, India, and southeast Asia in 20th century; interaction of domestic politics and foreign policy; Asian nationalism, militarism, communism; America's involvement in wars and peace-making.
HIST 382. Chinese Culture and Institutions (3) I. Historical development of Chinese thought and institutions from traditional to modern times. Classical philosophy and religions, family, social system, bureaucracy, autocracy, nationalism and communist state. Intrinsic values of broadening perspectives through exposure to major non-Western cultural experience.

HIST 386. Japanese Culture: Multi-Media Approach (3) II. Higher culture in traditional Japan. Religion, visual arts, literature, theatre, and uniquely Japanese arts. Political and institutional history as it relates to cultural development.
HIST 391. Special Studies in History (1-3). Content and theme vary with instrucior. Designed to meet needs and interest of nonmajors.

HIST 395. Workshop on Curient Topics (1-3) On demand. Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format used. Requirements usually completed within time format. May be repeated if topics differ on approval of adviser.

HIST 400. Topics in History (2-3) On demand. Study of selected topics or subject areas.
HIST 401. Caesar and Christ: Social Worlds of Late Antiquity and Early Christianity (3) I. Basic issues and problems involved in tensions and conflicts between pagan and Christian that were eventually accommodated in 4th century A.D.; social disaffection, political resistance, and cultural alienation.

HIST 411. Modern Mexico (3) 1. Analysis of first Latin-American state to experience political, social, and economic revolution in 20 th century; causes of the revolutin, leaders and institutions produced, emergence of Nexico as relatively stable and progressive state.
HIST 413. Caribbean and Spanish Main (3) II. Political, economic, and social development of Greater Antilles and Spanish Main from 17th to 20th centuries; war and trade, slavery, revolution, caudillism, and communism in Caribbean.

HIST 414. Canada (3) I. European colonial rivalry, problems of European-settied colonies, emergence of colonial self-government, confederation movement, search for national identity, nature of commonwealth nation, role as mediator in Anglo-American relations, importance as independent neighbor.

HIST 415. Spain and Portugal (3). Political, economic, and social development of lberian peninsula from invasion of Moors to 20th century dictators; reconquest, reign of Hapsburgs, Spanish Civil Wars, regimes of Franco and Salazar.

HIST 419. Westward Movement in America (3) I. Development of Trans-Mississippi West during 19th century; American Indian, territorial expansion, sectional conflict, economic development.

HIST 420. Topics in American West (3). Selected topics in history of Trans-Mississippi West; frontier literature, territorial system, California, conservation, Indian affairs, modern west

- HIST 421. American Colonial History, 1492-1763 (3) I. European backgrounds of American history, establishment of European settlements and institutions, emergence of colonial culture, conflict between France and England for New World.
- HIST 422. American Revolutionary Era, 1763-1815 (3) II. Causes, course, and consequences of War for Independence; organization of government and emergence of national party system; economic, social diplomatic problems of young republic.
HIST 425. Conflict and Division in U.S. (3) I. Economic, social, political institutions of 1815-1860; Old South and forces that produced Civil War.
HIST 426. Civil War and Reconstruction, 1861-1877 (3) II. Political, economic, and cultural conditions during War; resulting problems to peoples and governments of both sections continuing through postwar period.

HIST 427. American South, 1865-Present (3) II. Reconstruction South, new industrial growth, evolution of Southern agriculture racial and labor problems. South in American political life, southern education and culture, South toclay.

HIST 428. Emergence of Modern America, 1877-1900 (3) I. Transformation of U.S. from isolated, agrarian nation into modern, industrialized world power; economic, social, cultural, and political problems which attended this change.

HIST 429. Progressive Era and Years of Republican Ascendancy, 1900-1933 (3) II. American political and economic progressivism; great crusade of World War l; "normalcy" and business society of Twenties; great crash and early depression years; intellectual, cultural, social change of Roaring Twenties.
HIST 430. Recent U.S. History (3) II. Politics, public policy, and society from the New Deal to the present.
HIST 433. American Constitutional History (3) I. Constitutional developments from framing of the Constitution in 1787, which established a federal republic that protected states rights, to creation of a national republic after Civil War, aiding rapid industrialization and creating need for business regulation, social welfare state, national protection of civil rights, and expanded role of presidential leadership
HIST 436. American Social and Intellectual History (3) I. Select topics in American social and emotional experience during 19th and 20th centuries: nationalism, regionalism, urbanization, immigration, ethnicity, professionalisrn, gender, childrearing, education, mental health.

HIST 437. U.S. as World Power in 20th Century (3) I. American involvement in world affairs; imperialism in Asia and Latin America; World War I - response to German militarism and Russian communism; postwar "isolationism"; World War II - background to Pearl Harbor, wartime alliances, peace settlements.
HIST 438. U.S. Foreign Policy; World War IIPresent (3) II. Origins of Cold War and containment policy toward Soviet Union, U.S. response to communism in China, Korean War; complex causes and controversial strategies; U.S. involvement in and failure in Vietnam; Cuban missile crisis and movement toward "detente."

HIST 441. Classical Hellenism (1000-400 B.C.)
(3) I. Ancient Greek society and culture from "dark ages" through "golden age" of 5th century. Resourcefulness of Hellenism in democratic politics, imperialistic policies, and classic products of Periclean Athens, Weakness of Greek civilization in coping with crises engendered by Atheno-Peloponnesian war

HIST 442. Roman Revolution: From Gracchi Through Caesar Augustus (3) II. Crisis of social turbulence, political violence, and cultural ambivalence that marked Rome's transition from city-state to world state; how and why Roman archaism, republicanism, and imperialism contributed to collapse of Late Republic and creation of Early Empire.

HIST 444. The Making of Europe (3) II. Cultural, religious, political, and economic aspects of the Middle Ages which laid the framework for modern European civilization; cross-cultural contacts with the Christian and Islamic East.

- HIST 448. Modern European Society and Thought (3) II. Major social and intellectual trends in modern European society; including liberalism, socialism, Marxism, fascism, existentialism and post-war disillusionment.
HIST 454. European Foreign Relations, 1914Present (3). Foreign policies and diplomatic practices of the great powers and their statesmen: World War I, postwar quest for stability; World War II, Europe in the Cold War, contemporary problems.
HIST 458. England, 55 B.C.-1689 (3) I. Major constitutional, economic, political, religious, and social developments through 17th century: making of the. Anglo-Saxon kingdom, feudal government and society, crisis of late medieval England, Tudor restoration of order, 17th-century civil war and revolution.
HIST 459. Great Britain, 1689-Present (3) II. Growth of parliamentary government; impact of the Enlightenment, French Revolution, and industrialization; Victorian England; political and economic reform; two world wars and their consequences.
HIST 462. British Empire-Commonwealth (3). Rationale of imperialism, expansion of Britain overseas, development of colonial holdings, evolution of concept and reality of Commonwealth of Nations.

HIST 464. History of France Since 1815 (3) II. Social and economic development of France, 1815 - Third Republic; Jacobin radicalism, emergence of French labor movement; France between two world wars; Vichy and the Resistance; problems of Fourth and Fifth Republics.
HIST 469. Medieval and Imperial Russia, 9001825 (3) I. Radical, political, and religious origins; development of autocracy; national and imperial problems to death of Alexander I.

* HIST 470. Modern Russia, 1825-Present (3) II. Revolutionary origins; social, economic, political position in 19th and 20th centuries.

HIST 471. Education and Revolution in Russia (3). Russian-Soviet struggle to create perfect society dominant in world through interplay of education and revolutionary ideology as reciprocal political tools.
HIST 480. Senior Seminar in History (3). For selected senior history majors. Examination of historical literature, problems of historical research, discussion of various historical methods. Open to history majors by invitation only.
HIST 481. History of Africa, 18th CenturyPresent (3). Anti-slavery movement, rise of forest and savannah kingdoms, Islamic revival, impact of Christianity, European exploration, imperialism, colonialism, nationalism, and rise of modern African states.
HIST 483. Revolution and Tradition in Modern China (3) II. China's modern transformation from the Confucian empire to the socialist nation of one billion people. Culturalism, nationalism, Marxism and Communism; China's cultural legacy, problems of modernization; China's relations with the west.

HIST 486. Japan: New Superstate (3) II. Japan's successful modernization since "opening" to West in 1853; political development, industrialization, expansion; Japan's rise from defeat in World War II to world economic power.

HIST 495. Readings in History (1-3). Individual readings in consultation with instructor in fields of special historical interest. Prerequisite: consent of department chair and instructor.

## Home Economics (HOEC)

HOEC 101. Clothing Design and Construction (3) I, II. Aesthetic principles of design and analysis of clothing construction methods: Evaluation of basic techniques and their application to construction of garments. Consumer buying of clothing analyzed. Lab fee.
HOEC 103. Textiles (3) I, II. Fiber, yarn and fabric structures; finishes; color and design. Selection and care of fabrics for personal and hoùsehold uses. Lab fee.
-HOEC 105. Personal and Family Relationships (3) I, II. Growth and development of college students as individual and in social relationships in family, college, community; activities and functions of present-day family.

HOEC 107. Black Families in America (3) I, II. Living patterns of the American black family: historical development, present status, strengths, problems, and prognosis.

HOEC 120. Survey of Child and Family Community Services (3) I, II. Institutions and agencies serving children and families. Principles of effective services including qualifications and preparation of professional people. Transportation required.

- HOEC 123. Introduction to Early Childhood Education (3) I, II. Conceptualization of early childhood education. Review of experiences provided in different early education programs.
HOEC 195. Telecourse on Current Topics in Home Economics (1-3) On Demand. Selected introductory topics; departmentally supervised presentations via television complemented by seminars or other student-teacher interaction in groups or individually.

Hote 202. Intermediate Clothing and Basic Flat Patiem (3) I, II. Clothing construction techniques and couture methods as applied to commerclal designer patterns. Basic flat pattern knowledge and skills resulting in design and execution of an original muslin garment Prerequisites: HOEC 101 and HOEC 103. Lab fee.

HOEC 20A. Introduction to the Fashion IndusIry (3) 1, II. Fashion design and terminology; organization of fashion industry and career oppontunities in lashion. Prerequisites: HOEC 101 and HOEC 103 or consent of instructor.

GHOEC 205. Home Management (3) I, II. Eifecis of values and philosophy on decisions regarding family resources: time, energy, knowedge, ability, skills and attifudes in achieving family goals. Work simplification, history of discipline, and evaluation in home management.
HOEC 203. Household Equipment (3) I, It. Selection, operation, care and management of household equipment for efficient use, safe operation and increased consumer satisfaction. Two houre lecture, two hours lab per week lab fee.

- HO EC 207 , Essentals of Nutrition (3) I, li. A non-technical course. Application of fundamental principles of nutrition in selection of adequate diet for optimal health; current nutrifion controversies. Not open to home economics education, dietetics, or food and nutrition majors.
HOEC 210. Fundamentals of Food Science (3) 1, 11. Art and science of foods. Scientific principles reinforced by actual preparation of foods and meal service. One hour of lecture and four hours nf lab. lab fee.
HOEG 212. Meai Service Management (3) I, II. Management of available resources for planning, organization, preparation and service of family and commercial type meals. Controls in purchasing, receiving, storage and costing. One hour of lecture and four hours of lab. Prerequisite: HOEC 210. Lab fee.
HOEc 219. Fabric Use in Interior Design (3) i. Fundamentai workroom techniques used in construction of textile products for residential and commercial interiors. Lab fee.
HoEC 223. Child Study (2) II. Development of young children as individuals and in groups using observation and other data gathering techniques.
HOEC 224. Prosnam Planning and Creative Experiences for Young Children (3) I, II. Play, materials, meihods of presentation and ways of enhancing creativity in children under six. Planning, carrying out and evaluating experiences and activities with groups of young children.
HOEC 230. Prolessional Catering Techniques (3) II. Techniques of preparation and presentation germaine to food service catering speciaiista Laboratory fee. Prerequisite: HOEC 210 or equivalent.

HOEC 250. Foundations of Home Economics (3) L. Home economics; the profession, the role of the educator, and understanding students; development of educational strategies including peer teaching thru field and cinical experiences. One hour of seminar and three hours of expertence in a professional setting.
HOES 255. Telecourse on Current Topics in Home Econorioss (1-3) On demand. Selected advanced topics; departmentally supervised presentations via television complemented by seminars or other student-teacher interaction in groups or individually.

HOEC 302. Foundations for Marriage and Family Relations (3) I, II. Development of basic philosophy about marriage and family relations in a democratic society. Emotional, psychological and physical relationships and family interrelationships. Prerequisites: HOEC 105 or SOC 101; junior or senior standing.
HOEC 303. Home Furnishing (3) I, II. Today's interiors from standpoint of use, economy, beauty, and individuality. Recognition and evaluation of space needs, window, wall, and floor treatments as well as furnishing and accessories. Prerequisite: ART 101 or ART 102.

HOEC 305, Integrating Career and Family (3) 1, II. Issues facing dual-career families; applied problem-solving as approach to famHy decision making, communication, childrearing, career patterning. Not open to students with credit for BA 305.

HOEC 307. Nutrition (3) I, II. Principies of nutrition with applications to planning dietaries for individuals under different conditions. Two hours of lecture and two hours of laboratory. Prerequisites: CHEM 116 or 306. Lab fee.
HOEC 310. Microwave Oven Application (2) I. Selection, care and effective utilization of the microwave appliance and accessories. One hour lecture, two hour lab. Prerequisite: HOEC 206. Lab fee.

HOEC 311. Family Resource Management (3) I. Integration and application of concepts; processes and principles of family resource management within household environment. Four hours lecture/lab plus arranged. Prerequisites: HOEC 205 and HOEC 307. Lab fee.

HOEC 313. Textile Analysis (3) I, li. Economic, political and cultural forces related to production and use of historic and modern textlles; emphasis on recent technical developments and consumer textiles. Prerequisite: HOEC 103.
HOEC 319. Residential Interiors (3) I, II. Application of design principles in residential interiors. Problem formulating and problemsolving in restoring and renovating residential interiors. Professional organization of design portfolio for residential employment Prerequisites: CONS 235, DESN 301 and HOEC 303.

- HOEC 320. Infant Development (3) I, II. Growth and development of infants from conception to toddler stage. Developmental theories and study of risk factors.
HOEC 321. Child Development (3) II. Physical, emotional, social and cognitive development of children from conception to school age. Developmental theories and influences of family and society.
HOEC 322. Child Development Practicum (3) I, II. Supervised participation with preschool children. One hour of lecture and six hours of lab. Must apply in the Child Development Center office one semester prior to participation. Prerequisite: HOEC 321 or EDFI 342.

HOEC 326. Foods of Other Cultures (2) I, 11. Geographic, economic, and cultural influences on dietaries in selected regions of the world. Preparation and service of regional U.S. and foreign foods. One hour of lecture and two hours of lab. Prerequisite: at least one food content course. Lab fee.
HOEC 328. Preadolescent and Adolescent in Family and Community (3) I. Development and socialization of adolescents and preadolescents; youth problems, culture, and growth. A review of research relevant for intervention or service programming. Prerequisite: HOEC 105 or consent of instructor.

HOEC 331. Principles of Food Service Wlanagement (3) 1. Preparation and service of quality foods for institutions and restaurants. Menu planning, food purchasing, and issuing of stores; supervision and cost control. Two hours of lecture and three hours of clinical experience. Prerequisite: HOEC 212 or HOEC 230 or consent of instructor.
HOEC 333. Design and Evaluation of Food Service Facilities (3) !, II. Blue-print interpretation, layout, design and drawing. Includes development of work analysis and flow charts for selection and placement of equipment in production, storage and dining facilities. Two one-hour lectures; one two-hour laboratory session. Prerequisites: DESN 104 or DESN 301 or equivalent.
HOEC 335. Principles and Practice of Food
Protection (3) I. Introduce the principles involved in identification and prevention of food contamination. The role of public health regulations will be emphasized in the practice and control measures in the various food service operation. Could lead to NIFI Certification.

HOEC 352.Vocational Home Economics in Secondary Schools (3) 1. Principles, objectives, curriculum, instructional materials and methods of vocational home economics. No S/U grade for home economics majors. Prerequisites: HOEC 250, EDFI 302 or junior standing.
HOEC 353. Organization and Teaching in a
Vocational Job Training Program (3) li. Techniques of teaching, occupational analysis, curriculum planning and supervision of cooperative education in school programs and in vocational and technical schools. No S/U grade for home economics education majors. Prerequisites: HOEC 250 ; HOEC 352 prerequisite or concurrent.

HOEC 354. Curriculum Management in Home Economics (2) II. Field experience and coordinated seminar examining curriculum management as it differs in urban, suburban, or rural schools. No S/U grade for home economics majors. Arrangements made in consultation with home economics education faculty. Prerequisite or corequisite: HOEC 352.

HOEC 389. Supervised Field Experience (1-5)
1,11 , summer. Supervised work experience of diversified nature in approved field site. Contact hours and specific requirements obtainable from authorized home economics faculty members in the specialized areas. May be repeated. Prerequisite: consent of department. Graded S/U.
HOEC 395. Workshop on Current Topics (1-3) On demand. Intensive educational experience on selected topics related to skill development, content update, or materials development. Typically, an all-day or similar concentrated time format used. May be repeated on approval of adviser. Some workshops require transportation.
HOEC 401. History of Costume (3) I. Development of western costume from Egyptian times to present; emphasis on relation to modern costume to earlier forms of dress.

HOEC 402. Fashion Merchandising (3) I, II. Planning, selection, and marketing of tashion merchandise, including identification of a target customer, building a fashion image, financial planning, assortments and unit control, fashion promotion, and trend merchandising. Prerequisite: HOEC 204 or consent of instructor.

HOEC 403. Sociological and Psychological Aspects of Clothing (3) II. Cultural, sociological and psychological factors influencing clothing habits of individuals and groups are related to their environments. Prerequisites: SOC 101 and PSYC 201 and junior standing.
HOEC 404. Tailoring (3) I, II. Specialized techniques of professional tailoring used in construction of a suit or coat. Analysis of quality in ready-to-wear tailored garments. Prerequisite: HOEC 202 or consent of instructor. Lab fee.

## HOEC 405. Family and Consumer Economics

(4) I, II. Families' financial planning; conditions as they affect consumer decisions in relation to patterns of living, income, and goals. Not open to students with credit for BUSE 240.

- HOEC 406. Housing the Family (3) H. Selecting, financing and adapting housing for families with varying lifestyles and needs. Energy efficiency, government role in housing, renting and owning options, and psychological needs emphasized.

HOEC 407. Research in Human Development and Family Studies (3) I, II. Learning methods of research by completing a research project on a topic of the students' choice in the area of human development and family studies. Prerequisite: HOEC 105 or consent of instructor.
HOEC 408. Investigations in Family Life of Minority Groups (3) II. Directed investigation of family life of racial and cultural minority groups in United States. Prerequisite: junior or senior standing.

HOEC 412. Advanced Apparel Design (3) II. Creative expression and application of principles of apparel design through the media of flat pattern and draping. Development of original design from sketch to finished garment. Prerequisite: HOEC 202. Lab fee.

HOEC 413. Advanced Home Management (3) II. Alternate years. Recognition, integration, and application of management principles and concepts in a variety of family managerial situations. Utilization of appropriate technology. Prerequisite: HOEC 205 or consent of instructor.

HOEC 414. Experimental Clothing Construction (3) I. Experimental approach to factors influencing construction of apparel. Prerequisite: HOEC 202 or consent of the instructor. Lab fee.
HOEC 415. Home Management for Low Income Families (3) II. Alternate years. Managerial behavior of economically deprived families. Emphasis on improving managerial skills in identifying, conserving, increasing and using resources to realize family values and goals. Prerequisite: HOEC 205.
HOEC 416. Advanced Household Equipment (2) II Alternate years. Current trends, development and research in household equipment with implications for consumers. Research project related to students' professional interests required. One hour lecture, two hours lab.
HOEC 417. Home Furnishing Laboratory (3) II. Renovation and construction of various furnishings including refinishing, upholstering, slip covering and drapery making for home and professional purposes. Prerequisites: HOEC 101 or HOEC 219 and HOEC 303 or consent of instructor. Lab fee.
HOEC 418. History of Interiors (3) I. European and American furniture from 14th through 20th centuries with corresponding interiors; wall, window and floor treatments and decorative arts. Prerequisite: HOEC 303 or consent of instructor.

HOEC 419. Contract Interiors (3) I, H. Application of design principles in contract and commercial interiors. Space and facilities planning. Identification of interior equipment to facilitate a particular function. Professional organization of design portfolio for contract employment. Prerequisite: HOEC 319.
HOEC 421. Parent Education (3) I, II (even years), I (odd years). The process of parenting and the interactive effects of the parent-child relationship. Development of effective support systems for parents and the role of the professional parent educator. Prerequisite: junior or senior standing.
HOEC 422. Cognitive Development of the Young Child (3) I (odd years). Contemporary theories of intellectual development of young children; research pertaining to specific concept areas and the development of related experiences. Prerequisite: HOEC 320 or HOEC 321 or consent of instructor.

HOEC 423. Organization of Programs for Young Children (3) II. Factors to condider in organization and administration of programs for young children. Prerequisite: HOEC 322 or consent of instructor.
HOEC 424. Children Under Transitory Stress (2) I (even years). Infants' and children's efforts to cope with situational stresses such as illness, hospitalization, death, divorce, separations from family, birth of siblings and illness or disability of parent. Prerequisites: HOEC 320, HOEC 321 or consent of instructor.
HOEC 425. The Hospitalized Child (3) I (odd years). Analysis, synthesis and integration of theory, research and practice from a multidisciplinary perspective for understanding needs of hospitalized children. Prerequisites: HOEC 320, HOEC 321, or consent of instructor.
HOEC 426. Studies in Individual and Family Potential (3) I, II. Theories of human behavior and family interaction which promote fully functioning individuals and families. Family communication and various patterns of family adjustment to internal and external stress. Prerequisites: HOEC 105 or HOEC 302, or consent of instructor.

HOEC 427. Facilitation of Individual and Family Potential (3) II. Development of personal skills and personal awareness which facilitate effective interpersonal-familial and/or professional functioning. Methods of affirming selfesteem, encouraging authentic communications, and stimulating personal growth. Prerequisites: HOEC 105 and HOEC 426 or consent of instructor.
HOEC 428. Sexuality and the Family (3) II. Interrelationships of areas of human sexuality and family development/interaction. Intended for students with background in sexual physiology and psycho-social aspects of human sexuality. Prerequisite: PSYC 307 or HED 338.
HOEC 429. The Family in the Middle and Later Years (3) II. The family in the middle and later years, with emphasis on relationship between spouses, and with children and grandchildren. Identification and critical analysis of factors associated with success and problem areas for such families.
HOEC 431. Experimental Foods (3) I, II.
Experimental methods of quality control and recipe standardization. Scientific reasoning applied to the methods of food preparation. Subjective and objective evaluation of results. Two hours of lecture and three hours of lab. Prerequisites: HOEC 212, CHEM 116 or consent of instructor. Lab fee.

HOEC 432. Advanced Nutrition (3) II. Topics in normal nutrition, including nutrients and their interrelationships. Application of nutrition principles in counseling individuals. Analysis of current literature for validity and content. Introduction to nutritional assessment. Two hours of lecture and four hours of lab. Prerequisite: BIOL 332.

HOEC 433. Advanced Food Service Management (3) II. Management principles and procedures in institutional or commercial food services. Selection, training and supervision of personnel. Food procurement, production and marketing. Clinical practicum. Two hours lecture and three hours of clinical experience. Prerequisite: HOEC 331 or consent of instructor.
HOEC 434. Diet Therapy (4) I. Diseases and dietary modifications they necessitate. Determination of rationale for inclusion or exclusion of specific foods in prescribed diet; clinical dietitian's role. Three hours of lecture and four hours of clinical experience. Prerequisite: HOEC 432.

HOEC 435. Nutrition for Infants and Young Children (3) I. Nutrition of infants and children in health and disease, from prenatal period to adolescence. Two hours of lecture and two hours of lab. Prerequisite: HOEC 207 or HOEC 307.
HOEC 436. Nutrition for the Aging (3) II. Nutritional needs of the aged. Menu planning, food purchasing and preparation. Psychological, physiological and socio-economic factors affecting dietary practices of the elderly in group and individual situations. Two hours of lecture and two hours of clinical experience. Prerequisites: 'HOEC 207 or HOEC 307, and BIOL 331 or BIOL 332, or consent of instructor.
HOEC 437. Quantity Food Production Management (3) I, II. The maniagement and application of appropriate resources to meals produced in quantity. Laboratory fee and professional liability insurance required. Prerequisite: HOEC 331 or consent of instructor.
HOEC 470. Independent Study (1-3) I, II, summer. For advanced students who want to conduct intensive study of selected problems in home economics. For undergraduate credit only. Prerequisite: consent of department chair.
HOEC 480. Seminar in Home Economics (1-3) On demand. In-depth examination of topics in home economics not covered by existing course work. Repeatable once. Undergraduate credit only. Some seminars require transportation and/or lab fee.

HOEC 489. Internship (5-12) I, II, summer. Internship in a professional environment. Work settings are approved on an individual basis. May be repeated. Graded S/U.
HOEC 497. Student Teaching (1-10) I. Classroom teaching under supervision on fullday basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs: 300. May be repeated. Graded $\mathrm{S} / \mathrm{U}$.

## Humanities (HUM)

HUM 101. Introduction to the Humanities (3) II. Experience of art including music, film, theatre, literature, dance, painting, sculpture, architecture, philosophy, and the combined arts.

## Industrial Education (IE)

(Additional costs for materials in all laboratory experiences)
IE 252. Elements of Instruction (3) I. Models ofinstruction as related to learner and functions and purposes of specialized career and technology education programs on all educational levels including individual observation and participation at various levels.
IE 352. Instructional Scope and Sequence (3) II. Design and implementation of instructional systems including pertormance objectives, approprlate content, teaching-learning strategies, and evaluation in specialized career and technology education programs on all educational levels including individual observation and participation at various levels. Prerequisite: IE 252
HE 423. Development of Training Programs (3) II on demand. Design production and evaluation of training programs for industry and business. Task analysis work design, and cost analysis in development of training programs.

15 447. Teaching Technology Systems (3) I. Integration and use of principles developed in previous methods courses and laboratory settings, selection, organization, adaptation, and use of instructional materials or curricuium projects related to industrial technology systems. Prerequisites: MFG 214 and CONS 235.

12 449. Organization and Administration (3) I. Financial and business procedures, program, taboratory, and equipment planning; maintenance programs, classroom and laboratory management systems; purchasing, storage, dispensing and inventory control procedures; public relations, cocurricular responsibilities, innovative programs. Prerequisites: IE 352 and IE 497.

FE 462. Career and Technology Education in Elementary Schools (3) II, on demand. Development and evaluation of instructional activities to facilitate career development and understanding of technology among elementary chitdren. One one- and one-half hour lecture and two one- and one-half hour laboratories.
12570. Coordinating Cooperative Education Programs $\|_{\text {s }}$ odd numbered years. Prepared coordinator of cooperative work education programs in all phases of career and technology education. Readings, discussions, and field experiences designed to develop understanding of various types of cooperative programs, role of coordinator, and related insiruction.
He 490 . Problems in industrial Education (1-3) On demand. For advanced student wanting to conduct intensive study of selected problems in industrial education. Prerequisite: consent of college. Graded S/U.

IE 492. Student Teaching (1-10) 1, II. Classroom deaching under supervision on full-day basis. Conferences and seminars supplement program. Required for elementary and/or kindergarten-primary certification. Fee: $\$ 5$ per credit hour. Eligibility requirements must be thet. G/F hrs: 300 . May be repeated. Graded SiU.

IE 497. Sudent Teaching (1-10) 1, 11. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required of students in secondary schooi or special certification program. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met C/F hrs: 300. May be repeated. Graded 5/U.

## Industrial Engineering Technology (INET)

†INET 134. Time Study (4) I, II. Responsibilities of a time study technician and equipment utilized; emphasis on performance, rating, conducting a time study, determining allowances, work sampling.
†INET 143. Quality Control (3) I, II. Quality assurance, product reliability; acceptance, attribute, asnd variable sampling; control charts as related to quality control.

## Industrial Environment Technology (ENVR)

ENVR 421. Industrial Pollution Control (3) I. Air and water pollution control regulations as they apply to industry. Functioning and selection of parameters of industrial pollution control equipment and selected case studies.
ENVR 490. Problems in Industrial Environment Technology (1-3) On demand. For advanced students wanting to conduct intensive study of selected problems in industrial environment technology. Prerequisite: consent of college. Graded $\mathrm{S} / \mathrm{U}$.

## Insurance (INS)

INS 300. Principles of Insurance and Risk (3) I, II, summer. Fundamental insurance and risk concepts; insurance company functions; legal aspects of basic insurance; homeowners property and liability, auto, life, and health coverages. No Prerequisite.
INS 465. Property and Liability Insurance Coverages (3) II. Protection provided by and legal aspects of fire, casualty, transportation, workmen's compensation, multiple-lines, and corporate surety-ship insurance coverages. Prerequisite: INS 300 or permission of instructor.
INS 466. Concepts and Issues in Insurance Company Management (3) I. Insurance company functions; types of insurance carriers; marketing and underwriting problems; agency/carrier relationships; reinsurance, rate-making, financial analysis, and regulation. Prerequisite: INS 465 or permission of instructor.
INS 467. Life Insurance (3) II. Economic and social aspects of life insurance; structure of life insurance and annuity contracts; contract provisions and legal principles; calculation of premiums, reserves, surrender values, dividends; business uses. Prerequisite: INS 300 or permission of instructor.

INS 469. Group and Social Insurance (3) I. Group life and health insurance; pension plans; social insurance; integration of group, pension, and social insurance coverages. Prerequisite: INS 467 or permission of instructor.
INS 470. Risk Management (3) II. Management of corporate risk through identification, measurement, and control of loss exposures utilizing primarily non-insurance methods. Case problems and supplemental text assignments. Prerequisite: INS 465 or permission of instructor.
INS 491. Studies in Insurance and Risk Management (1-3) On demand. In-depth study of selected areas. Offered to individuals on lecture, seminar, or independent study basis depending on student needs and nature of material. May be repeated to six hours. Graded S/U.

## Interpersonal and Public Communication (IPCO)

- IPCO 110. Intercoliegiate Forensic Activities (1) I, II. For student who wishes to participate in intercollegiate debate, discussion, oratory, extemporaneous speaking, or other individual events. May be repeated to two credits.
IPCO 203. Small Group Communication (3) I, II, summer. Theory and practice in the analysis of social interaction in small groups as it affects problem solving and policy formation processes. Mass lecture plus lab sections.
iPCO 204. Argumentation (3) I, II, summer. Principles of argumentation; case analysis and construction, and practice in forms of debate.
- IPCO 205. Public Speaking (3) 1, II. Principles of public communication composition and public speaking, including practice.
IPCO 303. Persuasive Communication (3) I, II, summer. Theories and concepts of persuasive communication; attitude change, audience analysis, and strategies of persuasion.
- IPCO 304. Leadership in Group Communication (3) I. Conceptions, methods, and techniques of leadership related to group communication processes. Emphasis is given to understanding and application of contingency theories. Prerequisite: IPCO 203.
- IPCO 305. Human Communication (3) I, II, summer. The development of theoretical understandings of communication. Theories considered are foundational to the application of communication knowledge in a wide variety of situations.
- IPCO 306. Interpersonal Communication (3) I, II, summer. Two-party communication, reduction of defensive climates as means of facilitating effective communication. Practical experiences in information seeking, persuasive, and personal encounters.

IPCO 307. Speech Communication in Organizations (3) I, II, summer. Message initiation, diffusion, and reception in organizational setting. Function and conduct of meetings, including both parliamentary procedure and relationships to organizational settings.

IPCO 310. intercollegiate Forensic Activities (1) I, II. Similar to IPCO 110; for juniors and seniors. May be repeated to two credits.
IPCO 311. Contemporary Minority Voices (3) II. Alternate years. Contemporary minority communication and culture; coping strategies, nature of minority audiences, and discussion of political philosophies of various spokespersons for minority issues.
IPCO 395. Workshop on Current Topics (1-3). On demand. Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format. May be repeated on approval of adviser, if topics differ.
IPCO 402. Critical Analysis of American Public Communication (3) II. Principles of thetorical criticism applied to studies of significant American communication events.
IPCO 406. Toplcs in interpersonal and Public Communication (3) !, 11, summer. Selected topics or subject areas within the field of communication, marital communication, legal speaking, assertiveness, and nonverbal communication. May be repeated.

IPCO 489. Communication Internship (1-10) I,
II, summer. Field experience in communica-
tion. Study of communication as intern in public or commercial agency. Open only to IPCO majors in BAC program. Prerequisites: 2.5 overall GPA, junior status and 12 hours of completed IPCO courses. Graded S/U.

IPCO 490. Problems in Interpersonal and Public Communication (1-3) I, II. For advanced student who wishes to do intensive study in rhetoric, public address, or communication studies independently or in conjunction with courses regularly offered. May be repeated. Prerequisite: consent of department.

## Italian (ITAL)

Entering students who had Italian in high school should take the placement test during summer preregistration or prior to enrollment in a course.
qITAL 101. Elementary Italian I (4) I. Cultural approach to beginning language. Development of the four skills: listening, speaking, reading, writing. Four class periods and Jaboratory practice each week.
qITAL 102. Elementary Italian II (4) II. ITAL 101 Continued. Four class periods and laboratory practice each week. Prerequisite: ITAL 101 or one year of Italian in high school.
qITAL 201. Intermediate Italian I (3) I. Grammar review. Development of the four skills. Three class periods and laboratory practice each week. Prerequisite: ITAL 102 or two years of Italian in high school.

IITAL 202. Intermediate Italian II (3) II. ITAL 201 continued. Three class periods and laboratory practice each week. Prerequisite: ITAL 201 or three years of Italian in high school.
ITAL 261. The Italian Cinema (3). Modern Italian culture and literature movements and their expression in cinema; demonstrates close relationship between literature and cinema. In English.
ITAL 351. Italian Composition and Conversation I (3) Improvement of oral and written skills; emphasis on composition. Prerequisite: ITAL 202.
ITAL 352. Italian Composition and Conversation II (3). Improvement of oral and written skills in the language; emphasis on conversation. Prerequisite: ITAL 202.
ITAL 361. Introduction to Italian Literature (3). Chronological evaluation of outstanding works in Italian literature from Middle Ages to present; various movements and genres: Prerequisite: ITAL 202.

ITAL 371. Italian Civilization I (3). Political, social, intellectual, artistic life from Middle Ages through 19th century. Background for literary studies and preparation for teaching of Italian. Prerequisite: ITAL 202.
ITAL 372. Italian Civilization II (3). ITAL 371 continued; political, social intellectual, artistic life of modern Italy. Prerequisite: ITAL 202.
ITAL 470 . Independent Readings in Italian (1-3). For the advanced student who wishes to study a particular author or period, or a problem in language or civilization. Prerequisite: consent of chair of department and instructor.
ITAL 488. Italian Literature: Advanced Studies 3). Study of author, literary school, genre, or selected theme. May be repeated to nine hours if topics are clearly different. Prerequisites: ITAL 361 and ITAL 362.

## Japanese (JAPN)

TJAPN 101. Elementary Language and Culture I (4) I. Introduction to modern spoken Japanese. Four class periods and scheduled oral practice each week.
IJJAPN 102. Elementary Language and Culture II (4) II. JAPN 101 continued. Four class periods and scheduled oral practice each week. Prerequisite: JAPN 101, or equivalent.
IJAPN 201. Intermediate Japanese I (3) I. JAPN 101-102 continued. Conversation, writing, reading, grammar. Three class periods and scheduled oral practice each week. Prerequisite: JAPN 102, or equivalent.

TJAPN 202. Intermediate Japanese II (3) II. JAPN 201 continued. Three class periods and scheduled oral practice each week. Prerequi-, site: JAPN 201, or equivalent.

JAPN 301. Third Year Japanese I (3). JAPN 201-202 continued. Development of the four skills. Three class periods and schedule oral practice each week. Prerequisite: JAPN 202 or equivalent.
JAPN 302. Third Year Japanese II (3) II. JAPN 301 continued. Three class periods and scheduled oral practice each week. Prerequisite: JAPN 301 or equivalent.
JAPN 480. Selected Topics in Japanese (1-3) On demand. Topics chosen from Japanese literature, culture or thought to meet curriculum needs and student requests. May be repated to six hours with different topics.

## Journalism (JOUR)

- JOUR 103. Introduction to Mass Communications (3) I, II, summer. Survey of modern journalism and mass communication; mass communication media and effects; role and influence of newspapers, magazines, radio, television, photography, and related fields of advertising and public relations. Open to non-majors.
JOUR 203. History of Journalism (3) English background, development of American mass media from colonial days to present. Historical factors affecting reporting and presentation of news in print and electronic journalism.
JOUR 206. Introduction to Photojournalism (3) I, II. Function of pictures in newspaper, magazine and television reporting. Practice in picture taking and darkroom procedures. Lecture and laboratory. Student must provide own camera and supplies. Lab fee.

JOUR 291. Foundations of Journalism (1-3) I, II, summer. Lecture and laboratory experience in journalistic writing and editing. Not available to students on the main BGSU campus. Prerequisite: permission of instructor.
JOUR 300. Introduction to Journalistic Writing (3) I, II, summer. Practice in the elementary forms of newspaper, magazine, broadcast and public relations writing; emphasis on grammar, spelling, punctuation and sentence structure. Prerequisites include completion of at least 30 semester hours of coursework consisting of general education requirements including ENG 112 and JOUR 103. An overall gradepoint average of 2.7 must have been earned in the aforementioned coursework at the time of admittance into JOUR 300, as well as a minimum grade of " C " in JOUR 103. In addition, students must have passed an English proficiency examination administered by the School of Journalism. This course is reserved for pre-journalism majors and exceptions approved by the School of Journalism. Application for this course must be made at the School of Journalism office, 103 University Hall. Lab fee.

JOUR 301. Journalism Techniques for Non-
Majors (3) I, II. Introduction to news gathering, news writing, news editing and journalistic graphics for non-journalism majors whose programs might benefit from such a course. Not open to those who are presently journalism majors. Prerequisite: completion of freshman English composition requirements.

JOUR 302. Copy Editing (3) I, II. Theory and practice in editing local and wire news, headline writing, picture editing, evaluating news, layout and design, video display terminal operation. Prerequisites: " $B$ " and " $C$ " or better in JOUR 103 and 300; junior standing. Lab fee.
JOUR 303. Editing Specialized Publications (3) I, II, summer. Theory and practice of editing functions and techniques in producing specialized publications: magazines, newsletters, newspapers and brochures for business and non-profit organizations. Graphics skills, including electronic typesetting. Prerequisites: "B" and "C" or better in JOUR 103 and 300; junior standing. Lab fee.

JOUR 304. Feature Writing (3) I, II. Discovering, researching, and writing the newspaper feature story and short magazine article. Prerequisites: " B " and " C " or better in JOUR 103 and 300 ; junior standing. Lab fee.
JOUR 305. Photojournalism Editing (3) II. Assignment, selection, preparation and display of photographs for publication, especially in newspapers, magazines and newsletters. Prerequisites: " B " and " C " or better in JOUR 103 and 300; junior standing.
JOUR 307. Advanced Photojournalism (3) I. Practice in advanced problems of photography, including picture stories, and evaluation of photographs for reproduction and communication. Lecture and laboratory. Student must provide own camera and supplies. Prerequisite: "C" or better in JOUR 206. Lab fee.
JOUR 311. Reporting (3) I, II. Newsgathering and newswriting for all types of news stories ranging from the simple factual story to the complex, specialized story. Practice in covering assignments for publication. Prerequisites: " B " and "C" or better in JOUR 103 and 300; junior standing. Lab fee.

JOUR 312. Reporting of Public Affairs (3) I, II. Field practice in covering governmental and community affairs with attention both to general and specialized areas. Prerequisite: "C" or better in JOUR 311 or 330.
JOUR 315. Press Management (3) I, II. Business problems of publishing - organization, financing, circulation, promotion. Mechanics of publication, various types of reproduction, adaptability of each, comparative costs, related problems. Open to non-majors.
JOUR 330. Radio/Television News (3) I, II. Techniques of writing, reporting and editing news for radio and television broadcasting; rewriting wire copy; introduction to ENG shooting and editing techniques; preparation and utilization of television graphics. Student must provide own tape recorder and cassettes. Prerequisites: B and C or better in JOUR 103 and 300 ; junior standing. Recommended: broadcast production course (RTVF 262 or 263) and photogaphy course (JOUR 206). Lab fee.

JOUR 331. Avvanced Radio/Television News (3) I, I. Writing, editing and producing the racio and television newscast. Emphasis on ENG shooting and editing; field reporting; producing the newscast in a TV studio; advanced zelevision gaphcis. Student must provide own videotape cassette. Prerequisite "C" or better in JOUR 330 and RTVF 262 and 263 plus JOUR 206. Lab fee.
JOUR 340. Princlples of Public Relations (3) I, $\mathrm{H}_{\text {r }}$ summer, Public relations problems, policies, practices applied to business and nonprofit organizations; media methods of communicating, survey research and attitude ohange. Open to non-majors.
soufi 380. Writing ror Public Communication (3) 1, 11. Public relations writing skills for business and nonprofit organizations. Prerequisites: " $B$ " and " $C$ " or better in JOUR 103 and 300 ; junior standing. Lab fee.
JOUR 402. Journalism Law and Ethics (3) 1,11 , summer. Legal concept of freedom of the press, constitutional guarantees, libel, privacy, copyright, broadcast regulation, contempt, obscenity, ethical problems, right to know. Open to non-majors.
JOUR 403. The Editorial (3) I. Techniques of persuasive and critical writing and the role of editorial opinion in modern mass media. Prerequisites: " $B$ " and " $C$ " or better in JOUR 103 and 300 ; junior standing.

JOUR G04. Magazine Aricle Writing (3) I, II. Scarching for story ideas, analyzing magazine markets, researching subject matter, witing and polishing stories. Prerequisites: JOUR 304.
JOU5 407 . Color Photography (3) 11. Theory and application of color processes and their limitations and advantages. Production of color transparencies and prints. Prerequisite: "C" or better in JOUR 307. Lab fee.

دOUS 412. Field Experience (1-3) I, II, summer. soumalism internship program required of all joumalism majors. Activity may be in more than one medium, full or part time, paid or voluntary. Two hour required of all majors, one of which must be with a campus medium. (120 hours of internship service equals one credit hour). Prereguisites: 2.5.JOUR gradepoint average; 225 overall gradepoint average; junior standing. Graded S/U.
JOUE 4 4.4. Supervision of High School Publicallons (3) II. For teachers or prospective teachers of high school journalism or advisers of school newspapers or yearbooks. Problems of editorial supervision, business management and production. Open to non-majors.
 Practices, probleme and trends in modern magazine publishing; analysis of editorial objectives, content, audience, format, production and management. Open to non-majors.
10UF 423. Introduction to Mass Communication Research (3) II. Mass communication from the scientific viewpoint. Research techniques in advertising, public relations, newspapers, radio and television. Application of behavioral science research methods to communication research. Open to non-majors.
JOUn 430. The Documentary (3) I. II.
Research, witing and preparing news, informational and public service features, documentary and magazine-type programs; writing a progem treatment and budget; production of a documentary of broadcast quality. Prerequisite: "C" or better in JOUR 331. Lab fee.

JOUR 431. Interpretive Reporting (3) I. Research and writing of in-depth reports, interpretive news, profiles, background stories, news analyses. Investigative reporting of current events and issues. Prerequisite: C or better in JOUR 312 or consent of instructor.
JOUR 432. Newsroom Decision Making (3) II. Newspaper editorship, goal setting, problem analysis, readership analysis, publication conception and creation, staff management. Prerequisite: senior standing in the School of Journalism or consent of instructor.

## JOUR 433. Government and the News Media

(3) I. Origins and concept of freedom of information and evolution in constitutional law and judiclal decisions; contemporary problems of censorship in publishing, broadcasting and film. Open to non-majors.
JOUR 435. Press and Society (3). Press as institution; its role, content, effects and responsibilities as a cultural force in society. Open to non-majors.

JOUR 440. Public Relations Techniques (3) I, 11. Application of public relations theories, tools and techniques to the public relations campaign. Research, planning and execution are practiced. Prerequisites: senior status in the public relations sequence and " C " or better in JOUR 303, 340 and JOUR 380.

JOUR 470. International Press Systems (3) I. Social, economic and political factors, organization and controls in the national news and informational systems of countries around the world. Open to non-majors.
JOUR 471. International Media Networks (3) II. Factors affecting flow of world news and public information; regional and international networks. Open to non-majors.
JOUR 481. Topics and Problems in Public
Relations (1-3) I, 11, summer. Issues and probtems that confront public relations practitioners in corporate and non-profit communications programs. Prerequisite: instructor's consent.
JOUR 490. Special Problems in Journalism (1-3) I, II, summer, Research problems, practical projects, intensive reading or mini-courses to meet needs of student's special interests. Prerequisite: instructor's consent. Graded S/U.

## Latin (LAT)

Entering students who had Latin in high school should take the placement test during summer preregistration or prior to enrollment in a course.
qLAT 101. Elementary Latin I (4) I. Cultural approach to beginning language. Development of the four skills: listening, speaking, reading, writing. Four class periods and laboratory practice each week.
*LAT 102. Elementary Latin II (4) II. LAT 101 continued. Four class periods and laboratory practice each week. Prerequisite: LAT 101 or one year of Latin in high school.
LAT 141. Great Greek Minds (3) I. Masterpieces of Greek literature: Homer, Sappho, Pindar, Aeschylus, Sophacles, Euripides, Aristophanes, Herodotus, Thucydides, Plato, Aristotle. No Greek required. No credit for both LAT 141 and 485.

LAT 142. Great Roman Minds (3) II. Masterpieces of Latin literature: Lucretius, Cicero, Catullus, Vergil, Horace, Livy, Ovid, Petronius, Tacitus, Juvenal, Martial. No Latin required. No credit for both LAT 142 and 486.

LAT 145. Greek and Latin Elements in English (3). Terms and concepts derived from Greek and Latin occurring in English; designed for premedical, predental, prelaw, language, sciences majors.

TLAT 201. Intermediate Latin I (3) I. Grammar review. Development of the four skills. Three class periods and laboratory practice each week. Prerequisite: LAT 102 or two years of Latin in high school.

- LLAT 202. Intermediate Latin II (3) II. LAT 201 continued. Three class periods and laboratory practice each week. Prerequisite: LAT 201 or three years of Latin in high school.
LaT 351. Latin Prose Composition ! (3). Latin syntax; emphasis on word order and sentence structure. Prerequisite: LAT 202.

LAT 352. Latin Prose Composition 11 (3) Developing increased ability to understand structural pecularities of classical Latin. Prerequisite: LAT 351.

LAT 361. Latin Literature I (3). Chronological survey of Latin literature into the Golden Age. Prerequisite: LAT 202.
LAT 362. Latin Literature II (3). Chronological survey of Latin literature from the Golden Age. Prerequisite: LAT 202.
LAT 470. Readings in Latin Literature (1-3) I, II. Advanced reading for students wishing to study special period or great author. Prerequisite: consent of chair of department and instructor.

LAT 480. Classical Mythology (3). Study in English of Greek and Roman myths; historical meaning and influence on life, literature, and art. No Latin required.

LAT 481. Roman Life (2). Study in English of daily life and customs in Rome as described in literature and attested by history, art, archeology. No Latin required.

LAT 485. Greek Literature in English (3) I. Thought and action of ancient Greeks as seen mainly through their literary works. For majors and minors in Latin and other languages and students wanting to fulfill humanities requirement, no Greek required. No credit for both LAT 141 and 485.

LAT 486. Latin Literature in English (3) II. Thought and action of ancient Romans as seen mainly through their literary works. Intended for majors or minors in Latin and other languages and for students wanting to fulfill humanities requirement, no Latin required. No credit for both LAT 142 and 486.

## Latin-American Studies (LAS)

LAS 401. Latin-American Studies Senior Seminar (3) Il. For seniors majoring in Latin American studies and other interested students. Examination of literature, problems of research and writing, discussion of methods. Required of Latin-American studies major.

## Legal Studies (LEGS)

LEGS 200. Perspectives of American Law (3) I, II. Thematic case study of family law, property, privacy, torts, criminal law, and other areas which explain social forces that give substance to American law, analysis and reasoning behind court decisions. Prerequisite: 30 hours.
LEGS 301. General Business Law (3) I, II, summer. Historical, political, economic background to business law. Origin, development, fundamental of contracts and sales. Economic role of contracts in facilitating goods and services. Prerequisite: junior standing.

LEGS 302. General Business Law (3) II, summer. LEGS 301 continued. Law of sales, common carrier, partnerships and corporations, and agency law. Prerequisite: LEGS 301.
L.EGS 305. Comparative Legal Philosophy (3) I. Legal philosophy and comparative law using legal systems of Western, Communist, and developing countries as models; treatment of commercial obligations and constitutional rights within different legal systems.
LEGS 310. Law and the Citizen (3) I. Major social issues of today and how judicial system shapes social policy and reform; consumer protection and other annually selected social issues being adjudicated in courts: discrimination and reverse discrimination, capital punishment, reform of legal system, problems in criminal justice system, freedom of speech and assembly, obscenity and pornography, etc. Prerequisite: junior standing or permission of instructor.

LEGS 340. Administration of Criminal Justice (3) II. Legal and sociological perspectives in which police, criminal courts, juries, judges, and correction systems operate. When possible, qualified criminologists assist in teaching.

LEGS 401. Law of Business Relationships (4) I. Legal environment of business relationships, which includes the study of contracts, sales, professional responsibility and business regulations in antitrust, securities and employment. Not open to students who have taken LEGS 301.

LEGS 402. Law of Business Relationships (4) II. Commercial law including negotiable instruments, secured transactions, bankruptcy, bailments, agency, partnership, corporation, inmurance, trusts and wills. Prerequisite: LEGS 301 or 401.

LEGS 406. International Legal Transactions (3) II. Legal problems faced by individual and corporate business persons when operating within international framework. Methods of control of multinational corporate entities, effect of doing business as national or foreign firm, and act of state doctrine relating to expropriation of assets of foreign firm.

LEGS 413. Trusts and Estates (3) I. Execution, administration, revocation of wills and trusts, guardianships, life insurance estates; insurance law relating to estates, their protection, and liability; role of wills and trusts in distribution of wealth. Prerequisite: LEGS 301.

LEGS 414. Liability Law (3) II. History and development of modern concepts in areas of personality, privacy, product and service liabilities; legal problems in advertising, responsibility to work force, and ecology.
LEGS 415. Realty Law (3) II. Creation, acquisition, transfer of realty; deeds and mortgages as security devices and their economic implications; landlord-tenant relations and economic role of leasehold interests.

LEGS 417. Law of Business Associations (3) II. Establishing relation of agency, partnership, and corporation and legal incident thereto; fundamentals of Uniform Partnership Act, Model Corporation Act; economic implications as business entities. Prerequisite: LEGS 301.

EGS 419. Private Labor Law (3) I. Federal egislation in defining roles of labor organizations and management as they interrelate in private industry; National Labor Relations, as amended, and 1964 Civil Rights Act, as amended, prohibiting discrimination in employment.

LEGS 421. Administrative Law (3) II. Regulation of business and policy implications for public; antitrust, trade practices, equal opportunity employment, environmental restraints, public utilities.
LEGS 425. Health Care Law (3) I. Publicprivate constraints in foundation health agencies; experimentation and risk assumption; agency and independent contract liability; reasonable standards of care doctrines; governmental regulations.
LEGS 429. Employment Discrimination and Affirmative Action Law (3) II. Federal laws, Ohio laws, Federal Executive Orders \#11246, federal regulations interpreting these laws and orders that govern employment decisions in hiring, firing, testing, promotion, demotion, transiers, etc.

LEGS 431. Environmental Law (3) II. History and development of modern concepts in environmental law; air, water, land, noise; problems in legal alternatives and tax incentives.

LEGS 440. Purchasing and Selling Law (3) II. A legal analysis of the state and federal laws regulating the purchasing, sale and marketing of goods and services. Regulations involving the corporate procurement and marketing functions as well as consumer rights and remedies will be emphasized. Prerequisite: LEGS 301.
LEGS 450. Hospitality Law (3) II. The legal regulations, duties, liability and relationships of persons and businesses engaged in the food service, restaurant, hotel/motel and hospitality industries.

LEGS 490. Legal Research and Drafting
Seminar (3) II. Seminar requiring use of all types of legal resources and Lexis. A series of projects to develop competencies in legal research and drafting.
LEGS 491. Studies in Business Law (1-4) II. In-depth study of selected areas. Offered to individual student on lecture basis or as seminar depending on student needs and nature of material. May be repeated to eight hours.
LEGS 495. Readings for Honors in Business Law (1-4) I, II, summer. For student in business administration who wishes to pursue supervised independent program of reading and study. Prerequisite: 3.0 accumulative GPA, consent of department.

## Library and Educational Media (LEM)

LEM 203. Introduction to Librarianship (3) I, II. Profession of librarian/information/media specialist; types of library/information/media centers, jobs performed, professional literature and organizations, history of libraries and materials. Lecture; discussion/questioning; roleplaying; practicum. C/F hrs.: 16.
LEM 301. Basic Educational Media (2) I, II, summer. Selection, operation and utilization of common classroom educational media. Lecture; discussion/questioning; problem solving; laboratory; practice/drill. Prerequisite: to follow EDFI 302. C/F hrs.: 16.
LEM 395. Workshop in Educational Media (1-2). Study, readings and development of materials to meet the needs of practitioners. Topics vary from offering to offering. May be repeated with consent of adviser. C/F hrs.: varies.
LEM 403. Reference Services and Materials
(3) I odd years, summer on demand. Basic sources of information and use in providing library/information/media services. Lecture; discussion/questioning; viewing/listening/ answering; problem solving. C/F hrs.: 25.

LEM 404. History of Books and Libraries (2) Dévelopment of books and libraries from earliest times to the present with emphasis on their roles in the preservation and communication of information. Lecture; discussion/questioning; viewing/listening/answering. C/F hrs.: 4.
LEM 405. Government Publications (3) I, odd years. Nature, use, acquisition, and organization of printed materials issued by federal, state, and local governments and international agencies. Lecture; discussion/questioning; practice/drill; laboratory. Prerequisite: LEM 403 or consent of instructor. C/F hrs.: 17.
LEM 407. Selection of Materials (3) II even years, summer on demand. Principles of selection and acquisition of print and nonprint materials. Lecture; discussion/questioning; practice/drill; practicum; role-playing; problem solving. C/F hrs.: 40.
LEM 408. Classification and Cataloging (3) | even years, summer on demand. Tools and basic procedures of technical processing and organizing of library/media/information materials. Lecture; discussion/questioning; practice/drill; problem solving; laboratory; practicum. C/F hrs.: 40.
LEM 411. Materials for Secondary School Media Centers (3) II even years, summer on demand. Print and nonprint materials and program activities for secondary school media centers. Special needs of adolescents including gifted and retarded. Lecture; discussion/questioning; viewing/listening/answering; problem solving. Prerequisite: 9 hours of LEM courses or consent of instructor. C/F hrs.: 20.
LEM 428. Advanced Utilization of Educational Media (3) I or II, summer on demand. Audiovisual materials to motivate, persuade, instruct. Selection, production, use, and evaluation. Lecture; discussion/questioning; viewing/listening/answering; problem solving; laboratory. Prerequisite: LEM 301 or consent of instructor. C.F hrs.: 16.
LEM 430. Preparation of Instructional Materials (3) I or II, summer on demand. Planning, designing, and producing instructional materials in terms of stated objectives. Laboratory; practicum; discussion/questioning; problem solving. Prerequisite: LEM 301 or 428 or consent of instructor. C/F hrs.: 22. Lab fee.

LEM 431. Visual Communication in Instruction (3) II odd years. Role of visual stimuli in teaching/learning environments. Emphasis on instructional drawing. Lecture; practice/drill; problem solving; laboratory. Prerequisite: LEM 301 or consent of instructor. C/F hrs.: 40.

LEM 433. Classroom Television (3) II even years.
Television as an integral part of the instructional process. Includes equipment operation and selection and basic production techniques. Lecture; practice/drill; viewing/ listening/answering; problem solving; laboratory. Prerequisite: LEM 301 or 428 or consent of instructor. C/F hrs.: 20.

LE:H 434. Induividualizing Instruction with Educational media (3) I even years. The application of educational technology (equipment, materiats, and instructional design techniques) to the conceptual and operational aspects of individualized instruction. Lecture; viewing/listening/answering; problem solving; independent learning/self-instruction. Prerequisite: LEM 301 or 428 or consent of instructor. C/F hrs.: 20.
LEME E3E. Selection, Maintenance and Repair of Media Equipment (3) I even years. The role of the teacher and media specialist in selection, maintenance and repair of classroom media equipment at building level. Lecture; practice/ dril; laboratory; independent learning/selfinstruction; problem solving; discovery. Prerequisite: LEM 428 or consentof instructor. C/F hrs. 20.
LEM 441. Storytelting (3) I, II, summer on dsmand. Technique and practice of storytelling in fibraries, classrooms, etc. Selection of traditional and modern literature to tell and read aloud. Lecture; practice/drill; viewing/ Istening/answering; role playing. Prerequisite: ENG 342 or consent of instructor. C/F hrs.: 8.
LEM 445. Compular Systerns for Library Services (3) On demand. Introductory study of automated library functions. Prerequisites: LEM 403 and 408. C/F hrs.: 39.
LEP㱔 450 . Media Center in the School (3) I or II, summer on demand. Orgenization and administration of school media centers. Lecture; discussion/questioning; practice/drill; problem solving; practicum; role-playing. Prerequisite: just prior to student teaching. C/F hes. 20.
1ED 455. Instructional Media in Industry, Business and Government (3) I or II, summer on demand. Selection and utilization of instructional media in non-school settings. Not available for students with credit for LEM 428. Lecture; discussion/questioning; viewing/ listening/answering; problem solving; laboratory. Prerequisitie: consent of instructor. C/F hrs. 16.
LEEM 490. Problems in Library and EducaHienal Media (1-3) 1, il, summer. Independent study of selected topics. May be repeated to six hours. Prerequisite: consent of instructor. C/F hrs.: varies.
LEII A91. Field Work (2) I, II, summer. Supervised field work in library, media center, or information service approved by department. May be repeated to 4 hours. Practicum. Prerecuisite: consent of instructor. C/F hrs.: varies. Graded $\mathrm{S} / \mathrm{U}$.
LEEf: 492. Student Teaching (1-10) I, il. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Fequired for elementary and/or kindergarten-primary certification. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs: 300 . May be repeated. Graded S/U.
LEMV 497. Student Teaching ( $1-10$ ) I, II. Classroom teaching under supervision on. full-day basis. Conferences and seminars supplement program. Required of students in secondary school or special certification progam. Fee: $\$ 5$ per credit hour, Eligibility requirements must be met C/F hrs.: 300. Miay be repeated. Graded S/U.

## Linguistics (LING)

LING 310. Introduction to Linguistics (3) II. Nature of languages and human communication; principles and procedures for analyzing and describing languages; language change and variation. Prerequisite: sophomore standing.
LING 490. Special Problems in Linguistics (2-3) On demand. Theories and applications of linguistics studies or problems in languages, literatures, psychology, speech, and other related fields. Prerequisite: LING 310.

## Management (MGMT)

MGMT 300. Introduction to Production and Operations Management (3) I, II, summer. Operations of firm; design of production systems; operation, coordination, and control of production activity; major analytical tools for management. Prerequisite: STAT 212 or equivalent.
MGMT 305. Principles of Organization and Management (3) I, II, summer. Fundamentals of organization theory; objectives, policies, decision-making, authority, management development, leadership, communication, motivation, and effective human relations as related to management principles. Not open to business majors.
MGMT 330. Procurement (3) I, II, summer. Management of procurement; process of establishing need, source selection, pricing, specifications, negotiation and bidding, quality assurance, value analysis, make or buy, procedures, legal considerations, and computer systems. Related to industrial, governmental, and institutional utilization. Prerequisite: STAT 212 or equivalent.
MGMT 360. Organizational Theory and
Behavior (3) I, II, summer. Micro-relationships in organizations; historical perspective, changing nature of organizations, and individual and overall group behavior. Prerequisite: STAT 212.

MGMT 361. Personnel Administration (3) I, II, summer. Design, organization, and operation of personnel function. Planning manpower needs, developing human resources, appraising performance, developing compensation systems, and compliance with applicable government regulations such as EEO, OSHA, and ERISA. Not open to students specializing in human resource management or to students with credit for MGMT 450 or MGMT 451. Prerequisite: MGMT 305 or MGMT 360.

MGMT 430. Materials Management (3) 1, II. Conceptual and analytical framework for material management problems. Development and evaluation in depth of materials management system components; facility location, transportation, Inventory requirements, materials handling, order processing. Prerequisite: MGMT 300 or permission of instructor.

MGMT 439. Procurement and Materials Management Problems (3) II. Capstone course integrating principles from other required courses: lectures, case discussions, simulations, and research projects. Prerequisite: MGMT 330 or 430.

MGMT 441. Production Process Design (3) I, 11. Effective design of production transformation process. Product decision, process selec tion, and capacity-related issues. Macroprocessing modes and attendant problem areas such as layout of production facilities, project management, and line balancing; microprocessing aspects such as work design and measurement. Quality control and salety. Prerequisite: MGMT 300.

WGMMT 442. Inventory Systems Planning (3) I II. Forecasting methods for output requirements. Traditional theories and techniques of inventory control. Current inventory methodology such as material requirements planning; broad range of inventory control problems. Prerequisite: MGMT 300.
MGMT 445. Production Planning and Scheduling (3) I, II. Short range production scheduling such as job/flow shop scheduling and maintenance scheduling; intermediate range scheduling such as aggregate planning and master scheduling; long term scheduling such as capacity control. Prerequisite: MGMT 300.
MGMT 449. Problems in Production and Operations Management (3) II. integrates all principles, theories, and techniques gained from previous courses into broad perspective. Case study, simulation, and team projects/ presentations. Prerequisites: any two of MGMT 441, 442 and 445.
MGMT 450. Human Resource Management (3) I, II. Concepts and skills involved in staffing, appraisal, placement, training, development, and compliance with applicable governmental regulations including EEO. Prerequisite: MGMT 360.
MGMT 451. Human Resource Management II
(3) I, II. Concepts and skills required in job evaluation, wage and salary administration, health and safety, and compliance with applicable governmental regulations, including OSHA and ERISA. Prerequisite: MGMT 360.

MGMT 461. Advanced Organization Theory and Behavior I (3) I, II. Individual and interpersonal variables which influence organizational behavior, motivation theory, personality theory, interpersonal processes, and helping relationship. Prerequisite: MGMT 360.
MGMT 463. Advanced Theory and Behavior II
(3) 1, II. Group and organizational variables which influence organizational behavior, group development and behavior, organizational design, and organizational processes. Prerequisite: MGMT 360.
MGMT 465. Organization Development Theory and Technology (3) I. Theory and technology of organization development; history, philosophy, process and major technology of organization development, the consulting process and the diagnostic methodology used in organization development. Prerequisite: MGMT 360.

MGMT 468. Organization Development Field Experience (3) II. An integrative and applied course designed to allow students to davelop and apply skills in diagnosing organizations, designing interventions and carrying out change in organizations. Prerequisite: MGMT 465.

MGMT 489. Internship (1-3) I, summer. Experience in approved business position. Student participates in seminar to formally evaluate work experience. Must be arranged in advance and approved by coordinator. Work experience must be completed within one year of acceptance into program. Not open to students with credit from any similar program in College of Business Administration. Graded S/U.

MGMT 491. Studies in Management (1-3) On demand. Selected areas not covered by existing courses but which are developing rapidly as important parts of discipline. Offered to individual on lecture basis or in seminar, depending on student need and course content. May be repeated to six hours.

MGMT 495. Readings for Honors in Management ( $1-3$ ) I, II, summer. For superior student who desires individual reading program to broaden knowledge of management literature on semi-independent basis. Prerequisite: academic standing in upper 20 percent of class.

## Management Information Systerns (MIS)

- MIS 200. Introduction to Management Information Systems (3) I, II, summer. Principles of computer systems, role of information systems in organizations; introduction to information systems theory; programming in a high-level procedural language, using microcomputers; introduction to packages, e.g., spreadsheets. Lab fee at Firelands. Credit allowed for at most one of the following courses: MIS 200, CS 100, CS 281.
MIS 360. Introduction to Systems Concepts (3) I, II, summer. Introduction to the general concept of a system and to systems theory, the system life-cycle, and system development processes; emphasis is on application to business-oriented information systems. Prerequisite: MIS 200.
MIS 371. Systems Analysis (3) I, II. Concepts and methods of systems analysis and design; includes a project involving design of a com-puter-based information system; development and management of systems departments. Prerequisites: MIS 360, CS 360, MGMT 300 or concurrent registration in MGMT 300, and admission to the degree program in MIS or consent of department.
MIS 472. Contemporary Topics in MIS (3) I, II. Logical database design; distributed information systems. Relational and entity-relationship models; data transmission, distributed system architectures, ISO 7-layer architecture. Prerequisites: MIS 371, CS 360.
MIS 479. Cases in MIS (3) I, II. Covers traditional and DSS-oriented cases exhibiting information systems; in action; includes DSS theory, prototyping methodologies and tools, and an implementation project. Prerequisites: MIS 360, MIS 371, MIS 472, CS 360, FIN 300, MKT 300, MGMT 300.

MIS 489. Internship Seminar (1-3) I. To be completed at first opportunity following suitable internship experience. Work experience to be preceded by at least 70 hours of academic credit and advanced approval by program coordinator. Not open to students with other intership credit in College of Business Administration. Graded S/U.
MIS 491. Studies in Management Information
Systems (1-3) On demand. Selected areas or contemporary problems. May be repeated. May be offered individually as well as in classes depending on student needs and nature of material. Prerequisite: approval of department.

## Manufacturing Technology (MFG)

(Additional costs for materials in all laboratory courses)

- MFG 112. Introduction to Manulacturing Processes and Systems (3) I, II, summer on demand. Technology of the manufacturing enterprise. Production materials and methods, manufacturing planning, organizing and controlling are explored. Four hours of lecture and latoratory.
$\dagger$ MFG 113. Non-Metallic Materials and Processes (3) I, II, summer on demand. Processing equipment, methods, operations, procedures, and design utilized in production of non-metallic products; raw materials sources; methods of conversion and testing. Four hours of lecture and laboratory. Lab fee.
- MFG 114. Metallic Materials and Processes (3) I, II, summer on demand. Materials properties, fabricating equipment and methods and procedures used in production of metallic products. Four hours of lecture and laboratory. Lab fee at Firelands.
†MFG 211. Manufacturing Processes II - Forming, Combining (3) Alternate years. Traditional and non-traditional forming and combining processes in plastics; extrusion; injection, compression, vacuum, fiberglass, rotation and other processes stressed. Emphasis on industrial applications. Field visits to plastics processing plants. Two hours lecture, three hours laboratory. Prerequisite: MFG 112.
$\dagger$ MFG 213. Non-Traditional Manufacturing Processes II (3) II. Alternate years. Numerical control, EDM, advanced machining and material removal. Programming, testing, and cutting with numerical controlled and standard metal cutting tools. Two hours lecture, three hours laboratory. Prerequisites: MFG 114 and AMS 100.
- MFG 214. Manufacturing Processes (3) I, II, summer on demand. Production methods, processing equipment, tooling, organization and control employed in manufacturing industries. Four hours of lecture and laboratory. Prerequisites: MFG 112, MFG 114. Lab fee at Firelands.
$\dagger$ MFG 215. Metallurgy and Metrology (3) Alternate years. Physical metallurgy and heat treatment of metals; metal structure, alloys, tool steels, tempering, and powder metallurgy. Study of instruments and machines for measuring dimensions and surface finishes of machine tools. Two hours lecture, three hours laboratory. Lab fee.
MFG 311. Machining Technology (3) I,
summer on demand. Setup and operation of precision metal processing machine tools.
Tool preparation and introduction to numerical control programming. One one-hour lecture and two two-hour laboratories. Prerequisite: MFG 114.
MFG 312. Introduction to Manufacturing
Processes and Systems (3) I, II, summer on demand. Technology of the manufacturing enterprise. Production materials and methods, manufacturing planning, organizing and controlling are explored. Four hours of lecture and laboratory. Transfer students only.
MFG 323. Wood Processing Technology (3) II. Wood and wood-composite materials, processing methods, and product applications. Four hours of lecture and laboratory. Prerequisite: MFG 112 or permission of instructor.
MFG 329. Plastics Processing Technology (3) I. Identification, properties, characteristics, and selection of plastics materials. Set-up and operation of primary and secondary plastics processing equipment. Basic mold design and construction. Two one-hour lectures and one two-hour laboratory per week. Prerequisite: MFG 112.
MFG 334. Metalic Materials and Processes(3) I, II, summer on demand. Material properties, fabricating equipment, and methods and procedures used in production of metallic products. Four hours of lecture and laboratory. For transfer students only. Obtain permission of college.

MFG 338. Materials and Metaliurgy (3) I.
Metallurgical structure and its effects on properties of ferrous and nonferrous metals and alloys. Properties of metallic and nonmetallic materials that affect their selection and performance in industrial products. Four hours of lecture and laboratory. Prerequisites: MFG 112 and MFG 114.
MFG 361. Welding Processes I. (3) I, summer on demand. Welding processes in joining metals, strength of materials in welded joints, technological developments in the welding industry. Skill emphasis on flat and horizontal using SMAC and oxy-acetylene. Four hours of lecture and laboratory. Prerequisite: MFG 114 or consent of instructor.
MFG 424. Manufacturing Processes (3) I, summer. On demand. Production methods, process equipment, tooling, organization and control employed in manufacturing industries. Four and one-half hours of lecture and laboratory. Prerequisites: MFG 112, 114. Obtain permission of college.
MFG 426. Quality Assurance (3) II. Use and selection of inspection equipment, planning and controlling of quality at strategic points in manufacturing process, and assurance of receiving, fabricating, and shipping acceptable materials. Two one-hour lectures and 2 hours of laboratory. Prerequisites: MFG 214 and MATH 115 or STAT 200, or consent of instructor.
MFG 427. Work Measurement and Analysis (3) I. Design and measuement of work and techniques of setting work standards to effectively use tools, equipment, and manpower. Work measurement and application of principles of motion economy in practical situations. Two one-hour lectures and 2 hours of laboratory. Prerequisite: MFG 214 or consent of instructor.

## MFG 428. Automation and Computer Inte-

 grated Manufacturing. (3), II. Automation and computer integrated manufacturing in industrialized cultures, including ergonomics, planning, organization, management, numerical control, computer control, robotics, computer-aided-design and computer-aided-manulacturing. Prerequisites: MFG Core, CS 101; or the consent of the instructor.MFG 451. Casting Processes (3) I odd numbered years. Foundry operations in industry. Pattern making, core making, molding, melting, furnace operation, pouring of metals, and cleaning of castings. Four hours of lecture and laboratory. Prerequisite: MFG 114.
MFG 458. Machine Tool Processes II (3) II even numbered years, summer on demand. Advanced precision metal machine tool processes, production machines, and related tooling problems. One one-hour lecture and two two-hour laboratories. Prerequisite: MFG 311.

MFG 459. Ceramics Processing Technology (3) on demand. Materials and processing methods employed in the ceramic industries. Materials selection, batch and body making, basic mold design and construction. Four hours of lecture and laboratory. Prerequisite: MFG 112 or consent of instructor.
MFG 461. Sheet Metal Forming and Fabrication (3) II odd numbered years. Methods of pattern development, forming and fabrication methods used in sheet metal processing. One one-hour lecture and two two-hour laboratories. Prerequisite: MFG 114.

RFG 463．Weiding Processes il（3）II，summer on denand．Welding of metals using oxyacet－ ylene，electric arc，MIG and TIG processes including welding metallurgy；weld testing； design and construction of welded items；new technology development in welding．Skill emphasis on horizontal，vertical and overhead welding．Four hours of lecture and laboratory． Prerequisite：MFG 361.
MFG 490．Pioblems in Manulacturing Tech－ nology（ $1-3$ ）On demand．For advanced stu－ dents wantirig to conduct intensive study of selected problems in manufacturing technol－ ogy．Prerequisite：consent of college．Graded SIU．

## Markeling（MKT）

仑िसT 300 ．Principles of Marketing Manage merit（3）i， 11 ，summer．An introduction to the dis－ cipline．Topics include buyer behavior；demand forecasting；market research and information systems；product，promotion，pricing and dis－ tribution strategies；strategic planning and con－ trol systems．Prerequisites：any ECON course and any ACCT course and STAT 200 or PSYCH 270 or SOC 369 or MATH 115 or MATH 127 （or a Math placement score beyond MATH 127）or any MATH course equal to or higher in level than MATH 124.

6要䢸 400．Tepics in Marketing（1－3）I，II Selected areas not covered in depth by existing courses but which are developing as important part of marketing．Offered on lecture basis or in seminar format，depending on student demand and course content．Typical topics，which may vary from semiester to semester，could include professional selling，non－profit，hospitality and services marketing；demand analysis and fore－ casting，distribution systems；industrial market－ ing；product（brand）management；and pricing strategies．May be repeated to 6 hours．Prerequi－ sites：depending upon course content，prerequi－ sites in addition to MKT 300 may be required．
喏KT 402，Duyer Dehavior（3）I 11 ，summer． Pertinent theoretical and empirical findings about buying（consumer，industrial and insti－ tutionall behavior；topics include attitude for－ mation and change；motivation；personality； social／cultural forces；arid concepts under－ lying strategies of market segmentation and positioning．Prerequisite：MKT 300.

县长 410 ．Principles of Advertising and Pro． motion（3）1， 1 ，summer．Theory and decision making in advertising and promotion．Topics relate to the promotional mix from a man－ ager＇s polmt of view，including decisions about promotional campaign design，budgeting． message and media selection，and measure－ ment of effectiveness．Prerequisite：MKT 300.
Wint al1．Crealive Siralegies and Tactics in Adrertising（3）1，11．The creative process applied to advertising and promotion．Theory and practice of creative aspecis of advertising strategy development and tactical implemen－ tation；copy，layout，and production．Prereq－ Uisites：MKT 300 and MKT 410.

MKT 专12．Managerial Probiems in Advertising （3）I，II．Evaluating opportunities for effective advertising program development and imple－ mentation Experience will be gained（typically via cases，major campaign development exer－ cises，or focused projects）in making decisions regarcing the setting of objectives；campaign design，budget allocation，message and media selection．Prerequisites：MKT 300 and
NKT 410.

MKT 420．Marketing Research（3）I，II，summer． Marketing research as a process，tool，and source of information relevant to marketing decision making．Examines marketing research methods and techniques used in the collection and interpretation of primary and secondary data．Prerequisites：STAT 212 and MKT 300.

MKT 421．Advanced Marketing Research（3）I， II．Application of research principles to solve marketing problems．Research projects are designed，implemented and completed．Topics include：sampling；sample design；questionnaire construction，data collection，tabulation and analysis．Prerequisites：STAT 212 and MKT 300 and MKT 420.
FiKK 430．Retail Management（3）I，II，summer． Evolution，organization，and operation of retail－ ing；a managerial emphasis is maintained．Pre－ requisite：MKT 300.
MKT 436．Retail Merchandising（3）1，11，summer． Merchandising functions：buying，selling． Merchandise planning，budgeting，procuring， pricing；sales promotion，inventory evaluation， cost analysis，and control．Prerequisites：MKT 300 and MKT 430.
© MKT 442．Sales Management（3）I，II，summer． Theory，principles，and practices of selling and sales force administration for manufacturing and wholesaling enserprises．Topics in－ clude recruiting；training；compensation；sales force size and design；selling techniques；and performance appraisal．Prerequisites：MKT 300 and MKT 402.

MKT 460．Strategic Marketing（3）I，II．Stra－ tegic planning is explored in terms of market－ ing strategy development per se and its rela－ tionship to corporate－wide planning．Topics include：product／market planning strategies； and strategy－related tools and mode．Central to the course are case studies and／or computer simulation games．Prerequisites：MKT 300 and MKT 402 and MKT 420.
MKT 489．Marketing Internship（1－3） 1 ，II， summer．Work in approved business position； credit determined by quality and extent of work experience．Not open to freshmen and sophomores，or to students with crediy for ACCT 489 or BA 489 or MGMT 489．Prerequi－ sites：Nine hours of MKT coursework and permission of department chair．Graded S／U．

## MKT 495．Reading for Honors in Marketing

（1－3）I，II．For superior student who wishes individual reading program or independent research experience with guidance from an appropriate advisor．Prerequisites：academic standing in upper 20 percent of class and permission of instructor and senior standing．

## Mathematics and Statistics （MATH）

Prerequisites listed for courses are strictly en－ forced．Those listed for 300 and 400 level courses assume a grade of $A, B, C$ or $S$ has been earned in the prerequisite courses．Ex－ ceptions may be made only with the approval of the insiructor．
The following are the principal sequences of courses，portions of which are used for program and college group requirements．There are various entry points，at different levels of pro－ ficiency，into each of these sequences．See ＂Mathematics Placement＂below

MATH 130，131；232， 233
MATH 128，131；232， 233
MATH 127，129；131，232， 233
MATH 124， 125
Program requirements are often stated in terms of completing a certain course．So stu－ dents will enser and leave these sequences at different points depending on their preparation
and needs．For example a B．S．degree in the College of Arts and Sciences requires com－ pletion of MATH 131．Some programs and col－ lege group requirements may be satisfied，in part，using MATH 115， 116 or 121.

## Advanced Placement Iniormation

Students who have taken a calculus course in high school may be eligible to enter the calcu－ lus sequence（MATH 131，232，233）at MATH 232 or 233 ，and may also be eligible for credit for some of the courses in this sequence．These students should take the Calculus AB or Calcu－ lus $B C$ advanced placement examinations from the College Entrance Examinations Board given at their high school．The department also gives an advanced placement examination in calcu－ lus for those students who do not have these examinations available，or who did not score high enough to earn credit．Students should register for MATH 131，pending examination results．

## Mathematics Placement Information

The department administers placement exami－ nations to aid students in selecting an approp－ riate entry point into one of the sequences of courses，or to determine if remedial work is ne－ cessary．Placement testing and advice on course selection are available at pre－ registration，and at other times in the depart－ ment office： 450 Mathematical Sciences Build－ ing．These entry points are：

MATH 115 or 124 of 127 or 128
MATH 130
MATH 131
In addition to selecting an appropriate entry point，the student should attempt to select the proper course or sequence of courses to serve their immediate needs，future plans，and possi－ ble changes in these plans．Since mathematics courses are involved in many major，minor，and group requirements，the various possibilities should be taken into account．In particular，to ensure that future options are kept open，stu－ dents who are undecided should select a pre－ calculus sequence leading to MATH 131.
In selecting a sequence of courses，students should read carefully the catalog descriptions of each of the listed courses．Note，for example， that one should not take both MATH 127 and 128，nor both MATH 128 and 130.

## Entering Beginning Courses

To enter any of the beginning mathematics courses，MATH 115 or 124 or 127 or 128，a stu－ dent should have two years of high school al－ gerbra，one year of geometry AND a satisfactory placement exam score．If a student does not meet these minimal level requirements，the de－ partment offers two remedial courses，MATH 095 and 096，which contain material that the student should learn to achieve she minimum eniry level for beginning mathematics courses． Depending on their placement exam scores， these students would take EITHER MATH 095 or 096．MATH 096 is meant for those students who have fewer deficiencies than those who need to take MATH 095.

MATH 095 and 096 are designed solely to help students gain enough knowledge to be successful in their beginning mathematics courses．Because students＇needs vary so widely，these courses are taught on a self－study basis with individualized testing and tutoring， augmented with lectures．However it is required that certain deadlines must be met during the semester in order to receive a satistactory grade．Credit for MATH 095 and 096 cannot be applied towards any baccalaureate degree pro－ gram．It is highly unlikely that a student without the minimal mathematics entry level require－ ments will pass a beginning mathematics
course. Furthermore, in covering the material in the beginning mathematics courses, it will be assumed that the students have mastered the background material covered in MATH 095 and 096.

MATH 095. Intermediate Algebra (5) I, II. A remedial course designed solely to bring a student up to the minimal level necessary to enter a beginning mathematics course. Credit for this course cannot be applied towards any baccalaureate degree program. Please read "Entering Beginning Courses" for the distinction between MATH 095 and 096, and for a description of who should take this course. Topics include: polynominals, factoring and rational algebraic operations; linear equations, quadratic equations, systems of linear equations; graphing; inequalities and sets; integer exponents and radical expressions. Additional fee. Graded S/No Record.

- MATH 096. Intermediate Algebra (3) I, II, summer. A remedial course designed solely to bring a student up to the minimal level necessary to enter a beginning mathematics course. Credit for this course cannot be applied towards any baccalaureate degree program. Please read "Entering Beginning Courses" for the distinction between MATH 095 and 096, and for a description of who should take this course. Topics include: polynominals, factoring and rational algebraic operations; linear equations, quadratic equations, systems of linear equations; graphing; inequalities and sets; integer exponents and radical expressions. Additional fee. Graded S/No Record.
If MATH 115. Introduction to Statistics (3) I, II, summer. Description of data, binomial and normal distributions, estimation and testing of hypotheses for means and proportions. Prerequisite: See "Entering Beginning Courses."
IIMATH 116. Introduction to Statistics II (3) II. MATH 115 continued. Nonparametric methods; linear regression and correlation; analysis of variance. Prerequisite: Grade of $C$ or higher in MATH 115 or consent of instructor.
- MATH 121. Topics in Modern Mathematics (3) I, II. Language of sets, introductory logic, number systems, other topics. Not intended for improvement of algebra skills. Students needing additional preparation in algebra should take MATH 095 or MATH 096. Not open to students with credit for any college mathematics course. Prerequisite: one year of high school algebra.
I MATH 124. Basic Calculus I (4) I, II, summer. Polynomials, factoring radicals and rational exponents; linear and quadratic equations and inequalities; graphs; differential calculus for rational functions with applications. Not intended for students in physical sciences. Not open to students with grade of C or better in MATH 131. MATH 124-125 is a concept-oriented calculus and matrix algebra sequence for students in social sciences, business and other areas who are not eligible for MATH 131, but who need preparation for mathematically oriented courses in their fields. Prerequisite: See "Entering Beginning Courses,"
If MATH 125. Basic Calculus II (4) I, II, summer. Integral calculus, exponential and logarithm functions, partial derivatives, and matrix algebra. Prerequisite: C or higher in MATH 124.
\$ MATH 127. Elementary Functions (3) I, II, jummer. Polynomials, factoring, radicals, rational exponents; linear and quadratic equations and inequalities, applications; polynomial, exponential and logarithmic functions and their graphs; systems of equations; theory of equations. Not to be taken if credit for MATH 128 or 130 has been received. Prerequisite: See "Entering Beginning Courses."

I $\triangleleft$ MATH 128. Precalculus Mathematics (5) I, II. Polynomials, factoring, radicals, rational exponents; linear and quadratic equations and inequalities, applications; polynomial, exponential, logarithmic and trigonometric functions and their graphs; trigonometric equations; systems of equations; complex numbers; theory of equations. Not to be taken if credit for either MATH 127, 129 or 130 has been received. Prerequisite: See "Entering Beginning Courses."
$\bullet$ MATH 129. Trigonometry (2) I, II. Trigonometric functions, graphs, identities, equations, inverse functions, solution of triangles, complex numbers. Intended for students who have good preparation in algebra and geometry but lack knowledge of trigonometry. Not to be taken if credit for MATH 128 or 130 has been received. Prerequisite: C or higher in MATH 127 or two years of high school algebra, one year of high school geometry, and satisfactory placement exam score.
If MATH 130. Precalculus Mathematics (3) I, II, summer. Theory of equations, coordinate geometry, exponential, logarithmic, and trigonometric functions, applications. Overlaps with content of MATH 128 and 129. Not to be taken if credit for MATH 128 or 129 has been received. Prerequisites: two years of high school algebra, one year of high school geometry, and a satisfactory placement exam score.
If MATH 131. Calculus and Analytic Geometry ( 15 ) I, II, summer. Differential and integral calculus including applications of the logarithmic and exponential functions. The MATH 131-232-233 sequence is a traditional calculus course for well-prepared students and is prerequisite for all advanced mathematics and statistics courses. Prerequisites: (1) two years of high school algebra, one year of geometry, one-half year of trigonometry, ACT math score of 24 or higher, and satisfactory score on departmental placement test; or (2) grade of C or higher in MATH 128, 129, or 130.

- MATH 222. Discrete Mathematics (3) I, II. Sets, functions, relations, algorithms, induction, elementary combinatorics, graph theory and propositional calculus. A student cannot receive credit for both MATH 222 and 322. Prerequisite: MATH 125 or 131.

MATH 226. Mathematics of Finance (3) I. Simple and compound interest, ordinary annurities, amortization, sinking funds, bonds, life annuities, life insurance. Prerequisite: grade of C or higher in MATH 125 or 131.
$\$$ MATH 232. Calculus and Analytic Geometry II (5) I, II, summer. MATH 131 continued. Techniques of integration, sequences and series, vector valued functions, analytic geometry. Prerequisite: Grade of C or higher in MATH 131.

- MATH 233. Calculus and Analytic Geometry III (3) I, II. MATH 232 continued. Partial derivatives, multiple integrals, introduction to differential equations, applications. Topics from differential equations. Prerequisite: grade of $C$ or higher in MATH 232.
***MATH 241. Mathematics for Elementary Teachers I (3) I, II, summer. Numeration systems, set theoretic development of the whole number system, systems of integers and rationals, number theory. Open only to elementary and special education majors. Prerequisite: satisfactory placement exam score.
***MATH 242. Mathematics for Elementary Teachers II (3) I, II, summer. MATH 241 continued. The real number systems, informal geometry, basic probability. Open only to elementary and special education majors. Prerequisite: grade of C or higher in MATH 241.
> **MATH 243. Mathematics for Elementary
> Teachers (4). A fast-paced treatment of MATH 241 and 242 for well-prepared, mathematically inclined students only. Open only to elementary and special education majors. Prerequisite: placement in MATH 243 by placement exam and permission of instructor. Not open to students who have taken MATH 241 or 242.
- MATH 247. Fundamentals of Statistics
(3). Discrete probability models, sampling theory, solving problems in statistical inference using nonparametric techniques. Prerequisite: MATH 125 or 131.


## MATH 295. Honors Course in Mathematics

 (1) Series of lectures by various department members surveying major areas of mathematics. To be taken after completion of MATH 232. Prerequisite: invitation of department.MATH 311. History of Mathematics (3) II (1985 and alternate years). History through calculus. Prerequisite or corequisite: MATH 332.

MATH 313. Elementary Mathematical Logic (3) I, II (1986 and alternate years). Propositional and predicate logic; nature of mathematical proof; applications to mathematics and computer science. Not open to students with credit for CS 313.
MATH 322. Discrete Mathematics (3). I, II. Sets, functions, relations, algorithms, induction, elementary combinatorics, graph theory, the propositional calculus and other topics. A student cannot receive credit for both MATH 222 and 322. MATH 322 is recommended for majors of minors in mathematics. Prerequisite: MATH 232 or consent.

- MATH 332. Elementary Linear Algebra (3) I, II. Systems of linear equations, vectors, matrices, determinants, linear transformations, vector spaces, and applications. Techniques and some proofs. Prerequisite: MATH 232.
- MATH 337. Differential Equations (3) I, II.

Equations of first, second, and higher order; linear equations with constant coefficients; series solutions; Laplace transform; numerical methods and applications. Prerequisites: MATH 233 and MATH 332.

MATH 339. Fundamental Concepts of Modern Algebra (3). Introduction to modern algebra. Elementary properties of groups, rings, integral domains, and fields. Divisibility properties of integers, construction of rational numbers. Prerequisite: MATH 332 or consent of instructor.
MATH 350 . Numerical Calculus (3). Basic numerical algorithms for computer use, polynomial interpolation, quadrature, solution of nonlinear equations and linear systems. Not open to student with credit for CS 350 . Prerequisites: CS 101, MATH 233, and MATH 332.

MATH 395. Honors Course in Mathematics (1). A choice of two experiences: (1) a problem solving seminar, or (2) use of the mathematics library to conduct a search for articles related to a selected topic. Prerequisite: invitation of department.

MATH 400. Topics in Mathematics (3) Selected topics in mathematics not included in existing courses. May be taken twice for credit. Prerequisite: consent of instructor.

MATH 401. Number Theory (3). Divisibility, prime numbers, congruences, prime modulus, quadratic residues, quadratic reciprocity law, numerical functions, factorization of integers, elementary diophantine equations, and applications. Prerequisite: MATH 339.

MATH AO2 Mostom Geometry (3) I. Axiomatic development of neutral and Eucidean geometry. Introduction to non-Euclidean geometry Prerequisite: MATH 339.
mathit 403. Modem Algebra : (3) I. Topics from groups, normal subgroups, homomorphisms, theorems of Lagrange and Cayley, rings, ideals, Euclidean domains, abstract vector spaces. Prerequisite: MATH 322 and 332 or consent.

能ATH 494. Whodern Aigebra il (3). Continuation of topics from MATH 403. Prerequisite: MATH 403.

MATH t05. Projectue Geometry (3). Algebraic techniques to study projective properties of geometric configurations and plane curves, principle of duality, projective transformations, cross ratios, intersection theory, and classical theorems. Prerequisite: MATH 335.
**PATH 4th. Advanced Mathematics for Elementay Teachers (5) Il. History of elementary mathematics, infinite sets, non-Euclidean geometry, and other selected topics. Prerequisite: grade of C or better in MATH 242 or 243.

What 4x. Foumdations of wathematics ! (3)
l. Logic; set theory fincluding iniormal dis cussion of infinite sets and cardinais); axiomatic method (including models, consistency, and independence). Prerequisite: MATH 339 or consent of instructor

MATH 422. Foundations of Mathematics If (3) Topics in the foundations of mathematics Prerequisite: MATH421,313, or consent of instructor.

MATH A26. Mathematics of mile Contingencias (3) It. The mathematics of pensions and life annuties, single life functions, measurement of mortalty, net ievel premium reserves mutitiffe funcitons, joint life probabilities, last survivor and general multi-life functions. Prerequisite: MiATH 226 or consent of instructor.
 sequences and series, uniform convergence, improper integrals, parial derivatives, Jacobians, change of variables, and optimization. Prerequisite: MATH 233.

HATH 432. Linear Agebra with Applications (3) h. Matices and vector spaces, eigenvalues orthogonal matrices, positive definite matrices, quadratic forms. Possible applications: differential equations, Markov chains, least squares. Prerequisite: MATH 332 or consent of instructor.

HATH 434. Vector Calculus (3) II (1986 and allemate years). Differential calculus of vector functions, irverse and implicit function theorems line and surtace integrals, theorems of Green Gauss, and Siokes. Prerequisites: MATH 233 and 332

MATH 437. Qualliative Theory of Differential Equations (3) / (1985 and alternate years) Existence theorems for linear and nonlinear equations, systems of first order linear equations nontinear equations and stability, appications. Prerequisite: MATH 337.

Mati 439. Bonndary vaue Problems of Diflerenial Equations (3) !, (1986 and alternate years). Boundary value problems, SturmLiouville theory, singular boundary conditions, Fourier series, partial differential equations of mathematioal physics, e.g., heat, wave, and Laplace's equation in one and several dimensions. Applications. Prerequisite: MATH 337.

MATH 441. Probability and Statistics I (4) I, II. Probability spaces, discrete and continuous random variables and their distributions expected value, and Central Limit Theorem, sampling distributions, estimation of param eters, and tests of hypotheses. Prerequisite or corequisite: MATH 233.

MATH 442. Probability and Statistics II (4) II. MATH 441 continued. Maximum likelihood estimation, Neyman-Pearson lemma, most powerful tests, regression analysis, nonparametric statistics. Prerequisites: MATH 441 and 332.

MATH 445. Applied Probability (3) ! (1986 and alternate years). Probability models for applications, finite Markov chains, queueing systems, Poisson process, applications to genetics, diffusion, computer systems. Prerequisites: MATH 332 and 441.

MATH 451. Numerical Analysis (3) I. 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, matrix inversion, selected algorithms programmed for solution on computer. Prerequisites: MATH 332 and programming expeience. Not open to students with credit for CS 451.

MATH 452. Numerical Analysis (3) II. Compu tation of eigenvalues and eigenvectors of matrices, least squares and approximation numerical solution of initial value and boundary value problems in ordinary differential equations. Topics from: spline, trigonometric and Chebychev approximation, numerical solution of partial differential equations, and optimization techniques. Prerequisites: MATH 337 and programming experience. Not open to students with credit for CS 452

MATH 461. Introduction to Complex Analysis (3) Il (1985 and alternate years). Complex numbers, complex valued functions, differentiation of complex valued functions, analytic functions, power series, integration, contour integrals, residues and poles, conformal mapping, applications. Prerequisite: MATH 233 and 332 or consent of instructor

MATH 465. Introduction to Real Analysis (3) I. Sets, functions, and properties of real numbers, numerical sequences and series, imits, continuity, uniform continuity for real functions, differentiation and Riemann integration. Prerequisite: MATH 233.

MATH 470. Readings in Mathematics (1-3) independent study of a topic of particular interest to an advanced student under the direction of a faculty member. May be repeated. Prerequisite: consent of instructor and chair of department.
MATH 489. Internship (1-3). Internship for majors in mathematics or statistics in the cooperative education program. Written report required. May be repeated with permission. Does not apply towards major or minor. Prerequisite: permission of department Graded S/U

MATH 495. Honors Course in Mathematics (1). Directed study in some field of mathematics; preparation and presentation of research topic. To be taken concurrently with wo or more hours of MATH 470. Prerequisite: invitation of department.

## Medical Record Administration (MRA)

MiRA 101. Introduction to Health Professions
(1) I, II. Survey of health professions and function of health care personnel within these professions. Graded S/U.

MRA 300. Topics in Medical Record Adminis tration (1-3) On demand. Courses which are being considered for offering on a regular basis. May be repeated.
MRA 301. Medical Terminology i (2) I, II. Vocabulary and terms used by medical personnel; prefixes, suffixes, word roots and their combining forms, usage and spelling; specialized terms by body systems. Prerequisite sophomore standing.
MRA 395. Workshop-Current Topics (1-3) I, II, summer. May be repeated. Special topics or issues in the field of medical records, primarily of current or unique interest to students and/or practitioners. Prerequisite: permission of the instructor.
MRA 400. Topics in Medical Record Administration (1-3) On demand, Courses which are being considered for offering on a regular basis. May be repeated.

MRA 401. Miedical Record Science I (3) I introduction to history and development of patient information systems. Analysis of medical record development, contact, format, use quantitative and qualitative evaluation. Study of health care information retention, storage and retrieval systems. Prerequisite: enrollment in MRA program and junior standing.

MRA 402. Medical Record Science II (3) II. Study of nomenciatures, disease and operation classification systems, and use of manual and computerized indexing and registry systems. Prerequisites: MRA 301 and MRA 401; enrollment in MRA program and junior landing.
MRA 403. Medical Record Science ill (3) I. Medical staff functions and requirements, including peer review and hospital wide quality assurance programs. Analysis of record systems in a variety of health care settings. Prerequisites: MRA 401 and MRA 402, enrollment in MRA program and senior standing.

MRA 404. Medical Record Science IV (3) II Planning, staffing, actuating and controlling a medical care information system by use of systems analysis techniques. Application of principles through management processes Prerequisite: enrollment in MRA program and senior standing.

MRA 405. Legal Aspects of Medical Records (2) !. Medico-legal aspects of medical records. Analysis of the medical record as a legal document, confidentiality and release of medical information. Prerequisite: current enrollment in LEGS 425, enrollment in the MRA program and senior standing.

MRA 406. Health Information Statistics (2) II. Computation, presentation and analysis of related medical statistics, with definitions, sources, collection and reporting systems. Vital statistics. Introduction to research methodology. Prerequisite: MATH 115, or SOC 369 or PSYC 270, enrollment in MRA program, and junior standing.
MRA 407. Research Design and Nethodology (2) I. Application of research techniques to study specific disease entities. Prerequisite: enrollment in MRA program and sentor standing.

MRA 408. Computers in Health Care (3) I. Use of computers in health care; applications to clinical lab, radiology, diagnosis, accounting and administration. Emphasis on medical record applications and systems approach to implementation. Data security, current technology and future practice. Prerequisite: MIS 200, enrollment in MRA program and senior standing.
MRA 410. Seminar - Trends in Medical Record Administration (2) II. Discussion of topics, trends, constraints affecting the profession. Supplemented by directed practice experience, articles, and case studies. Prerequisites: enrollment in MRA program and senior standing.
MRA 411. Medical Terminology II (2) I. A continuation of MRA 301 with a more indepth study of vocabulary and terms used by medical personnel, including pefixes, suffixes, . word roots and their combining forms, usage and spelling; specialized terms by body systems. Prerequisite or corequisite: MRA 301 and enrollment in MRA progam.
MRA 413. Fundamentals of Medical Science I (3) I. Disease processes affecting the human body are studied in relation to etiology, significant pathology, signs and symptoms, methods of diagnosis and treatment, complications and prognosis. Prerequisites: BIOL 331 and BIOL 332;: MRA 301; enrollment in MRA program and senior standing.
MRA 414. Fundamentals of Medical Science II (3) II. Continuation of MRA 413 by body systems: Prerequisites: MRA 413, enrollment in MRA program and senior standing.
MRA 470. Independent Study in MRA (1-3) I, II, summer. May be repeated. For advanced student to design and work independently on a study or special project in area of interest. Prerequisite: faculty sponsor and permission of the program director.

- MRA-486. MRA Laboratory I (2) I. Application of medical record theory to actual practice through a supervised learning experience in the medical record laboratory designed to give MRA students an opportunity to acquire basic procedural competencies presented in MRA 401., Prerequisite: enrollment in MRA 401.
MRA 487. Directed Practicum I (2) II. Practical medical record experience in a medical record department of a hospital under direct supervision. Emphasis on acquiring procedural competencies. Prerequisite: MRA 486.

MRA 488. Directed Practicum II (2) I. Practical medical record experience in a medical record department in a variety of settings under direct supervision. Emphasis on' acquiring procedural competencies. Prerequisite: MRA 486 and 487.
MRA 489. Directed Practicum III (6) II. Practical medical record experience under direct supervision designed to give the MRA student experience in managing a medical record départment in a health care facility; exposure to the daily organization and management of a medical record department. Prerequisites: MRA 486, 487 and 488.

## Health Information Technology (MRT)

†MRT-100. Medical Record Science I (4) I. Historical development of medicine, hospitals, and medical record profession. Basic functions if medical record department; filing, numbering systems; retention; forms design and control; standards for, development of medical records; analysis of record deficiencies; records in ECF's. Three hour lecture and two hours of assigned lab. Prerequisite: permission of instructor.
†MRT 101. Medical Terminology (3) I. Vocabulary and terms used by medical personnel; prefixes, suffixes, word roots, and their combining forms, usage, spelling, and pronunciation; specialized terms within body systems and medical specialties. Two hours lecture and two hours of assigned lab.
†MRT 102. Medical Transcription (3) II. Skill in use of transcription equipment and expansion of medical terminology and typing accuracy and speed. Practice in typing medical, operative, clinical summary, laboratory, history, physical, and admission reports. One hour lecture and' five hours lab. Prerequisites: MRT 101 and typing proficiency as indicated with a grade of - "C" or better in BUSE 111 or equivalency.
$\dagger$ MRT 112. Medical Record Science II (3) II. Coding, classifying, and indexing data according to ICD-9-CM; registers and indexes generated and requirements for their maintenance. Abstraction of medical data from patient records and introduction to computerization. Two hours lecture and two hours of assigned lab. Prerequisite:
†MRT 201. Medical Record Directed Practice (2) I, II. Application of medical record theory to actual practice through a supervised learning experience in an assigned clinical setting under the instruction of a professional medical record practitioner. 24 hours lab. No remuneration; see policy on transportation and uniforms. May be repeated up to 4 credits. Prerequisite: permission of instructor.
†MRT 204. Pathophysiology (4) II. Disordered human functions and systems; language, causes, and types of diseases; diseases of the body systems, each described in terms of its etiology, pathology, symptoms, and treatment. Four hours lecture. Prerequisites: BIOL 104, 331, and 332.
†MRT 211. Medical Record Science III (4) !. Health, hospital, statistics; medical care evaluation studies and utilization review with PSRO and JCAH standards; hospital libraries, tumor registries, and admitting procedures; principles and roles in management; problem oriented medical record; and current topics in medical records. Three hours lecture and two hours assigned lab. Prerequisite: MRT 112.
$\dagger$ MRT 212. Medical Reciord Science IV (1) II. The medical record as legal document; confidential communication; consents and authorizations for release of medical information. Two hours lecture, five weeks. Will immediately precede MRT 201. Prerequisite: MRT 211.
†MRT 290. Topics in Medical Record Technology (1-3) I, II. Medical record technology projects, workshops, and seminars dealing with current topics not covered in existing courses. Prerequisite: permission of instructor.
$\dagger$ MRT 291. Field Experience (3) I, II, summer.
Fifteen weeks of paid field work in a medical record department under supervision of Registered Record Administrator or Accredited
Record Technician. Prerequisite: permission of instructor.

## Medical Technology (MEDT)

*Duration of these courses may vary slightly from hospital to hospital.
MEDT 201. Orientation to the Profession of Medical Technology (1) I, II. Profiessional aspects of medical technology as part of health team; ethics, responsibilities, and laboratory administration. One three-hour laboratory/ discussion.

MEDT 402. Orientation and Management (1)
I or II or summer according to sequence. Orientation to the hospital departments and laboratory procedures. Laboratory supervision and management. Prerequisite: Admission.to hospitalbased medical technology program.
MEDT 403. Applied Clinical Microbiology (9) I or II or summer according to sequence. Fourteen weeks of supervised practical experience in identification of bacteria, fungi and parasites in a hospital laboratory setting.*
MEDT 404. Clinical Serology (2) I or II or summer according to sequence. Three weeks of supervised experience in clinical applications of cellular and humoral immunity as diagnostic procedures.*
MEDT 405. Applied Clinical Hematology (5)।, or II, or summer Eight weeks of supervised practical experience in hematologic methods, coagulation, and blood cell morphology in a hospital laboratory setting.*
MEDT 406. Applied Clinical Chemistry (11) I or II or summer according to sequence. Seventeen weeks of supervised practical experience in manual and automated methods in clinical chemistry, toxicology and endocrinology in a hospital setting.*
MEDT 407. Blood Bank (5) I or II or summer according to sequence. Seven weeks of supervised practical experience in analyzing the immune mechanism with emphasis on procurement of blood for transfusion in a hospital laboratory setting.*
MEDT 411. Diagnostic Immunology I (1) I or II or summer according to sequence. Theory of clinical immunology related to humoral and cellular immunity in health and disease states. Two lectures. Prerequisites: BIOL 439 and permission of instructor.

## MEDT 412. Diagnostic Immunology I

Laboratory (1) I or II or summer according to sequence. Laboratory application and testing related to humoral and cellular immunity in disease states. One three-hour laboratory. Prerequisites: BIOL 439 and permission of instructor. Lab fee.
MEDT 413. Immunohematology I (4) I or il or summer according to sequence. Theory of human blood groups, compatibility testing, detection and identification of antibodies, blood collection/storage, management of transfusion service. Four lectures. Prerequisites: BIOL 439 and permission of instructor.
MEDT 414. Immunohematology I Laboratory (1) I or II or summer according to sequence. Laboratory application and testing of human blood groups, compatibility testing, detection and identification of antibodies. Two three-hour laboratories. Prerequisites: BIOL 439 and permission of instructor. Lab fee.
MEDT 415. Immunohematology II (3) II or summer. MEDT 413 and MEDT 414 continued; emphasis on a clinical application. Prerequisites: MEDT 413 and MEDT 414 with a grade of $C$ or better and permission of instructor. Lab fee.
MEDT 416. Clinical Immunology II (2) II or summer. Clinical laboratory experience regarding testing and application of diagnostic immunology (MEDT 411 and 412). Prerequisites: grade of C or higher in MEDT 411 and 412 and permission of instructor: Lab fee
MEDT 421. Hematology I (2) I orlll or summer according to sequence. Origin, regulation; morphology and function of blood cells in health and disease. Congenital and acquired hematologic aberrations. Two lectures. Prerequisite: BIOL 332 or equivalent and permission of instructor.

MEDT 422. Hematology I Laboratory (2) I or II or summer according to sequence. Diagnostic laboratory procedures applied to qualitative and quantitative evaluation of blood cells. Prerequisites: BIOL 332 or equivalent and permission of instructor. Lab fee.

MEDT 423. Hematology |I (1) I or II or summer according to sequence. Mechanism of hemostasis in health and hemorrhagic and thrombotic disease. Blood cell morphology. One lecture and one two-hour laboratory.
Prorequisite: MEDT 421 and 422. Lab fee.
MEDT 424. Hematology ill (3) If or summer. Continuation of Phase I hematology sequence with emphasis on clinical application and hospital laboraiory instrumentation. Five weeks full-time instruction and practice. Prerequisites: grade of C or better in MEDT 421, 422, and 423 and permission of instructor. Lab fee.
MEDT 931. Clinical Microbiology I (3) II, or summer. Isotation identification and detailed description of clinically important bacteria. Microbial etiology of disease; methods of prevention and control. Three lectures. Prerequisites: BIOL 313 or equivalent and permission of instructor.
 (2) I or $\|$ or summer according to sequence. Diagnostic microbiology laboratory procedures. Methods of isolation and identification of clinically significant bacteria. Prerequisites: BIOL 313 or equivalent and permission of instructor. Lab fee.
meDT 433. Cinical Bacteriology 11 (4) il or summer. MEDT 431 and 432 continued; emphasis on clinical application and identification of clinically significant bacteria. Nine weeks fulltime instruction and practice. Prerequisites: BIOL 426, grade of "C" or better in MEDT 431 and 432, and permission of instructor. Lab fee.
MEDT 43A. Cinical Parasitology (2) I or II or summer according to sequence. Parasitic diseases of man; methods of detection, isolation, and idenitification of clinically significant human parasites. Lecture and lab. Prerequisites: BIOL 405, BIOL 313 and permission of instructor. Lab fee.

MEDT 435. Clinical Mycology (2) I or Il or summer according to sequence. Clinically significant fungi; methods of detection, isolation and identification, Lecture and lab.
Prerequisites: BIOL 313 or equivalent and permission of instructor. Lab fee.
鲳EDT 4at. Cilnical Chemistry I (4) I or Il or summer according to sequence. Theoretical principles of analysis of chemical constituents of body fluids in normal and disease states. Three lectures. Prerequisites: CHEM 308-309 and CHEM 201 and PHYS 201 and permission of instructor.

MEDT 442. Clinical Chemistry I Laboratory (2) I or ll or summer according to sequence. Methods, instrumentation and techniques of clinical chemistry through experiments, problems and demonstrations. Two three-hour laboratories. Prerequisites: CHEM 308-309 and CHEM 201 and PHYS 201 and permission of instructor Lab fee.

MEDT 443. Clinical Chemistry II (6) 11 or summer. Continuation of MEDT 441 and 442; emphasis on clinical application. Prerequisites: MEDT 441, 442 and 451 and permission of instructor. Lab fee.

MEDT 451. Analysis of Body Fluids (2) 1 or 11 or summer according to sequence. Physiology of urinary system and related diseases. Methods of detection of chemical and cellular elements of urine, cerebrospinal fluid, amniotic fluid, and other body fluids. One lecture and one threehour laboratory. Prerequisites: BIOL 332 or equivalent. MEDT 441 and 442 recommended. Lab fee.
MEDT 465. Cinical Studies (1) II or summer. Orientation to all clinical laboratory departments and procedures. Laboratory supervision and management. One week full-time orientation and instruction in hospital procedures. Prerequisite: permission of instructor.
MEDT 470. Special Topics (1-3) I or 11 or summer according to sequence. May be repeated to maximum 3 credits. Research techniques, literature search, experimental design, critical reading. Paper required on selected problem. Prerequisite: permission of instructor. Graded S/U.

MEDT 480. Infroduction to Clinical Research (1-3) Il or summer. Research techniques, literature search, experimental design. Term paper required. For university-based students during clinical training at clinical site. Prerequisite: senior standing and permission of instructor. Lab fee.
*Duration of these courses may vary slightly from hospital to hospital.

## Military Science (MILS)

MILS 101. ROTC and the National Defense Organization (2) I, li. History, organization, programs, benefits and objectives of Army ROTC. Organization and functions of national defense establishment, with emphasis on the role of the US Army. No military obligation or prerequisites. Freshmen and sophomores only.

MILS 102A. Rappelling/Practical Skills (2) I, li. Understanding and application of rappelling and pioneering skills. Integrated use of rope, snaplink and natural/artificial anchors. No military obligation or prerequisites. Freshmen and sophomores only.
MILS 1028. Rifle and Pistol Skilis (2) I, if. Understanding and application of fundamental rifle and pistol marksmanship. Weapons care, cleaning and safety. No military obligation or prerequisites. Freshmen and sophomores only.
Mills 103. The Soviet Threat (2) I, II, summer. The Soviet threat from the tactical level through the Ministry of Defense. Review of Soviet weapons, equipment and tactics introduced into the Soviet military since World War II and U.S. countermeasures. Soviet/WARSAW Pact capabilities vs. those of the United States and the North Atlantic Treaty Organization (NATO). No military obligation or prerequisites. Freshmen and sophomores only.

MillS 201. Survival (2) I, II. Discussion and application of knowledge and skills needed in basic human survival situations in urban, rural and wilderness environments. Topics to include land navigation, first aid, survival kits, adverse weather conditions, shelter and food. No military obligation or prerequisites. Freshmen and sophomores only.
MILS 202. Miliary Tactics (2) II, summer. Army tactics, principles of engagement, written military orders and usage of military maps. Simulation exercises and war games will be played in class highlighting military tactics. Methods of instruction will also be discussed. No military obligation or prerequisites. Freshmen and sophomores only.

MILS 301. Professionalism/Leadership (3) I. Professionalism and leadership required of the US Army Officer; application of leadership principles and styles through case studies air role-playing exercises with emphasis on military situations. Participation in leadership labs, physical training program and field training exercises required. Prerequisite: department permission and completion of one of the following: ROTC basic course at BGSU; ROTC Basic Camp at Fort Knox, KY; prior active duty service; Army Reserve/ANG basic training; or JROTC.

MILS 302. Smail Unit Operations (3) II. Organization and employment of basic military teams. Squad and platoon level tactical operations. Progressive leadership development through application of tactical principles. Participation in leadership labs, physical training program and field training exercises required. Prerequisite: department permission.
MILS 401. Unit Management and Oificar Development (3) I. Concepts and fundamentals of Army administration, supply and material readiness. Protessional officership techniques and military ethics. Management at the small unit level. Organizing, planning and participating in field training exercises. Prerequisite: department permission.
MILS 402. Unit Management, Miltary Writing and Correspondence (3) II. Organization and concepts of the US Army judicial system including court martial, nonjudicial and nonpunitive actions. Development of military writing techniques, preparation of staff papers and staff actions. Discussions of movement of goods, and administrative details pertinent to newly commissioned lieutenants. Development and participation in field training exercises. Prerequisite: department permission.

MILS 470. Situdies in Military Sclence (1-3) On demand. Detailed study of selected mil itary subjects. Offered on lecture basis, in seminar, or independent study depending on students' needs and nature of material. May be repeated to six hours. Prerequlsite: consent of instructor.

## Music Composition and History (MUCH)

NUCH 100. Small Ensembles (1) I, II. Collegium Musicum of College of Musical Arts offered under supervision of Composition/ History Department. For freshmen or sophomores. May be repeated. Following small ensembles offered: Renaissance Ensemble, Balinese Gamelan Ensemble, New Music Ensemble.
qMMUCH 101. Exploring Music (2) I, II. Focus on three types of contexts important to appreciating music: the composer, the place, and the time. Open to non-music majors.

MUCH 110. Elements of Music (3) I, summer. Musical literacy in scales, intervals and triads in two clefs, as demonstrated by singing, hearing, reading, and writing. (Open to nonmajors, minors, and music majors; may be waived through placement exam.)

MUCH 116. Fundamentals of Composition (2) 1, II. Basic compositional techniques for students not yet admitted to baccalaureate program in music composition. May be repeatr Cannot be substituted for MUCH 316. Prere uisite: MUCH 110 or consent of instructor.

IMUCH 125. Music of World Cullures (3) I. Musical systems of major non-Western art musics: Africa, Near East, Pacific, and Asia. Theoreticai, analytical, and cultural concepts related to music. Open to non-majors.

MUCH 131. Western Art Music I (4) I, II. Music of Baroque and Rococco periods viewed from theoretical, analytical, historical, cultural and performance perspectives. Prerequisite: MUCH 110 or equivalent.
MUCH 132. Western Art Music II (4) I, II. Music of Classical and Romantic periods viewed from theoretical, analytical, historical, cultural, and performance perspectives. Prerequisite: MUCH 131.
MUCH 141. Aural Skills I (2) I, II, summer. Basic skills in sightsinging; rhythmic, melodic and harmonic dictation of diatonic and triadic materials. Prerequisite: MUCH 110 or permission of. instructor.
MUCH 142. Aural Skills II (2) I, II, summer. Continuation of MUCH 141. Prerequisite: MUCH 141.

MUCH 211. Jazz Improvisations and Repertoire I (2) I. Techniques of jazz improvisation and related repertoire, application of basic scales, arpeggios, melodic construction to blues and standard pop tunes. Prerequisite: MUCH 131 or consent of instructor.
MUCH 212. Jazz Improvisation and Repertoire II (2) II. Advanced techniques of jazz improvisation and related repertoire, application of modes; altered scales, chord extensions, chromatic harmony to jazz compositions. Prerequisite: MUCH 211.
\#MUCH 221..Masterpieces of Music (2)।, II. Music of important composers from various periods; directed listening to selected works. Open to non-music majors.
MUCH 231. Western Art Music III (3) I, II. Music of 20th century viewed from theoretical, analytical, historical, cultural, and performance perspectives. Prerequisite: MUCH 132.

- MUCH 232. Western Art Music IV (2) I, II. Music of the Medieval and Renaissance periods viewed from theoretical, analytical, historical, cultural, and performance perspectives. Prerequisite: MUCH 141.
MUCH 233. African Music (2) I. Music of various cultural groups of súb-Sahara Africa. Theoretical, analytical, cultural, and performance concepts. Prerequisite: MUCH 141.
MUCH 234. Japanese Music (2) I. Music of 'Japanese temple, court, theater, and concert Theoretical, analytical, cultural, and periormance concepts. Prerequisite: MUCH 141.
MUCH 235. Indonesian Music (2) II. Music of principal cultural groups of Indonesia. Theoretical, analytical, cultural, and performance concepts. Prerequisite: MUCH 141.
MUCH 236. Introduction to Jazz and Commercial Music (2) I. An analysis of theoretical and historical evolution of American popular music, focusing, on Broadway, musical theater, rock ' $n$ roll and contemporary jazzrock. Prerequisite: MUCH 131 or consent of instructor.
MUCH 237. Jazz Theory and History. (3) II. The music of various styles of jazz from around 1900 to the present. Theoretical, analytical, cultural and performance concepts will be related to the music. Prerequisite: MUCH 131 or consent of instructor.
MUCH 241. Aural Skills III (2), I, II. Intermediate skills in sightsinging; rhythmic, melodic and harmonic dictation of chromatic material inluding seventh chords. Prerequisite: MUCH 142.

MUCH 242. Aural Skills IV (2) I, II. MUCH 241 continued. Prerequisite: MUCH 241 :

MUCH 300. Small Ensembles (1) I, II. Collegium Musicum of College of Musical Arts offered under supervision of Composition/. History Department. For juniors or seniors. May be repeated. Following types of small ensembles offered: Renaissance Ensemble, Balinese Gamelan Ensemble, New Music Ensemble.

MUCH 308. Keyboard Harmony I (2) I alternate years. Use of keyboard skills relating to score reading, transposition, extemporization, and accompanying.
MUCH 309. Keyboard Harmony II (2) II alternate years. Continuation of keyboard skills developed in MUCH 308; practical aspects of accompanying. Prerequisite: MUCH 308.
MUCH 311. Jazz Arranging and Analysis I (3) I. Swing repertoire, typical chord progressions, formal structure, melodic construction, compositional devices. Basic arranging tech-. niques common to traditional big-band music. Prerequisite: MUCH 212 or consent of instructor.
MUCH 312. Jazz Arranging and Analysis II (3) II. Harmonic trends of bop period; substitute chords, altered chords, melodic and rhythmic treatment. Addition of double reeds, French horns, and strings to the big-band. Contemporary trends in jazz and commercial music, including small group and rock styles. Prerequisite: MUCH 311 .
MUCH 315. Orchestration (2) I. Score analysis, arranging and/or composing for various families of orchestra (woodwinds, brass, percussion, strings), and scoring for full sym-, phonic orchestra. Prerequisite: MUCH 231.
MUCH-316. Composition (3) I, II. Original composition in vocal and instrumental forms. May be repeated to 12 hours. Prerequisite: MUCH 231 and 242. Open only to composition majors.
MUCH 318. Symphonic Literature (2) I. Listening to and analyzing works tracing development of symphony and symphonic poem to modern period. Prerequisite: MUCH 231.
MUCH 320. Band Scoring (2) I, ll. Scoring for band instruments, from small ensembles to concert band and marching band. Prerequisite: MUCH 231.
MUCH 325. Choral Arranging (2) II. Text analysis arranging for men's voices, treble voices, mixed voices; A Cappella and accompanied ensemble arranging techniques; calligraphy, reproduction, and copyrighting; dealing with publishers. Prerequisite: MUCH 232.
MUCH H341. Aural Skills V (2) I. Advanced skills in sightsinging; rhythmic, melodic and harmonic dictation of chromatic and atonal material. Prérequisite: MUCH 242.
MUCH 401. History and Literature of Jazz (2) l. Jazz from African influences through present developments; personalities involved in stylistic change.
MUCH 403. Counterpoint II (2) | alternate years. 16th century counterpoint. Prerequisites: MUCH 231 and 232 .
MUCH 404. Counterpoint II (2) II alternate years. 18th century counterpoint, tonal counterpoint in three and four voices; canon, invention, fugue, chorale-prelude. Prerequisite: MUCH 231.
MUCH 406. Problems in Music History (3) On demand. Research through topics and problems in music history. Prerequisite: consent of instructor. May be repeated to 12 hours.
MUCH 407. Performance Practice (2) I. Performance practice in music, improvisation, ornamentation, accompaniment, instrumentation, rhythm and tempo. Prerequisite: $M \cup C H$ 231.

MUCH ${ }^{408}$. Chamber Music Literature (2) II. Selected major chamber works of various periods. Reading on all forms and media. Prerequisite: MUCH 231.
MUCH 410. Contemporary Music Pro-Seminar (2) I, I. Musical styles and techniques of 20th century. Compositional and analytical approach, considering various influences of past. May be repeated to 8 hours. Open automatically to composition majors, to others by consent of instructor. Prerequisite: MUCH 231 with "C" or better.

MUCH 411. Jazz Pedagogy (2) II alternate years. Prepares student to teach fundamentals of jazz improvisation, arranging, jazz ensemble techniques. Prerequisite: MUCH 312.

MUCH 412. Opera Literature (2) II. Styles, interpretation, traditional performances of various schools. Prerequisite: MUCH 231.
MUCH 420. Problems and Techniques of Ethnomusicology (2) On demand. Topics and techniques in ethnomusiciology. Open to students interested in all music as aspects of culture.
MUCH 424. Electronic Music I (3) I. Basic language and literature of electronic music. One non-credit hour per week in listening laboratory. Problems of live electronic music.
MUCH 425. Electronic Music II (3) II. Various commercial equipment reviewed. Students realize tapes in electronic music studio under faculty supervision. Prerequisite: MUCH 424.
MUCH 431. Aesthetics of Black Music (3) On demand. West African and Afro-American concepts of music; modifying effects America has had from slavery to present.
MUCH 436. Audio Recording Techniques (2) I, II. Concert and studio multi-track recording methods culminating with an actual recording session. Students will gain some hands-on experience. Prerequisite: experience with audio hardware.
MUCH 470. Reading and Research (2-4) I, II. Directed independent reading and research in history, philosophy, theory, or aesthetics of music: Prerequisites: 16 hours of music theory. and history, and consent of instructor.

## Music Education (MUED)

For music education majors or minors only unless otherwise noted. Questions concerning eligibility for MUED courses should be directed to the Chair of Music Education prior to enrollment.
MUED 125. Percussion Class (1) II. Prerequisite: MUED 145. (Elective).
MUED 130. Trumpet-French Horn Class (1) I, II.
MUED 136. Trombone-Euphonium-Tuba Class (1) I, II.

MUED 140. Clarinet-Saxophone Class (1) I, II.
MUED 145. Flute-Percussion Class (1) I, II.
MUED 146. Oboe-Bassoon Class (1) I, II.
MUED 147. Bassoon Reed Class (1) II. (Elective).
MUED 150. Class Piano (1) 1, II. Class piano instruction for beginners and those with minimal keyboard experience. Placement into MUED 150 and 151 is determined on the basis of an audition. Only open for credit to music majors and minors. Grade of " C " or better required for admittance into MUED 151.
MUED 151. Class Piano (1) I, II, MUED 150 continued. Grade of " C " or better required for admittance into sophomore level group piano courses. This course includes Piano Proficiencyl.

MuED 154. Class Piano (1) I, II. Intermediate class stiudy. A more advanced approach to the acquisition of functional skills for those with advanced keyboard facility who need class instruction in order to pass functional proficiency requirements. A grade of " $C$ " or better required for admittance into sophomore level group piano courses, includes Piano Proficiency 1 .
© MUED 156. Beginning Piano for the Nonmusic Major I (2) I, II. Class piano course for beginning work in music reading, pop/jazz chords, keyboard technique, improvisation, and elementary piano literature. Not open to music majors or minors.
© MUED 157. Beginning Piano for the Nonmusic Major II (2) I, II. MUED 156 continued. Class piano course for beginning work in music reading, pop/jazz chords, keyboard technique, improvisation, and easy piano literature. Not open to music majors or minors. Prerequisite: MUED 156 or equivalent.
MuED 170. Voice Class (1) 1, II. Beginning study of voice production, breathing, posture, and diction through vocalises and songs in English. Open to non-majors.
MUED 177. Volce Class (1) I, II. MUED 170 continued. Prerequisite: MUED 170. Open to non-majors.
MUED 180. String Class (2) I, II.
MUED 190. Troubadour Harp Class (1) I, II. (Elective).
MuED 195. Guitar Class (1) I, II. (MUED majors and minors only.)
MUED 240. Introductory Music Field Experience (3) i, II. Introduction to the music education profession and a wide variety of teaching situations at all levels. Prerequisite: sophomore standing in music. C/F hrs: 40. Required of all sophomores.
MUED 249. Music Fundamentals (2) I, II. Development of a functional understanding of the elements of music and a basic awareness of the characteristics of the historical periods of music. $\mathrm{C}=15$ hours. Not open to music majors.
MUED 250. Class Piano: Instrumental Harmonization and Score Reading I (2) I, II. Class piano course for intermediate level work in melody harmonization, pop/jazz chords, and sightreading of piano and instrumental scores. Prerequisite: Piano Proficiency I. Grade of " $C$ " or better required for admittance into accompanying course.
MiUED 251. Class Piano: Instrumental Harmonization and Score Reading II (1) I. Class piano course for students with advanced keyboard facility; intermediate level work in melody harmonization, pop/jazz chords, and sightreading of piano and instrumental scores. Prerequisite: Piano Proficiency 1. Grade of " $C$ " or better required for admittance into accompanying course.
MUED 252. Class Piano: Choral Harmonization and Score Reading I (2) I, 1I. Class Piano course for intermediate level work in melody harmonization, pop/jazz chords, and sightreading of choral scores. Prerequisite: Piano Proficiency I. Grade of " $C$ " or better required for admittance into accompanying course.
MUED 253. Class Piano: Choral Harmonization and Score Reading il (2) I. Class Piano course for students with advanced keyboard facility; intermediate level work in melody harmonization. pop/jazz chords, and sightreading of choral scores. Prerequisite: Piano Proficiency I. Grade of " C " or better required for admittance into accompanying course.

MUED 254. Class Piano: Classroom Harmonization, Transposition, and Improvisation I (2) I. Class piano course for intermediate level work in melody harmonization, pop/jazz chords, transposition, and improvisation. Prerequisite: Piano Proficiency I. Grade of "C" or better required for admittance into accompanying course.
MUED 255. Class Piano: Classroom Harmonization, Transposition, and Improvisation I (1)
I. Class piano course for students with advanced keyboard facility; intermediate level work in melody harmonization, accompaniment transposition, and improvisation. Prerequisite: Piano Proficiency I. Grade of " $C$ " or better required for admittance into accompanying course.

## MUED 256. Class Piano: Accompanying as a

 Teaching Tool I (1) I, II. Class piano course for music education students who are not advanced pianists will provide introductory work in accompanying skills. Prerequisite: Piano Proficiency II. Grade of " C " or better required of music education majors for graduation.MUED 257. Class Piano: Accompanying as a Teaching Tool II (1) I, II. Class piano course for music education student with advanced keyboard facility, will provide work in accompanying skills. Prerequisite: Piano Proficiency II. Not for keyboard emphasis majors. Grade of "C" or better required of music education majors for graduation.

MUED 340. Junior Methods Project in Music (9) I. [Choral, String, Band (University Lab Schools) option]. II. (Band, classroom options). Concentrated study of organization, administering and teaching music in grades $\mathrm{K}-12$; emphasizes correlation of methods seminars with clinical and field activities. C/F hrs. Minimum 48 hours. Taken in conjunction with conducting, applied study, ensemble and an evening section of either EDFI 302 or EDAS 409. Prerequisite MUED 240 and permission of chair. Field component graded $\mathrm{S} / \mathrm{U}$.

MUED 349. Music as a Teaching Tool (2) I, II. A continuation of MUED 249. Development of skills in teaching procedures and relaied aspects of teaching. Acquisition of procedures for integrating music into classroom activities. C = 15 hours. Not open to music majors. Prerequisite: MUED 249 (may not be taken concurrently with MUED 249.)
MUED 359. Examination and Performance of Choral Repertoire (2) I. Material suitable for use in secondary schools; related performance problems and their solutions.
MUED 360. Musical Theatre Production Survey (2) II. On demand. Overview of considerations necessary in production of music theatre at public school level.
MUED 402. Beginning Wind and Percussion Instrument Repair (1) II. Basic practices and techniques of instrument repair.

MUED 450. Adult Group Piano Teaching (2) II. A survey of materials, supervised teaching, and program development appropriate for the adult level class. Open to students with a strong piano background. Consent of instructor required. Available for graduate credit also. Alternate years beginning 1984 or on demand.
MUED 451. Advanced Methods for Classroom Music (2) I. Examination of methods, instructional hardware, organizational patterns, and curricular models. Available for graduate credit also. Prerequisite: MUED 340 or consent of instructor.

MUED 458. Marching Band Techniques (2) I. Techniques in planning, charting and rehearsing marching band shows and administering public school marching bands. Prerequisite: junior standing.
MUED 470. Reading in Music Education (1-3) I, II. Special topics in music education. Admittance by consent of instructor.
MUED 491. Teaching Practicum (1-2) I, II. Supervised teaching in University laboratory schools for junior level classroom, choral or instrumental option music education majors. Prerequisite: consent of instructor. Graded SIU.
MUED 497. Student Teaching ( $1-10$ ) $I$, III. Supervised teaching in area schools, supplemented by conferences and seminars. Ten semester hours required of all music education majors. Meets student teaching requirement for special teacher's certification in music.

## Music, General (MUS)

MUS 099. Recital Attendance (0) I II. Required of all music majors for six semesters. Successful completion of course requires attendance at minimum of 15 oncampus music performances. Graded $\mathrm{S} / \mathrm{U}$.
MUS 190. Beginning Guitar (2) I, II. Introduction to the guitar, fundamentals of technique and music notation reading. Open to nonmusic majors only.
MUS 191. Intermediate Guitar (2) I, II. MUS 190 continued. Open to non-music majors only. Prerequisites: MUS 190 or previous experience and consent of instructor.

## Music Performance Síudies (MUSP)

MUSP 100. Small Ensembles (1) $1,11$. Formed under supervision of College of Musical Arts and offered on demand. Open to any University student who qualifies on the basis of audition. To research and perform appropriate ensemble literature. To develop independent listening and performance skills. For freshmen and sophomores. May be repeated. Specific minimum number of credits is required for all sludents majoring in performance or in music education with instrumental or vocal emphasis, with these credits applicable toward graduation. Work done above minimum may be counted as music electives. It is recommended that music majors and minors discuss the selection of appropriate ensemble experience with the applied teacher and chair of the department in which they are majoring. The following small chamber ensembles are offered:
MUSP A100 Music Theater Productions
MUSP B100 Guitar Ensembles
MUSP C100 Percussion
MUSP D100 Brass Choir 1
MUSP F100 Brass Choir II
MUSP 1100 Euphonium-Tuba
MUSP $J 100$ Brass
MUSP K100 Jazz Lab I
MUSP L100 Jazz Lab II
MUSP M100 String
MUSP N100 Trombone Choir
MUSP O100 Woodwind
MUSP P100 Horn Ensemble
MUSP Q100 Harp
MUSP R100 Piano Accompaniment (Practicum)
MUSP S100 Mixed Chamber
MUSP U100 Collegiates
MUSP V100 Saxophone
MUSP $\times 100$ Trumpet Guild
MUSP Y100 Varsity Quartet
MUSP Z100 Jazz Ensemble

MUSP 160. Sight Reading I (1) II. Development of visual comprehension of intervallic patterns and comprehension of basic rhythnic patterns. Prerequisite: consent of istructor.

MUSP 195. Pedal Harp Class (1), I, II. Prerequisite: one quarter of Troubadour Harp (MUED 190) or permission of instructor. Fee: \$22.50.

MUSP 210. Piano Repertoire (3) I. Alternate years. Literature from early keyboard music through classical. Prerequisite: consent of instructor.
MUSP 211. Piano Repertoire (3) II. Alternate years. Piano literature from Romantic era to present. Prerequisite: consent of instructor.
MUSP 214. Singer's Diction-Italian (2) I. International phonetic alphabet used as basis for phonetic analysis of Italian text in applying principles of lyric Italian diction as concerns the singer; simple grammatic construction; use of dictionary.
MUSP 215. Organ Repertoire (2) I. Alternate years. Organ literature from 1325 to the present, excluding the music of J.S. Bach. Prerequisite: consent of instructor.
MUSP 216. Organ Repertoire (2) II. Alternate years. Organ music of J.S. Bach. Prerequisite: consent of instructor.

MUSP 221, 231-235, 241-245, 261-263, 271-272, 281-286. Applied Instruction. A limited enrollment course, with registration priority given to students for whom applied study is a degree requirement. Others accommodated on a space-available basis. For freshmen and sophomores. One credit awarded for each half pur of applied instruction. Performance majors Sntitled to four credits for one clock hour lesson. $\$ 45$ fee for each half hour of applied instruction assessed each semester. (Maximum of $\$ 90$ for any one applied course.) Student enrolled for applied music has access to practice rooms and equipment with schedules and regulations determined by College of Musical Arts.
MUSP 221. Applied Percussion (1,2,3,4) I, II, summer.
MUSP 231. Applied Trumpet $(1,2,3,4)$ I, II, summer.
MUSP 232. Applied French Horn (1,2,3,4) I, II, summer.
MUSP 233. Applied Trombone (1,2,3,4) I, II, summer.
MUSP 234. Applied Euphonium (1,2,3,4) I, II, summer.
MUSP 235. Applied Tuba $(1,2,3,4)$ I, II, summer.
MUSP 241. Applied Flute $(1,2,3,4)$ I, II,
summer.
MUSP 242. Applied Oboe $(1,2,3,4)$ I, II,

## summer.

MUSP 243. Applied Clarinet ( $1,2,3,4$ ) I, II, summer.
MUSP 244. Applied Saxophone (1,2,3,4) I, II, summer.
MUSP 245. Applied Bassoon $(1,2,3,4)$ I, II, summer.
MUSP 261. Applied Piano ( $1,2,3,4$ ) I, II,
summer. ( 2 or more credits, permission of Instructor.)
MUSP 262. Applied Harpsichord (1,2,3,4) I, II.
MUSP 263. Applied Organ $(1,2,3,4) \mid$, II,
inmer.
rUSP 271. Para Voice (2) I, II. Fee: \$45.
MUSP 272. Applied Voice $(1,2,3,4)$ I, II,
summer.
MUSP 281. Applied Violin $(1,2,3,4)$ I, II,
summer.

MUSP 282. Applied Viola $(1,2,3,4)$ I, II, summer.
MUSP 283. Applied Cello $(1,2,3,4)$ I, II, summer.
MUSP 284. Applied Double Bass (1,2,3,4) I, II, summer.
MUSP 285. Applied Harp $(1,2,3,4)$ I, II,
summer.
MUSP 286. Applied Guitar ( $1,2,3,4$ ) I, II, summer.
All music majors registered for applied instruction are subject to the following regulations:
Jury examinations occur at selected times once each semester of each academic year. Failure to meet expected standards in weekly applied lessons or in jury examinations wili be reflected in the course grade. A grade lower than C will result in probationary status in applied instruction for the following semester. The chair of performance studies will send a letter to the student indicating the reasons for the probationary status in applied instruction, its duration and recommended action for its removal. If the student eliminates the identified deficiencies within the probationary period, the probationary status will be lifted and permission will be granted to continue applied instruction as required in the student's degree program option. If conditions for removal of the probationary status are not met, the student will be denied registration in applied instruction in the student's degree program option. After one semester, the student may audition for the appropriate faculty for reinstatement.
Jury examinations are appropriate times for students to be heard for change of emphasis or degree programs within the College of Musical Arts.

MUSP 238-239, 277-279, 288-289. Large
Ensembles (1-2) I or II. Open to any University student who qualifies on the basis of audition. For freshmen and sophomores. It is recommended that music majors and minors discuss the selection of appropriate ensemble experience with the applied teacher and chair of the department in which they are majoring.
MUSP A238 Fall Concert Band (1)।
MUSP A238 Symphonic Band (2) II
MUSP B238 Fall Wind Ensemble (1) I
MUSP B238 Concert Band I (1) II
MUSP C238 Concert Band II(1) II
MUSP D238 Concert Band III (1) II
MUSP E238 Athletic Band (1) II
MUSP 239 Marching Band (2) I
MUSP 277 A Cappella Choir (1) I, II
MUSP 278 Collegiate Chorale (2) I, II
MUSP A279 Women's Chorus (1) I, II
MUSP B279 Men's Chorus (1) I, II
MUSP 288 Chamber Orchestra (1)
MUSP 289 Symphony Orchestra (2)
MUSP 264. Accompanying Techniques I (1) I, II. Problems involving musical comprehension of solo part together with accompaniment; general introduction to vocal and instrumental accompaniment literature. Prerequisite: MUSP 160 or consent of instructor.
MUSP 265. Piano Four-Hand Class (1) On demand. Appropriate four-hand keyboard literature. Prerequisite: MUSP 160 or consent of instructor.
MUSP 275. Introduction to Opera Workshop (2)
I. Basic terminology and practices of opera theatre.

MUSP 300. Small Ensembles (1) I, II. Formed under supervision of College of Musical Arts and offered on demand. Open to any University student who qualifies on the basis of audition. To research and perform appropriate ensemble literature. To develop independent listening and performance skills. For juniors and seniors. May be repeated. Specific minimum number of credits is required for all students majoring in performance or in music education with instrumental or vocal emphasis; with these credits applicable toward graduation. Work done above minimum may be counted as music electives. It is recommended that music majors and minors discuss the selection of appropriate ensemble experience with the applied teacher and chair of the department in which they are majoring. The following small chamber ensembies are offered:
MUSP A300 Music Theater Productions
MUSP 8300 Guitar Ensemble
MUSP C300 Percussion
MUSP D300 Brass Choir I
MUSP F300 Brass Choir II
MUSP I300 Euphonium-Tuba
MUSP J300 Brass
MUSP K300 Jazz Lab I
MUSP L300 Jazz Lab II
MUSP M300 String
MUSP N300 Trombone Choir
MUSP O300 Woodwind
MUSP P300 Horn Ensemble
MUSP Q300 Harp
MUSP R300 Piano Accompaniment (Practicum)
MUSP S300 Mixed Chamber
MUSP U300 Collegiates
MUSP V300 Saxophone
MUSP $\times 300$ Trumpet Guild
MUSP Y300 Varsity Quartet
MUSP Z300 Jazz Ensemble
See also MUCH 100.
MUSP 305. Conducting I (2) l. Fundamental beat and cueing techniques.
MUSP 306. Conducting II (2) II. Advanced study and analysis of baton techniques, score reading, and rehearsal procedures; concentration option of either instrumental or choral conducting. Prerequisite: MUSP 305.
MUSP 310. Vocal Repertoire for the Young
Singer (1) I. Late 19th century to present with emphasis on British and American song literature and repertoire for young singers. Prerequisite: For music education choral/Musical Theater majors only.
MUSP 311. Vocal Repertoire (2) I. Late 19th century to present British and American song literature; repertoire for high school vocal solo contest; Scandinavian and Russian song literature. Prerequisite: consent of instructor.
MUSP 312. Vocal Repertoire (2) II. Alternate years. 19th and 20th century Fench, Spanish, and German art song literature. Prerequisite: consent of instructor.
MUSP 360. Sight Reading II (1) II. Rapid comprehension of complex intervallic and rhythmic patterns; coordinates problems involving ensemble precision. Prerequisite: MUSP 160 or equivalent skill level.

MUSP 361. Style and Interpretation (1) I, II. Supervised preparation and analysis of selected works of early keyboard music through classic; emphasis on style and interpretation. Prerequisite: MUSP 211.
MUSP 362. Style and Interpretation (1) I, II.
Supervised preparation and analysis of selected keyboard works from the Romantic era to the present, emphasis on style and interpretation. Prerequisite: MUSP 211.

MUSP 364．Accompanying Techniques II（1） II．Continuation of previous course work，using nore advanced literature．Prerequisite：MUSF 204 or consent of instructor．
MUS？367．Plano Pedagogy I（3）I．Methods， materials，and teaching techniques for the beginning pre－college student．Prerequisite： consent of instructor．
MUSP 388．Piano Pedagogy II（3）II．Methods， materials，and teaching techniques for the intermediate pre－college student．Prerequisite： MUSP 357 or consent of instructor：

Development ol stage techniques for more advanced students in productions of scenes and complete operas．Total of 12 credit hours possible．Vocal performance majors required to take four hours．Prerequisite：MUSP 275 or consent of instructor．

WUSP 306．Service Playing（2）I．Alternate years．Hymn playing，transposition，modula－ tion，improvisation，and accompanying at the organ．Prerequisite：consent of instructor．
MUSP 397．Service Playing（2）Il．Alternate years．MUSP 396 continued．Prerequisite： MUSP 396 or consent of instructor．

HiSP t10．Harpsichord Repertoires（3）I． Alernate years．Keyboard literature to 1700 based on original source material and con－ temporary editions；emphasis on performance． Prerequiste：consent of instructor．
MUSF at1．Harpsichord Repertoize（3）II． Atemate years．Solo harpsichord itterature from 1700 to the present，emphasis on performance． Prerequisite：consent of instructor．
MUSP 415．Organ Construction（2）II．Alternate years．Chronological history of the design and construction of the organ．Prerequisite：consent of instructor．

刮USP 4it．Chuich Music（2）II．On demand． Music of the major Western churches；plain－ song，hymnology，liturgies．Prerequisite：con－ sent of insiructor．

㖶US 421，431－635，441－445，461－463，471． 472， $481-486$ ．Applied instruction．A limited en－ rolment course，with registration priority given to students for whom applied study is a degree requirement．Others accommodated on a space－avallable basis．For juniors and seniors． One credit awarded for each half hour of applied instruction．Performance majors entitled to four credits for one clock hour lesson．$\$ 45$ fee for each hall hour of applied instruction as－ sessed each semester．（Maximum of $\$ 90$ for any one applied course）．Student enrolled for applied music has access of practice rooms and equipment with schedules and regulations determined by College of Musical Arts．
Husp 421．Applied Percussion（ $1,2,3,4$ ） 1 ，11， summer．
MUSP 431．Applied Trumpet $(1,2,3,4)$ I，II， summer．
（TUS？432．Applied French Horn（1，2，3，4）I，II， summer．
MUS？433．Applited Trombone $(1,2,3,4) 1,1$ ， summer．
眭解 434．Applied Euphonium $(1,2,3,4) 1,11$ ， summer．
 summer．
 summer．
MUSP n42．Applied Oboe $(1,2,3,4)$ I，II． summer．

MUSP 443．Applied Clarinet $(1,2,3,4)$ I，II， summer．
MUSP 444．Applied Saxophone $(1,2,3,4)$ I，II， summer．
MUSP 445．Applied Bassoon（ $1,2,3,4$ ）I，II， summer．
MUSP 461．Applied Piano $(1,2,3,4)$ I，II，
summer．（2 or more credits，permission of instructor）
MUSP 462．Applied Harpsichord $(1,2,3,4)$ I，II．
MUSP 463．Applied Organ（1，2，3，4）I，II，
summer．
MUSP 471．Para－Voice（2）I，II．Fee：$\$ 45$.
MUSP 472．Applied Voice（1，2，3，4）I，II，
summer．
MUSP 481．Applied Violin（1，2，3，4）1，II， summer．
MUSP 482．Applied Viola（ $1,2,3,4$ ）I，11，
summer．
MUSP 483．Applied Cello $(1,2,3,4)$ I，II，
summer．
MUSP 484．Applied Double Bass $(1,2,3,4)$ I，II， summer．
MUSP 485．Applied Harp $(1,2,3,4)$ I， 11 ， summer．
MUSP 486．Applied Guitar $(1,2,3,4)$ summer．
All music majors registered for applied instruc－ tion are subject to the following regulations：
Jury examinations occur at selected times once each semester of each academic year．Failure to meet expected standards in weekly applied lessons or in jury examinations will be reflected in the course grade．A grade lower than $C$ will result in probationary status in applied instruc－ tion for the following semester．The chair of performance studies will send a letter to the student indicating the reasons for the proba－ tionary status in applied instruction，its duration and recommended action for its removal．If the student eliminates the identified deficiencles within the probationary period，the probationary status will be lifted and permission will be granted to continue applied instruction as re－ quired in the student＇s degree program option．If conditions for removal of the probationary status are not met，the student will be denied registration in applied instruction in the stu－ dent＇s degree program option．After one semes－ ter，the student may audition for the appropriate faculty for reinstatement．
Jury examinations are appropriate times for students to be heard for change of emphasis or degree programs within the College of Musical Arts．
MUSP 438－439，477－479，488－489．Large
Ensembles（1－2）I or II．Open to any University student who qualifies on the basis of an audition．For juniors and seniors．It is recom－ mended that music majors and minors discuss the selection of appropriate ensemble experi－ ence with the applied teacher and chair of the department in which they are majoring．
MUSP A438 Fall Concert Band（1）I
MUSP A438 Symphonic Band（2）II，
MUSP B438 Fall Wind Ensemble（1）
MUSP B438 Concert Band I（1）It，
MUSP C438 Concert Band II（1）II，
MUSP D438 Concert Band III（1）II
MUSP E438 Athetic Band（1）II，
MUSP 439．Marching Band（2）I
MUSP 477．A Cappelia Choir（1）I，II
MUSP 478．Coliegiate Choral（2）I，｜｜
MUSP A479．Women＇s Chorus（1）I，II．
MUSP B479．Men＇s Chorus（1）I，II．
MUSP 488．Chamber Orchestra（1）
MUSP 489．Symphony Orchestra（2）
MUSP 453．Brass Pedagogy（2）I．Teaching techniques and materials for brass instru－ ments．Prerequisite：consent of instructor．

MUSP 454．Woodwind Pedagogy（2）II．
Teaching techniques and materials for wood－ wind instruments．Prerequisite：consent of instructor．
MUSP 458．String Pedagogy（2）II．Upper an＊ lower strings．Principles of teaching stringed instruments．Investigation of related literature and materials．Prerequisite：consent of instructor．

MUSP 459．Organ Pedagogy（2）II．Alternate years．On demand．Principles and techniques and literature applied to various levels of organ study．Prerequisife：consent of instructor．
MUSP 466．Piano Pectagogy Practicum（1）1，ll． Laboratory in supervised piano teaching，both private and classes．Prerequisite：MUSP 367 or consent of instructor．May be repeated．
MUSP 467．Piano Technology（1）1．Apprecia－ tion of piano building，repair，and tuning． Minor repairs，regulation，and art of tuning． Prerequisite：consent of instructor．
MUSP 470．Readings，Research，and Periog－ mance in Music（1－5）I，II，summer．Directed independent readings，research，and／or per－ formance in performance studies in music． Prerequisites：consent of instructor and department chair．
MUSP 495．Senior Recital（2）1，II，summer． For performance studies majors．Full recital required during senior year prior to gradua－ tion．Recital repertoire requirements deter－ mined by respective areas within performance studies department．Prerequisite：consent of area coordinator．

## Nursing（NURS）

NURS 100．Orientation to Nursing（1）1．Assis： freshmen in choosing nursing as major and career goal；professlonal nurse＇s role，history of nursing，future trends in relation to current U．S． health care delivery system．Graded $\mathrm{S} / \mathrm{U}$ ．
NURS 370．Pathophysiology：Physiologic Defic． its of the Human Body（3）I．Study of common physiologic deficits of major human body sys－ tems with associated preventive and etiologic factors and clinical manisestations．Integration of human developmental concepts and heaith de－ viations occurring throughout the life cycle in examination of illness as a dynamic process． Prerequisites：CHEM 116，NUAS 255，257， 259.
NURS 371．Introduction to Clinital Mursing（5）1． Introduction to nursing theory and process foo－ using on Orem＇s Self Care Deficit Theory of Nursing．Clinical application to healthy individu－ als and families across the life span．Emphasis： on common health problems and self－care practices for clinical decision－making．Estab－ lishes the base for professional nursing prac－ tice．Provides opportunities to apply foundation－ al knowledge from lower division courses and to integrate knowledge and skills of concurrent courses．Four－hour class， 9 hours clinical expe－ rience weekly．Prerequisife：admission to nurs－ ing major．
NURS 372．Nursing Technologies I（1）I．A ser－ ies of self－paced modular learning experiences employing multimedia instructional methods for developing beginning cognitive and psychomo－ tor skills used in client assessment and impie－ mentation of nursing systems．Prerequisite：ad－ mission to nursing major．Graded S／U．Lab，

NURS 373. Role Transition to Professional Nursing (1) I. Student's development as a person entering the profession of nursing. Feelings, values, behaviors and cognitions are explored as the student establishes and experiences nurse-client interactions. Self-care behaviors related to self concept, group membership, level of stress and adaptation are examined in the role transition process. Prerequisite: admission to nursing major. Graded S/U.
NURS 380. Heath Care Science: Diagnosis and Treatment of Physlologic Deficits of the Human Body (3) II. Study of the diagnosis, treatment modalities and prognosis of common health deviations of the human body. Physiologic deficits of major body systems are examined as they relate to persons meeting health-deviation self care requisites during health restoration. Prerequisites: NURS 255, 257, 259, 370.

NURS 381. Nursing Systems: Holistic Health Care for the Oider Aduil (4) II. Use of Orem's Theory and the nursing process in clinical decision-making for and with older client. Focus on holistic assessment and nursing interventions in three settings: hospital, nursing home and community. 2 hours class, 12 hours clinical experience weekly. Prerequisite: NURS 370, 371, 372 and 373.
NURS 382. Nursing Technologies II (1) II. Continuation of skill development. Assists students to become knowledgeable and competent in the performance of selected cognitive and psychomotor skills applicable to the care of all age groups. Special emphasis on technologies commonly used with adult clients. Learning resource center experiences. Prerequisite: NURS 372. Graded S/U. Lab fee.

NURS 383. The Nurse-Client Relationship (1) II. A seminar-type course which concentrates on development of communication and interpersonal skills in establishing, maintaining and terminating the nurse-client relationship. Experiential learning opportunities are provided to learn interviewing skills and to increase interpersonal skills with clients who are demonstrating common reactions to illness and hospitalization. Nurse and client perspectives are examined. Prerequisite: NURS 373 . Graded S/U.

NURS 384. Clinical Nursing Ethics (1) II. Designed to assist nursing students to recognize ethical situations as they occur in nursing practice and to deal with those situations on the basis of reasoned ethical decision making. Prerequisites: PHIL 102 or 342, NURS 371 . Concurrent with NURS 381.

NURS 390. Pharmacology in Nursing Practice (3) II. Study of chemical interaction with the human body to produce biologic effects. Pharmacologic principles, legal foundation, psychologic aspects of drug therapy and self medication, drug actions, drug metabolism and multiple systemic drug effects are examined. Prerequisites: NURS 370 and 380.
NURS 391. Nursing Systems: Holistic Health Care for the Hospitaled Adult (4) II. Use of Orem's Theory and the nursing process in clinical decision making for and with young and middle aged adult clients in the acute care setting. Concepts of nursing relevant to persons with physiologic health deviations. Focus on hoassessment and nursing interventions. Two hours class, 12 hours clinical experience weekly. Prerequisites: NURS 370, 371, 372, 373.
NURS 392. Nursing Technologies III (1) II. Facilitates the students' acquisition of advanced cognitive and psychomotor skills for use in nursing system with clients of all age groups. Special emphasis on those technologies used with adult clients with whom students work in concurrent clinical courses. Learning resource center experiences. Prerequisite: NURS 382. Graded S/U. Lab fee.

NURS 393. Development of Nursing Agency (1) II. Content and process are directed toward personal growth in areas critical to the professional nursing role. Autonomy, account-ability, assertiveness; understanding of human sexuality; women's issues germane to the profession; socialization of men in nursing; and the nursephysician relationships are included. Prerequisite: NURS 383. Graded S/U.
NURS 394. Nursing in the Health Care Delivery System (1) II. Exploration of the focus that shaped the development of the health care delivery system; major health care issues and trends; role of nurses in the system; patterns of care delivery; the image of the nurse.
NURS 405. Oncologic Nursing (3) II. Elective course. Concepts, theories, and trends in care of patient with cancer. Includes management methodologies and nurse's role in diagnosis, treatment and rehabilitation, in both preventive and supportive areas. Prerequisites: completion of junior level nursing courses.
NURS 406. Nursing Systems: Critically ill Client (2) I, II. Elective course. Design of nursing systems for the critically ill individual and family. Methods of assistance for individuals with psycho-physiological health care deficits requiring advanced nursing knowledge and skills in the critical care environment. The philosophy and systems of critical care and special needs of the nurse are also examined. Prerequisites: completion of junior level nursing courses.
NURS 407. Emergency Nursing: Concepts of Practice (2) I, II. Study of nursing systems related to episodic, primary and acute care in the emergency care setting. Scope of practice with persons having undiagnosed physical and/or emotional alterations. Includes legal and ethical implications, exploration of nurse's unique role. Prerequisite: completion of junior level courses or consent of instructor. Graded S/U.
NURS 408. Nursing in the intraoperative Setting (2) I, II. Study of nursing practice in the operating room. Principles and concepts applicable to all surgical patients including preoperative preparation, operative and immediate post-operative care. Psychosocial aspects of surgical interventions. Legal and ethical implications. Prerequisite: completion of junior level courses or consent of instructor. Graded S/U.
NURS 416. Decision Making in Self Care (1) II. Explores self-care as deliberate action. The purpose is to assist clients in decision-making and/or goal directed behavior which will sustain, protect and promote human functioning. Assists students to teach clients how to make sound judgements for self-care. Offered to health-related professions, social workers, teachers and counselors. Prerequisite: consent of instructor. Graded S/U.
, NURS 417. Advanced Maternity Nursing (1) II. Integrates theoretical and clinical knowledge in the care of a pregnant family during the last trimester of pregnancy, labor and delivery, and the puerperium. Provides an opportunity for teaching, leaning and problem solving processes with family members through development of a close relationship during the child bearing cycle. Prerequisite: NURS 471 or consent of instructor. Graded S/U.
NURS 418. Nursing of Exceptional Children (1) II. A specialty course designed to develop knowledge of the needs of exceptional children with emphasis on mentally retarded or developmentally delayed children. Nursing's role is examined in relation to historical, socio-political and assessment perspectives. Explores values, legal aspects and services. Offered to healthrelated and teaching professions. Prerequisite: consent of instructor.

NURS 419. The Nation's Health Care (2) I. A course designed to stimulate curiosity about factors affecting the health of Americans. Includes a provocative view of health care systems, the role of health care professions and health related issues of a social, economic, political, philosophic and/or ethical nature. Offered to nursing and non-nursing majors. Prerequisite: consent of instructor. Graded $S / U$.
NURS 420. Holistic Self Care Management (2) II. Focuses on creative, innovative nursing strategies to assist clients to increase their self-care such as therapeutic touch, relazation techniques, imagery, hypnosis, biofeedback and others. Emphasizes the holistic, personcentered perspective. Encourages creativity in providing individualized nursing care. Prerequisite: admission to nursing program or consent of instructor. Graded S/U.

NURS 470. Independent Study in Nursing (1-3), I, II, summer. Research or project designed by study with guidance of a faculty member. Open to senior students with consent of a faculty member.
NURS 471. Nursing Systems: Childbearing Families (3) I, II. A theoretical and clinical nursing course using self-care deficit theory with childbearing families throughout the maternity cycle. Emphasis is on supportive-educative and partly compensatory nursing systems. Two hours class and 6 hours clinical experience weekly. Prerequisite: completlon of junior level nursing courses.
NURS 472. Nursing Technologies IV (1) I, II. Assists the student to achieve additional complex skills and theoretical knowledge required in the preparation of generalists in the practice of professional nursing. Includes skills and specific techniques directed toward child bearing and child rearing families. Learning resource center experiences. Prerequisite: NURS 392, concurrent with NURS 471 and 474. Graded S/U. Lab fee.
NURS 473. The Role of the Nurse as Scholar (1) I, II and limited enrollment in summer. Provides the basic knowledge and skills necessary for scientific inquiry into nursing practice. Aids in the development of experienced consumers of scientific reports. Provides principles used in identifying researchable questions in clinical practice and in the initial development of a research proposal. Prerequisites: completion of junior level nursing courses and PSYC 270 , SOC 369 or MATH 115 (statistics courses.)
NURS 474. Nursing Systems: Childrearing Families with a Well/III Child (3) I, II. A theoretical and clinical nursing course using self care deficit theory of nursing applied to childrearing families with a well/ill child. Focus is on the identification of and interventions with the well or ill child/adolescent who needs assistance to care for self or whose care giver needs assistance. Prepares the student to be knowledgeable and skilled in the care of children in order to provide family centered care to clients. Twohour class and 6 hours clinical experience weekly. Prerequisites: completion of junior level nursing courses.
NURS 481. Nursing Systems for Persons with Psychosocial Problems (3) I, II. Focuses on the nursing care of individuals with psychosocial problems, exploration of psychosocial and nursing theories, methods of assistance and research related to the individual and family with psychosocial problems and/or mental illness. Two hours class, 9 hours clinical experience weekly. Prerequisites: completion of junior level nursing courses.

Nups 484. tursing Systems for Persons in the Community ( 4 ) , 11 . The theoretical and clinical content of this course focuses on the family and the community as the basic unit of nursing service. Siudents plan, coordinate, implement and evaluate health care for individuals, families and population at risk across the life span and in a variely of health care setings. Two hours class, 12 hours clinical experience weekly. Prerequisites: completion of junior level nursing courses.
Wuns 994 tracticum in Rursing: Transition to Professional Prantice (6) II. Provides senior students with a concentrated period of clinical practice pricr to employment as a graduate protessional nurse Builds on knowiedge and skills gained in previous courses and provides opportunities for students to integrate nursing concepts and skills. Emphasizes complexity of design and management of nursing systems for individuals, families and multiperson units with a varied range of self care deficits. Provides an opportunity for students to focus their experiences in an area of clinical interest and to gain conlidence and competency for transition into the reality of the work world. 24 hours clinical experience weekly including a 2 hour seminar Prerequisites: all required nursing courses in previous terms of upper division.
TuRS 492. Concepts in Management (1) II. Management concepts with utility for nursing roles in the patient care seiting relative to leadership. group relationships, confict and conflict resolution, planned change and quality assurance. Prerequisites: all required nursing courses in prevous terms. Concurrent with NURS 491.

NuRS 493. Isswes in Prolessionat Nursing (1) II. Analysis of legal and political issues affecting the nursing profession using both historical and curent perspectives. Relationships to be examined and evaluated include the law and nursing, professionalisin and nursing, and power and nursing. Prerequisies: NURS 384,393 and 394.
HuAS 494. Nursing Research Design (1) I, II. Examines responsibilities of professional nurses to advance nursing knowfedge and practice through research. Applies theories and concepts of other disciplines in nursing research and considers eithical implications. Includes development of a final research proposal for investigation of a nursing problem. Prerequisites: NURS 473 and a statistics course.

The following courses in the nursing major must be completed by R.N. / B.S.N. students, at the Miedical College of Ohio at Toledo, in addition to the college core requirements:
NUAS 374, Profassional Role Development (2) Fall quarter. Focus on personal and professional development, feelings, values and cognitions related to the rote transition process.
 quarter. Exploration of Oren's Self-Care Deficit Theory as foundation for nursing practice. Examination of developmental and universal selfcare requisites of food, water and elimination. Emphesis on utilization of nursing process and actuisition of clinical decision-making skills.
Nuns ss5. Cinical Decision- haking il (2) Winter quarter. Continuation of exploration of Orem's Theory. Examination of developmental and universal self-care requisites of air, activity and social interaction.

Nuns 3*6. Nursing Technologies V (1-2) Winter and Summer quariers. A two-course sequence of self-paced modular learning experiences employing multimedia instructional methods to enable the RN siudent io perform a complate health history and physical examination.

NURS 396. Nursing Technologies VI (1-2) Spring and summer quarters. A two-course sequence of self- paced modular learning experiences employing muiti-media instructional methods to enable the RN student to perform a complete health history and physical examination.
NURS 395. Psychosocial Nursing (3) Spring quarter. Emphasizes the therapeutic nurseclient relationship in promoting the client's selfcare agency consistent with their needs and liie style. Encompasses the concept of holistic health. (Clinical course.)

NURS 470 . Independent Study in Nursing (1-4) Fall, winter and spring quarters. Nursing courses, research or other nursing projects designed by students with the guidance of the instructor.
NURS 475. Gerontological Nursing (3) Fall quarter. Use of Orem's Theory and oi the nursing process in clinical decision-making for and with the older client Focus on holistic assessment and nursing interventions for clients in three settings: hospital, nursing homes and the community. (Clinical course.)
NURS 485. Management in the Health Care Delivery System (3) Winter quarter. Management concepts in relation to leadership, conflict resolution, planned change and quality assurance. Major health care issues, trends and patterns of care.

## Operations Research (OR)

Of 380. Introduction to Operations Research (3) I, II. Philosophy underlying formulation of business problems in quantitative terms. Linear programming, special cases of linear programming, sensitivity analysis, inventory theory, and simulation. Prerequisite: MATH 125 or MATH 131, ECON 202, MIS 200.
OR 480. Linear and Integer Programming (3) Modeling industrial and public administration problems via inear, goal and integer programming; sensitivity analysis, dual, parametric programming; cutting-piane and branch and bound method; Balas additive theorem; current topics in integer programming. Prerequisite: OR 380 or CS 440.

OR 482. Computer Simulation of Stochastic Systems (3). Techniques of setting up stochastic models for inventory, production, queuing, scheduling, economic systems; implementing these models using computer simulation languages (e.g. GPSS). Prerequisites: STAT 212 or MATH 442, and at least one computer programming course.
OR 485. Introduction to Stochastic Models (3). Problems of incorporating risk into decision models; queuing theory; stochastic inventory models; Markov chains; stochastic mathematical programming. Prerequisite: OR 380 or CS 440 , STAT 315 recommended.

OR 487. Network Analysis (3). Network techniques for modeling and analysis of industrial and management problems: project management and resource allocation with PERT/CPM; transportation, transshipment, assignment, shortest path and minimal spanning tree models; maximal flow problems in single and multicommodity networks; out-of-kilter algorithm; advanced topics in network analysis. Prerequisite: OR 380 or CS 440.

OR 488. Inventory Models (3). Theory and techniques of constructing and analyzing mathematical models of inventory systems; models under stochastic conditions. Prerequisite: OR 380 or CS 440, STAT 315 recommended.

OR 489. Appled Nonlinear and Dynamic Programming (3). Quadratic and separable programming; gradient projection; penalty function and search methods. Dynamic programming with discrete and continuous variables, and its relationship to linear programming; geometric programming; applications in industry and pub lic administration. Prerequisite: OR 380 or CS 440.

OR 491. Studies in Operations Pesearch (1-3) On demand, Investigation of selected areas of contemporary problems. May be offered individualiy and in classes, depending on student needs and nature oí material.

## Philosophy (PHIL)

IT PHIL 10t. Introduction to Philosophy (3) 1,11 . Systematic study of enduring human concerns about God, morality, society, the self and knowledge.

IT PHIL 102. Introduction to Ethics (3) I, Il. Discussion of ethical concepts such as good and evil and right and wrong in the contexi of contemporary moral issues; major ethical theories as a basis for dealing with contemporary moral concerns.
TSPHIL 103. introduction to Logic (3) I, II. Uses of language including definitions and arguments, typical mistakes in reasoning, and methods of evaluating arguments.
PHIL 107. Introduction to Social Philosophy (3) I, II. Freedom, authority, law, the state examined philosophically to determine nature of "individual" and "society" and relationship that should exist between them; violence, rights (legal and moral), punishment, allenation, justice, elc.

TPHIL 204. Aesthetics (3) I, II. Meaning of "beauty" or aesthetic value in art and nature, approached problematically and applied to present-day experiences.

PHIL 210. Philosophy of Development of Per: sons (3) I, li. Self-development and criteria for evaluating life plans. Concepts of self-esteem and social responsibility applied to persomal and counseling situations,
(TPHIL 211. History of Ancient Philoscphy (3) I. Progress of Greek philosophy from its earliest origins in Greece through the Presocratics, Plato, and Aristotle, concluding with main themes of Hellenistic, Roman and medieval philosophy. PHIL 211 can function as an excellent introduction to philosophy.
\&PHIL 212. Hisiory of Modern Philosophy (3) II. Modern philosophy from its beginnings in the Renaissance through the rationalists, empiricists, and Kant. Attention to emergence of skepticism and rise of modern science as important influences on the development of modern philosophy. PHIL 212 can function as an excellent introduction to philosophy.
7) PHIL 230. Scientific Reasoning (3) I or II. Study of the scientific mehod which develops skills for interpreting scientific findings, and evaluating theories, tests and causal and statistical claims. One component deals with decision-making procedures based on these evaluations. No prerequisites.

- PHIL 240. Topics in Philosophy (3) 1, II.'Subject matter designated in class schedule. Primarily for students with littie or no background in philosophy.
PHIL 245. Philosophy of Feminism (3) I orll. Philosophical presuppositions and specific proposals of feminists; views on sex roles, human welfare, justice and equality, rights, self-actualization, self-respect, autonomy, exploitation, oppression, freedom and liberation, reform and revolution.

PHIL 303. Symbolic Logic (3) | or II. Notation and proof procedures used by modern logicians to deal with special problems beyond riaditional logic; propositional calculus, truth ables, predicate calculus, nature and kinds of tuggical proofs.

PHIL 311. History of Medieval Philosophy (3) I Alternate years. Offered in 1982-83. Major philosophical positions of Middle Ages; St. Augustine through Renaissance philosophers.

## PHIL 313. History of Contemporary Philos-

 ophy (3) II. Major movements in the 20th century, some emphasis on the most recent ones; includes existentialism, logical atomism, ordinary language analysis, and recent American analytic philosophy, and such philosophers as Sartre, Russell, Wittgenstein, Austin, Quine, and Davidson.PHIL 315. American Thought (3) I or II. Philosophical thought in America; emphasis on pragmatists (Peirce, James, Dewey); Natural Rights philosophy, transcendentalism, other major figures such as Royce, Santayana, Whitehead.
PHIL 317. Philosophy of Religion.(3) I or II. Nature of religion; gods and/or God; faith, revelation, and religious beliet; evil and righteousness; meaning of life. Readings from variety of sources, largely contemporary.
PHIL 318. Philosophy of Law (3) I, II. Philosophical foundations of legal system; essential nature of law and relation to morality; liberty, justice, and legal responsibility (intention, human causality, negligence, mens rea, fault, etc.) and punishment.

PHIL 319. Philosophy of Death and Dying (3) L. II. Conceptual, metaphysical, and epistemological issues related to nature of death; existential issues related to human significance of death for individual and community; normative issues related to care of dying.

PHIL 320. Business Ethics (3) I, II. Value conflicts that arise in business situations and philosophical ways of resolving them including issues involving the social responsibility of business people. No prerequisite.
PHIL 321. Indian Philosophy (3) | or II. Traditional schools such as Nyaya-Vaisesika, Sankhya-Yoga, Buddhism and Vedanta; epistemology, systems of formal inference, causality, metaphysics, mind-body relationships, methodological presuppositions.
PHIL 323. Asian Religions (3) I or II. Fundamental tenets of major oriental religions Hinduism, Buddhism, Jainism, Confucianism, Taoism, and Shintoism; cultural backgrounds of India, China, and Japan.
PHIL 325. Communism, Capitalism and Democracy (3) I or II. Freedom, alienation, human nature, the state, etc. as they function in communist, capitalist and democratic ideology.
PHIL 327. Philosophy of Punishment (3) I, II. Justification of capital punishment; acceptability of imprisonment as punishment; desirability of treating criminals as mentally ill rather than punishing them; related issues of different theories of punishment.
PHIL 331. Existentiallsm (3) I or II. Various existential themes, including the meaning of fie, human freedom, the limits of reason, the meaning of death, and the individual vs. society. Kierkegaard, Nietzsche, Dostoevsky, Camus, Sartre, Jaspers, Buber, and others comprise the reading.

PHIL 332. Environmental Ethics (3) | or II, Framework to assess possible responses to environmental problerss in light of human rights, standards of justice, and harm and benefit accruing from alternative solutions.
PHIL 333. Philosophy in Science Fiction (3) 1 or II. Ethical problems such as implications for man of advancement of science, relation of individual to state; metaphysical problems such as distinguishing men from robots, possibility of time travel.

- PHIL 334. Philosophy in Literature (3) I or II. Death, perception of self, conflict of values occurring in novels, plays, and poetry from various cultures. Content may vary from instructor to instructor, and from semester to semester. May be taken only once for credit.
PHIL 335. Philosophy of Film (3) I or II. Aesthetic theories concerning definition of film as distinctive art form; criteria for evaluation of films. Popular, documentary, art, and experimental films shown in class.

PHIL 340. Problems in Philosophy (3) I, II. Subject matter designated in class schedule. Primarily for students with little or no background in philosophy.
PHIL 342. Medical Ethics (3) I, II. Selected topics such as genetic engineering, euthanasia, honesty with the dying, and human experimentation viewed from perspective of representative ethical theories.
PHIL 344. Computers and Philosophy (3) I, II. Philosophical dimensions of the impact of computers on society with emphasis on the issues of ethics and artificial intelligence. Prerequisite: CS 101, its equivalent or permission of the instructor.
PHIL 395. Workshop on Current Topics (1-4) I, II On demand. Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format is used. Requirements are usually completed within this expanded time format. May be repeated if topics differ and adviser approves.

PHIL 403. Topics in Logic (3) I or II. Content varies from year to year. Topics include: modal logic, meta-theory of propositional and predicate logic, philosophy of logic. May be repeated for credit. Prerequisite: PHIL 303 (or equivalent) or consent of instructor.
PHIL 406. Philosophy of Language (3) I Alternate years: offered 1982-83. Historical and contemporary theories of meaning; their use in resolving traditional philosophical controversies and in providing foundation for contemporary analytic philosophy; various interdisciplinary connections.

PHIL 412. Theory of Knowledge (4) I or II; Alternate years. Survey of traditional epistemological issues and concepts combined with indepth treatment of some epistemological problem(s). Prerequisite: twelve hours of philosophy.
PHIL 414. Metaphysics (4) I or II; Alternate years. Survey of traditional metaphysical issues and concepts combined with indepth treatment of some metaphysical problem(s). Prerequisite: twelve hours of philosophy.
PHIL 415. Topics in American Philosophy (3) I or II. Theme or themes central to American philosophy. Prerequisite: one course in PHIL (excluding. PHIL 103) or consent of instructor.
PHIL 418. Philosophy of History (3) I or II. Nature of historical knowledge and certain metaphysically oriented theories of history. Prerequisite: one course in PHIL (excluding PHIL 103) or consent of instructor.

PHIL 423. Philosophy in Historical Perspective (4) I or II. Historical development and cultural background of a philosophical movement, issue or period combined with an indepth study of views of a major philosopher within that context. The latter will emphasize the integration of the philosopher's metaphysical, epistemological, and normative theories into a coherent world view. May be repeated. Prerequisite: twelve hours of philosophy.
PHIL 425. Moral and Social Philosophy (4) I or II. An indepth treatment of some theme(s) in social philosophy combined with a survey of traditional ethical theories as a background to social philosophy. Prerequisite: twelve hours of philosophy.
PHIL 431. Topics in Philosophy of Science (3) I or II. Content varies from year to year. Topics include: nature of scientific explanation, causality, contemporary empiricism, philosophy of biology, methods, presuppositions, concepts of behavioral sciences. May be repeated for credit. Prerequisite: three hours in PHIL and/or course work in sciences or consent of instructor.

PHIL 433. Philosophy and Physics of Space and Time (3) II. Physical theories of space and time from philosophical, scientific, and historical points of view. Topics include Zeno's paradoxes, Greek concepts of space and time, classical Newtonian world view, general ideas of modern theory of relativity and cosmology. Course presupposes high school level mathematics only. Crossdisciplinary; cross-listed in PHYS.

PHIL 470. Readings and Research (1-3) I, II. Supervised independent work in selected areas. Prerequisite: twelve hours of PHIL and consent of chair of department. May be repeated to six hours.
PHIL 480. Seminar in Philosophy (3) I, II. Indepth examination of one specific philosopher, philosophical movement, or problem. Determined by need and interest of student. Prerequisite: four hours in PHIL (excluding PHIL 103) or consent of instructor.

## Physical Education, General (PEG)

- PEG 100. General Physical Education (1) I, II, summer. Each freshman must fulfill the University requirement of two units from diverse physical activities. Most activities are coeducational. Two hours per week. Graded S/U.
- PEG 200. General Physical Education (1) I, II, summer. Elective program in diverse activities. Open to any student who has completed the University required two hours in PEG 100. Two hours per week.


## Physical Education, Professional (PEP)

PEP 110, 112, 116, 121, 123, 124. Required Prolessional Activities. A required program of skill and knowledge development within each activity including identification/analysis/ observation of elements of movement. Two laboratories. C/F hrs.: 10 each
PEP 110. Gymnastics-Men (2) I, II.
PEP 112. Gymnastics-Women (2) I, II.
PEP 116. Soccer (2) I.
PEP 121. Tennis (2) I.
PEP 123. Track and Field (2) I.
PEP 124. Volleyball (2) I, II.

PEP 137. Educational Dance (1) I, II. Movement approach for dance where the learner becomes aware of the expressive values inherent in dance by experiencing and analyzing movement, creating dances, and responding to dance structure. One laboratory. Advisable to take concurrently with PEP 138.
PEP 138. Educational Gymnastics (1) I, II. Movement approach to gymnastics where the learner becomes aware of how to manage body weight and understand concepts related to the development of versatile, qualitative and inventive movement. One laboratory. Advisable to take concurrently with PEP 137.
PEP 201-205, 207-209, 213, 214, 217-219, 226. 228. Elective Professional Activities. Elective courses of skill and knowlege development basic to participation and understanding of the activity. One laboratory.
PEP 207. Archery (1) I. Alternate years.
PEP 202. Badminton (1) $I$, II.
PEP 203. Basketball (1) I, Il.
PEP 204. Bowling (1) H.
PEP 205. Diving (1) I. Alternate years.
PEp 207. Fencing (1) II. Alternate years.
PEP 208. Field Hockey (1) I. Alternate years.
PEP 209. Goff (1) I.
PEP 213. Lacrosse (1) II. Alternate years.
PEP 214. Rebound Tumbling (1) II. Alternate years.
PEP 217. Softball (1) 1.
PEP 218. Swimming (1) I.
PEP 219. Synchronized Swimming (1) I.
PEP 226. Wrastling (1) II. Alternate years.
PEP 227. Advanced Educational Dance (1) II.

## Alternate years

PEP 228. Advanced Educational Gymnastics (1) II. Alternate years.

PEP 222. Advanced Synchronized Swimming (1) On demand. For advanced synchronized swimmer or person interested in participating in annual production and demonstrations; choreography, lighting, publicity and production. Laboratory hours arranged. May be repeated to four hours. Prerequisite: consent of instructor.

PEP 225. Advanced Lifesaving (1) I, II, summer. Red Cross Advanced Lifesaving training techniques and skills designed to save lives in the event of aquatic emergencies. Prerequisite for water safety instructor's course and lifeguard training. One laboratory. Prerequisite: eligibility testing conducted first week of course.
PCE 230. Structural Kinesiology (4) I, II, and alternate summers. The study of movement based on functional anatomy and selected mechanical principles. Three lectures; one laboratory. Prerequisite: sophomore standing. C/F hrs.: 15.
PEP 233. Laboratory Experiences with Children (2) II, alternate years. Opportunities to engage in field experiences with urban children in closely supervised school situation and in oncampus settings focused on developing, analyzing and improving teacher behavior through working with individual EMR children and assisting in classes. May be repeated to four hours. Two laboratories. C/F hrs.: 45.
PEP 235. Protessional Reading and Writing in Physical Education (1) On demand. Reading and interpretation of literature in physical education; writing professional paper; treatment of pertinent statistical techniques. Prerequisite: ENG 112.
PEp 238. Teaching Educational Gymnastics to Children (2) I, altemate years. Movement approach to gymnastics for children with emphasis on program content, methodology and progression. One lecture, one laboratory. Prerequisite: PEP 138 or permission of instructor. C/F hrs.: 21.

PEP 241. Educational Games Teaching to Children (2) I, il. Structure and teaching progression of games and sports; social, motor and cognitive. One lecture, one laboratory. Prerequisite: PEP 137 or PEP 138 or permission of instructor. C/F hrs.: 40.

PEP 247. Practical Experience (3) I, II. Supervised field experience with groups between ages of 11-18. Not open to first or second semester freshmen. Two lectures, one laboratory. Prerequisites: PEP 230, SPCH 102. Recommended: PEP 137, PEP 138. C/F hrs.: 50.
PEP 256. Concepts of Physical Education (2) 1, II. Introduction to the profession of physical education; objectives of physical education, elementary school and secondary school physical education, competitive athletics. adapted physical education, and career opportunities. Open only to major or minor students in physical education or by consent of instructor.
PEP 303. Biomechanics (3) I, II, alternate summers. The study of human motion through the examination of internal and external forces acting on the body and the effects produced by these forces. Two lectures, one laboratory. Prerequisite: PEP 230. C/F hrs.: 20.
PEP 322. Red Cross Water Safety Instructor's Course (2) I, II. Completion certifies student to conduct and to certify Red Cross swimming and lifesaving courses except WSI. One lecture, one laboratory. Prerequisites: Current advanced lifesaving certificate, evidence of teaching need, and consent of instructor. C/F hrs.: 10.
PEP 332. Teaching-Learning Processes (3) I, II. Analysis of student-teacher behaviors through clinical and field-based experiences for the purpose of developing and improving teacher-learning effectiveness. Emphasis on personal assessment and development of techniques. Two lectures, one laboratory. Prerequisites: PEP 137, PEP 138, PEP 241 and/or permission of instructor. C/F hrs.: 60.
PEP 337. Teaching Educational Dance (2) I, alternate years. Movement approach to children's dance with special emphasis on program content, methodology and progression. One lecture, one laboratory. Prerequisite: PEP 137 or permission of instructor.
PEP 340. Motor Development (3) II. Physical growth and perceptual-motor development of human beings including observation of children and assessment of perceptual and motor characteristics. C/F hrs.: 30.
PEP 342. Physical Education in the Elementary School (3) I, II, summer. Movement approach to physical education in the elementary schools including the examination of teacher behavior, child behavior, teaching techniques and styles and movement content. Suggested prerequisites: PEP 137, 138.
PEP 350. Motor Learning (3) I, II. Perception, learning, motivation and other psychological factors involved in motor learning and performance. Two lectures, one laboratory. Prerequisite: EDFI 302, C/F hrs.: 40.
PEP 356. Philosophical and Cultural Bases of Physical Education (3) II. The study of philosophy and culture pertinent to the shaping of physical education as a discipline.
PEP 360. Exercise Physiology (3) I, II. Lecture/laboratory course; the immediate and long range effects of exercise upon the human body. Two lectures, one laboratory. Prerequisite: BIOL 332. C/F hrs.: 20.

PEP 362. Teaching Motor Activity in Secondary Schools (3) I. Principles, objectives, lesson planning, instructional materials, teaching methods, curriculum, and field experience in physical education in the secondary schools. Two lectures, two laboratories. Prerequisites: PEP 350, EDFI 302, and admission to PEP Major Plans II or III. C/F hrs.: 60.
PEP 387. Practicum (1-5) I, II, summer. Field experience under supervision of PEP division of School of Health, Physical Education and Recreation. Petitioning required of each student before registration. Credit hours for each experience approved separately by program area. Prerequisite: approval of PEP division faculty.
PEP 392. Practicum in Secondary School
Physical Education (2) I. Field experience in physical education in the public school. Weekly assignment includes being in a public school two half days and attending regular seminars. Arrange. Prerequisites: PEP 362 HED 313, and junior standing. C/F hrs.: 90.
PEP 395. Workshop on Current Topics (1-3). On demand. Intensive educational experience in selected topics related to skill development, content update, or material development Typically, an all-day or similar concentrated time format. Prerequisites: approval of PEP division faculty and chair.
PEP 402. Assessment and Evaluation in Physical Education (2) $I$, II, alternate summers. Assessment and evaluation principles and techniques with application to performance/ learning in physical education programs. C/F hrs.: 8.
PEP 412. Organization and Administration of Physical Education and Interscholastic Athletics (3) I, II, alternate summers. Organization and administration of the total physical education program including instructions, intramurals, extramurals and interscholastic athletics. Prerequisite: senior standing.
PEP 428. The Movement Approach to Teaching Physical Education to Chifdren (5) II. Selection, design, and application of learning experiences appropriate for elementary school child based on movement concepts. PEP 387 must be taken concurrently. Two lectures, three laboratories. Prerequisite: PEP 332. Recommended: PEP 233, PEP 238, PEP 241, PEP 337 or approval of instructor. C/F hrs.: 100.
PEP 433. Fundamentals of Physical Education and Recreation for Special Populations (3) I, II, summer. Principles, objectives and history of adapted physical education. Overview of disabilities in relation to assessment, movement, instructional methods, resource materials, observation strategy and field trips. Two lectures, one laboratory. C/F hrs.: 35.
PEP 435. Motor Performance of Exceptional Children (3) II, alternte years. Relationship of neuromuscular patterns, assessment, and programming to movement of exceptional child field work. Two lectures and arrange. Recommended prerequisite: PEP 433 or PEP 340 . C/F hrs.: 20.
PEP 438. Seminar In Elementary School Physical Education (2) II, alternate years. Identification and examination of selecied curricular problems and issues in elementary school physical education. Prerequisite: PEP 428 or permission of instructor. C/F hrs.: 30.
PEP 470. Independent Study in Physical Education (1-3) I, II, summer. An indepth study project of a topic of particular significance to the student. Project must be approved by project supervisor and program area chair prior to registration. May be repeated. Prerequisite: by permission.

PE.P 487. Practicum (1-5) I, II, summer. Under supervision of PEP division of School of Health, Physical Education and Recreation Petitioning and approval required of each student before registration. Credit hours for each experience approved separately by program area. Prerequisite: approval of PEP division faculty.
PEP 492. Student Teaching (1-10) I, II. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required for elementary and/or kindergarten-primary certification. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs.: 300. May be repeated.
PEP 497. Student Teaching $(1-10) I$, II. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs.: 300 . May be repeated.

## Physical Therapy (PHYT)

PHYT 301. Human Gross Anatomy I (3) I. An integrated study of normal and variations of normal human biologic structure of the musculoskeletal, nervous, circulatory systems and epithelia and connective tissues of the trunk and extremities as correlated to function. Laboratory sessions to include cadaver dissection and prosected materials. Two hours of lecture, two two-hour laboratories.

PHYT 302. Human Gross Anatomy II (2) II. An integrated study of normal and variations of normal human biologic structure of the thorax and its contents as correlated to function. Laboratory sessions to include cadaver dissection and prosected materials. Two hours of lecture, one two-hour laboratory.
PHYT 304. Principles of Massage (2) I. History, theory, rationale, physiological effects and appropriate application of massage. One hour lecture, one two-hour laboratory.
PHYT 305. Human Neuroanatomy (2) I. An integrated study of normal and variations of normal human biologic structure of the central and peripheral nervous systems as correlated with neurophysiological functions. Laboratory sessions to include cadaver dissection and prosected materials. One hour of lecture, one two-hour laboratory
PHYT 306. Neurophysiology (2) II. Principles of neurophysiological and neuropathological motor and sensory function and related assessment skills and an understanding of the pain phenomena. Two hours of lecture.

PHYT 309. Functional Anatomy (3) II. Normal and abnormal static and dynamic human posture through the examination of internal and external forces acting on the body. Two hours of lecture, one two-hour laboratory.
PHYT 311. Pathology and Pharmacology I (2) 1. Pathogenesis and clinical sequelae of diseases and disorders of the musculoskeletal and nervous systems and pharmacological agents frequently used to treat such conditions. Two hours of lecture.

PHYT 312. Pathology and Pharmacology II (2) II. Pathogenesis and clinical sequelae of diseases and disorders of the cellular, cardiovascular, respiratory, metabolic and gastrointestinal systems. Two hours of lecture.
PHYT 321. Physical Therapy Procedures I (2) I. Physiological principles and appropriate technique of application of thermal and compression agents used in treating clients. Two hours of lecture, two three-hour laboratories. To be offered the first six weeks of the semester.

PHYT 322. Physical Therapy Procedures II (2) I. Physiological and bioelectrical principles and appropriate technique of application of high frequency and radiation modalities and traction used in treating clients. Three hours of lecture, two two-hour laboratories. To be offered the last nine weeks of the semester.

PHYT 326. Applied Medical Sciences (2) II. Clinical course and treatment of medical, surgical, and psychiatric disorders with emphasis on conditions frequently treated in physical therapy. An introduction of basic learning theory as related to clinical practice. One twohour lecture.

PHYT 331. Therapeutic Exercise I (2) I. History and theory of therapeutic exercise. An introduction to the types of exercises and muscle contractions and principles of body mechanics in client movement activities and the physiological positioning of patients. Two hours of lecture, one two-hour laboratory.
PHYT 332. Therapeutic Exercise II (2) II. Emphasis on assessment procedures to include the manual muscle test, functional evaluation, goniometry and other assessment skills. One hour lecture, one two-hour laboratory.
PHYT 381. Clinical Practicum I (2) II. Observation and orientation to physical therapy departments including patient care, treatment procedures, and patient/therapist relationships. Tues. and Thurs. afternoons, arranged. Graded S/U
PHYT 401. Human Growth and Development (3) I. Eight stages of human life with emphasis on neonatal and early childhood development and the aging process. The course includes developmental assessment and an understanding of the interrelationship of physical, perceptual, motor, social and cultural factors. One hour lecture and one two-hour laboratory.
PHYT 402. Electrophysiological Assessment and Treatment (2) II. Theory and application of electrical currents in assessment and treatment of patients. One hour of lecture, one two-hour laboratory.
PHYT 403. Evaluation Principles and Techniques Applied (2) II. Case study approach to the total evaluation and treatment planning of the patient to include: goal setting, diagnosis, prognosis, physical/mental status, effective and appropriate treatment methods, periodic review and accurate documentation for that patient. One one-hour case presentation, and one one-hour faculty/student discussion.
PHYT 404. Sports Trauma (2) I. Incidence, biomechanical and pathomechanical analysis and method of determining severity of sports injuries to the torso and extremities and the appropriate application of bandaging and adhesive strapping. One hour of lecture, one two-hour laboratory.
PHYT 406. Physical Trends and Management
(2) I, II. The development and organization of the professional association and its relation with other health care participants in the operation of a physical therapy service. Three hours of lecture.

PHYT 410. Research Methods (2) I. Scientific method of problem solving including formulation of a hypothesis, research design, methods of data collection, literature search and the critical analysis of professional literature. Two hours of lecture.
PHYT 411. Prosthetics and Orthotics (2) Ill. Orientation to management of the amputee and principles of functional bracing. Two hours of lecture.

PHYT 412. Orthopaedic Physical Therapy (3)
I. Philosophy, theory and principles of assessment of joint dysfunction, fracture management and mobilization of the peripheral joints. Review of normal and abnormal structure and function of the vertebral column and the sacroiliac joints. One hour lecture, one two-hour laboratory.
PHYT 421. Cardiopulmonary Physical Therapy (3) II. Principles of evaluation and the application of therapeutic principles to pathological disorders of the cardiopulmonary systems. Two hours of lecture, one two-hour laboratory.
PHYT 422. Rehabilitation Techniques (3) II.
Theories, philosophies and principles of rehabilitation for the chronically disabled. One hour of lecture, one two-hour laboratory
PHYT 431. Therapeutic Exercise III (4) I. History, development and neurophysiological application of therapeutic exercise to clients with neuromuscular disorders. Two hours of lecture, two two-hour laboratories.
PHYT 470. Independent Study (2) II. In depth study of clinically related problems or topic of interest. Consent of faculty required.
PHYT 481. Clinical Practicum II (2) I. Observation and orientation of physical therapy departments including patient care, treatment procedures, and patient/therapist relationships. Mon., Wed., Fri. afternoons, arranged Graded S/U.

PHYT 482. Clinical Practicum III (2) II. Observation and orientation of physical therapy departments including patient care, treatment procedures, and patient/therapist relationships. Mon., Wed., Fri. mornings, arranged. Graded S/U.

PHYT 489. Clinical Internship (10) Summer. Observation and orientation of physical therapy departments including patient care, treatment procedures, and patient/therapist relationships. Two rotations; one of six weeks and one of five weeks duration, 40 hours/ week, arranged. Graded S/U.

## Physics (PHYS)

PHYS 100. Basic Physics (3) I summer. For nonscience student; major principles and concepts; application to other fields. Not acceptable toward physics major or minor.
ITPHYS 101. Physics for Society (3) II. Relation of physics to areas of natural science, cultural development, and society. Two lecturerecitations and one two-hour laboratory. For nonscience student; not acceptable toward physics major or minor. Lab fee.
PHYS 104. Physics for Elementary Teachers (2) I, summer. Introduction to laws of motion, heat flow, electricity, and microscopic structure of matter; concepts used in the statement of these laws and their applications. Not acceptable toward physics major or minor.
PHYS 105. Physics and Sports (2) II. Alternate years. Basic physical principles, using athletic activities as examples. Not acceptable toward physics major or minor.
PHYS 106. Physics of Photography (2) 1 Alternate years. Elementary physics applied to the photographic process. Intended to help photographers better understand their equipment. Topics include: elementary optics of lens systems, macrophotography, exposure control, black and white film, and color theory. Not acceptable toward physics major or minor.
 summer. First term of an introductory physios sequence intended for students without calculus. Motion, forces, energy, electricity, magnetism and electrical measurements. Four lecture-recitations and one two-hour laboratory. Prerequisites: algebra and trigonometry. Lab tee.
70 ***HYs 202. College Physics II (5) I, II, summer. PHYS 201 continued. Fluids; heat; wave motion, sound; optics; atomic and nuclear physics. Four lecture-recitations and one two-hour laboratory. Prerequisite: PHYS 201. Lab tee.

If*PHYS 211. University Physics 1 (5) I. Introductory calculus-based physics sequence for science and engineering majors, Kinematics in one, two, and three dimensions; Newtonian mechanics; gravitation; heat and thermodynamics. Four lecture-recitations and one twohour laboratory. Corequisite: MATH 131. Lab fee.

PHYS 211 continued. Wave motion, sound, optics, electricity and magnetism. Four lecture recitations and one two-hour laboratory. Prerecuisite: PHYS 211. Corequisite: MATH 232. Lab fee.
*Prys 301. Modern Physics (3) I. Topics from relativity; quantum physics; nuclear, atomic tand molecular physics. Three lecture-recitations. Prerequisites: one year of calcuius and PHYS 201; or PHYS 212. Student must also register for PHYS 313.

PHys 303. Electronics (3) II. Discussion and laboratory practice in networks, transistors, integrated clrcults, and associated circuitry. Two lecture-recitations and one three-hour laboratory. Prerequisite: PHYS 201 or PHYS 212. Lab fee.

PHYS 305. Wave Laboratory (1) II. Introduction to advanced experimental techniques and data analysis; laboratory investigation of wave phenomena. One three-hour laboratory. Prerequisites: PHYS 212; or PHYS 202 and one year of celculus, lab fee.
PHY\$ 306. Themodynamics and Statistical Physics (3) |, Alternate years. Thermodynamic laws, entropy, specitic heat, kinetic theory; classical and quantum statistics. Three lecture-recitations. Prerequisites: one year of calculus and PHYS 202; or PHYS 212.

PHYG 307. Hechanics and Wave Motion (3) II. Mechanics of periodic systems including: the Kepler problem; driven harmonic oscillator; and coupled oscillators. Fundamentals of wave motion and the propagation of waves in elastic media. Three lecture-recitations. Prerequisites: PHYS 212; or PHYS 202 and one year of calculus.
Phys 305 . Atomic and Nuclear Physics (3) II. Phenomenological basis of our understanding of atomic phenomena, fundamental ideas of atomic structure, structure of nuclei and basic decay processes. Three lecture-recitations. Prerequisite: PHYS 301.
PHYS 313. Modern Physics Laboratory (1) I. Laboratory work designed to accompany material presented in PHYS 301. One threehour laboratory. Prerequisite: PHYS 202 or PHYS 212. Lab fee.

PHYS 321. Recent Progress in Astronomy (2) I. Alternate years. Pulsar dynamics, gravitational collapse and black holes, galaxies, large-scale structure in the universe, active galaxies and quasars, cosmology. Two lecture-recitations. Prerequisites: PHYS 212; or PHYS 202 and one semester of calculus. Not open to students with credit for ASTR 321.

PHYS 350. Musical Acoustics (3) II. 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 student majoring in physical sciences.
PHYS 400. Selected Topics in Physics (1-3) On demand. Selected topics not included in existing courses. Scheduling of course may be initiated by department staff or by students. May be repeated as different subjects are offered. Prerequisite: consent of instructor.
PHYS 401. Methods of Theoretical Physics I (3) I. Systems with more than one variable quantity; basic field theory; systems governed by rate equations; vibrating systems; Lagrangian and Hamiltonian dynamics; Fourier analysis; special functions arising from physical systems. Prerequisites: PHYS 212 and one year of calculus.
PHYS 402. Methods of Theoretical Physics II (3) II. Alternate years. Computational physics with applications of: Laplace's equation, wave and diffusion equations. Complex variable analysis. Rigid body motion and the eigenvalue problem. Prerequisite: PHYS 401.
PHYS 403. Stellar Structure and Evolution (3) II. Alternate years. Basic data, stellar interiors, theoretical models; advanced evolutionary states: red giants, white dwarfs, neutron stars, supernovas, black holes. Prerequisites: PHYS 301 and consent of instructor. Not open to students with credit for ASTR 403.
PHYS 406. Modern Optics (4) I. Principles of physical optics and modern spectroscopy; photodetectors; lasers and electro-optics. Three lecture-recitations and one three-hour laboratory. Prerequisite: PHYS 305.

PHYS 410. Solid State Physics (3) II. Alternate years. Continuum and atomic theories of solids, lattice vibrations, specific heat of solids, electron theory of metals and semiconductors. Superconductivity. Three lecturerecitations. Prerequisite: PHYS 307.
PHYS 411. Physics of Materials (3) |I. Alternate years. Structure and physical properties of ceramics, composites, and metallurgically important alloys. Principles and methods of modern materials analysis. Three lecturerecitations. Prerequisite: PHYS 307.
PHYS 412. Infrared Molecular Spectra (2) II. Alternate years. Origin of spectra of simple molecules. Prerequisite: PHYS 301 or course in physical chemistry.
PHYS 417. Quantum Mechanics (3) II. Alternate years. Duality of matter and radiation, state functions and interpretation. Heisenberg uncertainty principle, wave equations and principles of wave mechanics, elementary applications of Schroedinger's equation, operator methods, and approximation techniques. Prerequisite: PHYS 401.

PHYS 418. Electricity and Magnetism I (3) I. Electric and magnetic fields; Maxwell's theory of electromagnetic field with applications in propagation, absorption, reflection, transmission of radiation. Prerequisites: PHYS 401 and MATH 233.

PHYS 419. Electricity and Magnetism II (3) II. Alternate years. PHYS 418 continued with applications to guided waves and physical optics. Relativity. Prerequisite: PHYS 418.

PHYS 427. Signal Processing (2) II. Introduction to techniques of signal processing; dataacquisition and reduction, spectral analysis of continuous signals, sampling, aliasing and discrele Fourier transform. Convolution, correlation and filtering. Prerequisite: PHYS. 401 or equivalent.
PHYS 428. Microcomputer Interiacing (3) I. Medium and large scale integrated circuits such as peripheral interiace adapters. Integrated circuits such as UARTS, A/D converters are used to interface a microcomputer to the external world of the laboratory. One class period and two three-hour laboratories. Prerequisites: CS 307 and PHYS 212 or 201, or permission of instructor. Lab fee.
PHYS 429. Selected Topics in Microelectronics (1-3) On demand. An individual, indepth study of a microelectronic project. Designed to integrate the introductory knowledge gained in PHYS 303 and PHYS 428 into a complete microelectronic system. Arranged. Prerequisites: PHYS 428 and PHYS 303.
PHYS 433. Philosophy and Physics of Space and Time (3) II. Physical theories of space and time from philosophical, scientific, and historical points of view. Topics include Zeno's paradoxes, Green's concepts of space and time, classical Newtonian world view, general ideas of modern theory of relativity and cosmology. Cross-listed in PHIL
PHYS 470. Independent Study (1-2) On demand. Introduction to research in physics and astronomy; projects chosen in consultation with adviser, may include library and laboratory work. Prerequisite: consent of instructor.
PHYS 490. Special Problems in Physics (1-3) On demand. Readings and research on recently developing topics chosen to fit needs of students.

## Political Science (POLS)

If POLS 101. Introduction to Politics (3) I, II. Fundamental concepts and problems of politics illustrated with contemporary examples; comparison of modern political institutions in different cultures. Restricted to freshmen and sophomores.
4 POLS 201. American Government: Processes and Siructure (3) I, II. Constitutional basis and development, political processes (parties, nominations and elections, interest groups, public opinion), federalism, and institutions of national government.

- POLS 221. Introduction to Public Administration (3) I, II. American administrative system: emphasis on administrative structures and processes; relationship between elected offices and bureaucracy, notion of civil service, modes of managing administrative system.
\$POLS 250. Human Nature and Politics (3) On demand. Contemporary and historical perspectives of what man is and can be in relationship to systematic thought about politics. Fundamentals of critical thought and analysis of political controversies. Designed for general students and for those considering political theory as a field.
|PPOLS 271. Introduction to Comparative Government/International Relations (3) I, II. Basic concepts, approaches to, and comparisons of foreign political systems, including political cultures, participation, interest groups institutions, and processes; essential tools and methods of analysis for the study of foreign governments and international relations.


## POLS 290. Introduction to Political Inquiry (3)

 I, II. Concepts and theories used by political scientists; traditional- and behavioral-political science; how political scientists establish and evaluate concepts and theories. Required of all majors; should be taken before any 300 level course. Nonmajors must receive permission of instructor.POLS 301. Modern Political Ideologies (3) I, II. Nature of political power, freedom, authority, and terrorism as seen in ideologies of democracy, capitalism, liberalism, conservatism, communism, anarchism, socialism, and fascism.
'POLS 302. American Domestic Policy Process (3) I, II. Theories of public policy process; models of decision-making analysis; contemporary American domestic policy issues.
POLS 304. American Political Thought (3) II As reflected in colonial, Federalist, Civil War and late 19th century political thought.
POLS 330. Urban Management (3) I. Urban problems, local government structure and administrative mechanisms, national/state urban policies, service delivery, performance measures, alternatives for improving city/ county management and urban conditions. Prerequisite: POLS 221 or permission of instructor.
POLS 331. State and Local Government (3) I, II. Influence of culture and socioeconomic factors on state-local politics; state constitu tions, municipal corporations and charters; political participation; institutions and processes; intergovernmental relations; policy issues and outcomes in state/local government with special reference to Ohio.
POLS 333. Politics, Science and Public Policy 3) I. Impact of politics and science in making national science policy. Politics of science, science and its use in making public policy, role of science and technology in American and other industrial countries

POLS 334. Health and Medical Policy (3) II. Policies, issues, process involved in formulation and implementation of health care Politics of delivery of health care, insurance programs, medical funding, human experimentation.

POLS 335. Energy Politics (3) I. Energyrelated problems at the global, national and local levels for policymakers and citizens concerned about supply, price, efficiency, security and resource wars
POLS 336. Environmental Politics and Policies (3) II. Environmental issues, groups; establishing, implementing, evaluating key environmental policies.
POLS 337. Global Food Politics (3) II. How domestic and international political processes affect food production and consumption through governmental legislation, agency regulation, and international agreement in an interdependent world.

POLS 341. Public Opinion (3) I. Processes of opinion formation and change, political attitudes, belief systems, socialization, and the operation of public opinion processes in democracy; models of linkages between public opinion and public policies.

POLS 342. Mass Media and Public Policy (3) l. Relationship between media and government in reporting public policy issues; secrecy in government, bias and distortion in news media.

POLS 345. Legislative Process (3) II. Legislative behavior and decision making; forces involved in formation of public policy; proposed reforms of Congress. Prerequisite: POLS 101 or POLS 201 or consent of instructor.
POLS 346. Presidency and Executive Process
(3) I. Organization, functions, and powers of office of president and vice president; roles and presidential leadership psychology.
POLS 347. Judicial Process (3) I. American judiciary, particularly Supreme Court, as political institution; decision-making process and interaction of courts with rest of political system.

POLS 351. Western European Politics (3) II. Political systems and major policy problems of selected European countries. Political culture, governmental structures, political parties, and interest group roles in policy development. Prerequisite: POLS 101, 271, or permission of instructor

POLS 354. Governments of Soviet Union and Eastern Europe (3) I. Governmental structures and ideological forces controlling the political systems and socio-economic life within the Soviet Union and its satellite countries of Eastern Europe. Mission and expansion of Soviet influence beyond its borders.
POLS 355. Governments and Politics of Latin America (3) I. Influence of cultural and socioeconomic factors on politics; violence and revolution; role of major interest groups such as the military, labor, the Catholic Church; political parties and elections; institutions; focus is on selected nation-states.
POLS 361. Governments and Politics of Middie East (3) I. Governmental and political processes of Turkey, Iran, Israel, Arab Republic of Egypt, other selected Middle Eastern and North African political systems; major developmental problems of the area.

POLS 366. Governments and Politics of Asia (3) II. Representative contemporary Far Eastern and Southeast Asian political systems; how ideology, religion, militarism and other social forces (both endogenous and exogenous) have influenced the development of these policies.
POLS 368. African Political Systems (3) On demand. African struggles for independence; problems of development of selected postindependence political systems and guerilla movements in nonindependent territories.

POLS 372. Contemporary World Politics (3) I, II. Current global issues and problems such as the arms race, population control, disarmament and East-West, North-South rivalries will constitute the foci of discussion and analysis.
POLS 374. American Foreign Policy Process (3) I, II. Nature and conduct of contemporary U.S. foreign policy, with particular emphasis on the roles that the Executive and Legislative branches play in the process. Secondary foci of analysis are: how domestic political problems, interest groups, military alliances, technological and economic forces help shape foreign policy formation and articulation.

POLS 395. Workshop on Current Topics (1-4) On demand. Intensive educational experience on such selected topics as government public information work (agencies, departments, executive and legislative office), and other state, local, national, and international political affairs. May be repeated if topics differ, on approval of adviser.

POLS 400. Topics in Political Science (1-3) I, II. On demand. Subject matter varies. New, one-time courses being offered experimentally. See schedule for listing. Prerequisite: POLS 101 or POLS 201.

POLS 402. Western Political Thought I (3) I. Classics of political philosophy of ancient and medieval period. Major ideas and concepts of western political tradition from Plato through Middle Ages to Machiavelli.
POLS 403. Western Political Thought II (3) ì. Classics of political philosophy of modern period. Major ideas and concepts of Western political tradition from Hobbes to Marx.
POLS 404. 20th Century Political Thought (3) I or II. Contemporary classics of political philosophy. Theories of justice and right of Rawls, Nozick, Hayek, and Strauss; Berlin's pluralism; existentialism; and/or democratic theory.
POLS 405. Recent American Political Thought (3) On demand. American political ideas, ideologies, movements with fundamental social and political philosophies from Civil War to contemporary period. Prerequisite: POLS 304 or consent of instructor.
*POLS 416. Constitutional Law: Powers and Relationships (3) I. Supreme Court cases relating to U.S. governmental structure powers, and relationships.
-POLS 417. Constitutional Law: Procedural Rights (3) I. Due process, right to counsel, search and seizure, electronic surveillance, jury trial.
POLS 418. Constitutional Law: Substantive
Rights (3) II. Freedom of speech, press, and religion; equal protection of law, travel and privacy; right to vote.
POLS 419. Jurisprudence (3) II. Leading theories and theorists of law; Anglo-American thought and practice.

POLS 420. Administrative Law (3) I. Legal aspects of the administrative process and the effect of legal principles and processes upon administrative decision making. Emphasis on the limitation of administrative discretion and the judicial review of administrative decisions. Prerequisite: consent of instructor.
POLS 421. Bureaucratic Politics (3) II. The role federal bureaucracy plays in public policy process. Policy development; social and political factors that influence the administrative branch of government. Prerequisite: POLS 221 or permission of instructor.

## POLS 422. Survey of Public Administration

(3) I. Major topics and issues of the discipline including administrative structure and behavior, leadership, decision making, budgeting, personnel, inter-governmental relations and bureaucratic power and politics. May not be taken by students completing POLS 221.

POLS 423. Comparative Public Administration (3) II. Comparative study of administrative structures and processes in selected modern and modernizing political systems. Analysis includes the consideration of cultural, legal and political factors influencing the operation of bureaucratic institutions, developmental goals, and the methods of establishing and administering programs of social, economic and political development.

PORS 424. Sipreme Coun and Contemporary Hswies (3) If. Alternate years. Selected areas of current concern in constitutional law; substantive knowledge of relevant case law, scholarly legal journals which attempt to predict outcome of ftrure constitutional litigation. Prerequisite: POLS 417 or POLS 418.

POLS 425. Constitutional Law Advocacy (3) II. Substantive knowledge of one area in constitutional law; practical skills necessary for constitutional ajudication; techniques of legal research, writing appellate court briefs, and appellate count advocacy. Prerequisites: POLS 416 and POLS 417, or POLS 418 and permission of instructor.
POLS 430. Politics of Mietropolitan Areas (3) Summer. Socio-economic and political factors affecting the goverance of metropolitan areas with an emphasis on politico-administrative institutions, processes, and the major policy issues and their consequences for the management of metropolitan affairs. Prerequisite: POLS 221 or permission of the instructor.
PoLs ast. Regulatory Policy (3) II. Development of regulation as an insirument for correcting deficiencies of the economic market, role in acheving societal purposes, problems of regulatory practice. Prerequisite: POLS 221 or permission of the instructor.
POLS 434. Sexual Politics (3) 1. Socialization to, maintenance of, and change in gender political roles; patterns of dominance and submission in cross-cultural perspective.
POLS 440. Political Parties and Voter Behavfor (3) II. Democracy and political parties, party organization, primaries and conventions for nomination, campaigns and elections, patterns of election participation and factors affecting the voter's decision making.
POLS 443. Mass Media in Politics (3) 1. Techniques of modern election campaigns, management: use of research and voter profiles in developing strategy, tactics of mass persuasion: professional public relations in television and the electronic media.
POLS 452 . Pofitical Vioience and Revolution (3) II. Seminiar offered alternate years. Theoties about causes, processes, and consequences of violence as instrument of political competition and social change. Open to advanced social science undergraduate and graduate students or by consent of instructor.
POLS 453 Soviet Behavior and institutional Davelopment (3) 1. Approaches to study of Soviet Union that explain pollitical science as method of analysis; ideological and other approaches to Soviet behavior, pre-Soviet political influences; state and society in Marxism; postrevolutionary developments in Soviet politics; consolidation of power under communist leaders. Prerequisite: POLS 354.
POLS 454. Soviet Politicai System (3) 11 . Political and managerial structures and policies of Soviet Union that explain regime and institutional character and tendencies; government and party power structures; ideological influences in social and economic policies; manipulation of decision-making struciure; significance of Soviet external policies for major powers and emerging nations. Prerequisite: POLS 354.

POLS 458. Soviet Foreign Policy (3) 1. Soviet foreign policy in post-war era; domestic and international determinants and consequences for Soviet-Western relations, socialist bloc, and third world.

POLS 459. Intergovernmental Relations (3) On demand. Vertical and horizontal relations among governments in the American federal system, models and theories of federalism and intergovernmental relations (IGR), constitutional issues, twentieth-century changes, recent developments in financing and managing federalism and IGR. Prerequisite: POLS 221 or permission of instructor.
POLS 460. Politics and Issues of Worid Development (3) Il allernate years. Political and economic modernization problems; equity versus development; hunger and population; foreign aid, technology transfer and other seiected topics.
POLS 462. Japanese Politics and Foreign Policy (3) On demand, Political culture, institutions, processes and issues in contemporary Japanese politics; Japan's foreign relations with emphasis on relations with Pacific/Asian nations. Prerequisite: POLS 101, POLS 271 or permission of instructor.
POLS 470. Individual Readings (1-3) I, 11. On demand. Supervised individual readings to meet student's need for extended reading in familiar areas or for exploration in fields not covered by courses. Prerequisite: consent of supervising insiructor. May be repeated to nine hours.

POLS 473. International Law (3) On demand. History, nature, sources, and applications; relationship between law and society at international level.

POLS 475. International Organization (3) On demand. Major problems facing United Nations and other international organizations.

POLS 491. Seminar for Intern (3). Required for students planning internships. Survey and analysis of literature dealing with practice political experiences. Use of biographical material as sources.
POLS 492. Field Study (1-3) 1 , 11 , summer. For students working on political internship programs and political campaigns. May be repeated to six hours.
POLS 495. Honors Seminar in Comtemporary Polifical Science (4) I, II. Political science as discipline and profession; forms of political inquiry and research; scientific and methodological orientations toward values and scholarship; public and professional status of political science. Prerequisite: permission of honors committee. May be repeated to eight hours.

## Popular Culture (POPC)

7 POPC 160. Introduction to Popular Culture (3) I, II, summer. Basic theories of, approaches to, and topics within popular culture; several selected topics and use of various theories and approaches.
I 1 POPC 165. Popular Culture and Media (3) I, II, summer. Some of the ways in which mass media (TV, film, recording industry, print, radio) have affected modern American culture. Media relationships and interactions.

## 94POPC 220. Introduction to Folklore and

 Foiklife (3) I, II, summer. Study and collecting of folklore; ballads, myths, tall tales, heroes, folk medicines, superstitions; proverbs, arts, and cratts.POPC 231. Studies in Popular Culture (1-3) I, II, summer. Study of theme, era, or problem of popular culture. Subject matter designated in class schedule. May be repeated once if topics are different.

POPC 240. History of Popular Culture (3) Alternate years. From classical world to present, relationship between society and is popular culture; constant needs of man such as play, sex, ritual, etc.; changing needs of man in changing society.
-POPC 250. Introduction to Poputar Film (3) I, II, summer. Popular film as mass entertainment medium; Hollywood studios, popular film formulae, genres, relationships between popular films and movie-going audience; viewing of appropriate films.
POPC 270. Introduction to Contemporary Popular Literature (3) Alternate years. Popular literary formulae, publishing industry, relationship between popular literature and reading public, functions of popular literature in society.
POPC 280. Introduction to Popular Music (3) $1, \|_{1}$ Summer. Relationship between music world and listening-viewing audience; musical styies, trends in popular music, popular performers and entertainers and what they reveal about popular culture; appropriate music listening.
POPC 290. Television as Popular Culture (3) I, II, summer. Relationship between popular television programming and American society; viewing of appropriate television.
POPC 350. Advanced Studies in Popular Film (3) Alternate years. In-depth study of particular aspect of popular film: single genre, particular director, specific studio, eic. May be repeated once if topics are different; viewing of appropriate films. Two-hour lecture, two-hour lab.
POPC 355. Studies in History of American Popular Film (3) Alternate years. Specific period in American popular film: silent era, films of Depression, films of post World War II, etc. May be repeated once if topics are different; viewing of appropriate films. Two-hour lecture, two-hour lab.
POPC 370. History of Popular Literalure (3). Alternate years. Detective, science fiction, western mystery, best sellers, poetry, magazine fiction. Prerequisite: any 200 level literature course or permission of instructor.
POPC 380. Contexts of Popuiar Music (3) Alternate years. In-depih investigation into single aspect of popular music: specific popular music genres, specific musical themes, popular music industry, etc. May be repeated to eight hours if topics differ. Prerequisite: POPC 280.

POPC 390. Electric Media (3). Aiternate years. Cultural media theory as related to aural and visual elecíric media, especially radio and television. Impact of these media on contemporary culture. Prerequisite: one course in mass media or permission of instructor.
POPC 395. Workshop on Current Topics
(1-3). On demand, Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format. Requiremenis usually completed within expanded time format. May be repeated if topics differ, on approval of adviser.

- POPC 424. Topics in Folklore (3) II.

In-depth study of single topic. May be repeated once $i f$ topics are clearly different. Prerequisite: POPC 220 or permission of instructor.
POPC 426. Popular Entertainmenis (3). Aiternate years. Cultural significance of popular entertainments, past and present; circuses, carnivals, parades, vaudeville, protessional and amateur sporis, camping, etc. Prerequisite: POPC 160 or POPC 165.

POPC 460. Popular Culture Advanced Studies
(3) II. In-depth study of particular
problem: development of hero in popular arts,
cultural analysis of popular film, cultural analysis of popular music, etc. May be repeated once if subject matter is different. Prerequisite: POPC 165.

POPC 480. Senior Seminar in Popular Culture (2) Alternate years. Interdepartmental seminar for seniors in POPC program. Selected topics approached from several points of view. Prerequisites: senior standing and major in
POPC or in discipline represented in POPC program.
POPC 490. Problems in Popular Culture (1-3). For advanced student. Independent study. Prerequisite: consent of director of POPC program to proposal approved by staff member three weeks prior to end of quarter; and 6 hours POPC courses. May be repeated to eight hours.

## Psychology (PSYC)

\| P PSYC 201. General Psychology (4) I, II, summer. Scientific approaches to the study of behavior of organisms. Application to personal and social behavior.
PSYC 231. Research Methods in Psychology (4) I, II. Experimental and non-experimental techniques for investigating psychological phenomena. For non-psychology majors. Three lecture hours; two laboratory hours. Prerequisite: PSYC 201.

- PSYC 240. General Seminar (1-3) I, II. Specific content areas offered depends on demand and interest of staff. May be repeated twice. Prerequisite: consent of instructor.
PSYC 270. Quantitative Methods I (3) I, II,
summer. Principles of measurement. Quanti-
tative analyses of behavioral measures, including measures of typicality, individual differences, correlational methods and tests of significance. Two one-hour lectures and a two-hour lab. Prerequisite: PSYC 201 or consent of instructor.


## PSYC 290. Introduction to Laboratory

Methods in Psychology (4) I, II. Introduction to research methods used in laboratory and natural settings. Includes planning the research, collecting and interpreting the data, and communicating the results in both oral and written forms. Three one-hour lectures and one two-hour laboratory. Prerequisites: PSYC 201 and 270.
PSYC 301. Brain Mechanisms of Behavior (4) I, II. Brairı structure and function in organization of consciousness, perception, motivation and learning, sleep, dreaming, memory, drugs, glands, personality, electrical stimulation of brain. Laboratory hours by arrangement. Prerequisites: PSYC 201 and 290, or consent of instructor.
PSYC 302. Educational Psychology (3) I, II. (See EDFI 302) Concepts and factors affecting application of psychological principles to the educative process. No credit for both EDFI and PSYC 302. Prerequisite: PSYC 201.

- PSYC 303. Psychology of Child Development (3) I, II. Major concepts, theories, and principles of child development. Coverage is from conception until adolescence. Prerequisite: - PSYC 201.

PSYC 304. Adolescent Development (2) II. Major concepts, theories, and principles of adolescent development. Prerequisite: PSYC 201.

- PSYC 305. Psychology of Personality Adjustment (2) I, II, summer. Problems of personal adjustment. Related problems of theory and measurement of personality. Prerequisite: PSYC 201.
PSYC 306. Psychology of Gender (3) I. Psychological characteristics of women and men: personality, adjustment, identity formation, intellectual processes, sexuality; theories and data on gender development.
PSYC 307. Psychology of Human Sexuality (3) I, II, summer. Sexual physiology, psychosocial aspects of sexual behavior, sexual dysfunction and therapy, comparative sexual behavior.
PSYC 308. Introduction to Clinical Psychology (3) II. Models and roles associated with delivery of mental health services; major conceptions of psychological assessment and treatment. Prerequisite: PSYC 201.

PSYC 309. Psychology of Aging (3) II. Discussion of major theories of adult development; description of how biological, cognitive, personality, and social-psychological processes interact to produce development; emphasis on seeing how these processes occur in adults' everyday lives. Prerequisite: PSYC 201.
-PSYC 311. Social Psychology (3) I, II, summer. Social behavior covering theoretical issues and recent empirical findings: social influence and conformity processes, attitudes and attitude change, interpersonal attraction, social perception, group processes, sexual behavior, environmental influences on social behavior. Prerequisite: PSYC 201 or SOC 101.
PSYC 312. Principles of Social Interaction (2) II. Theoretical issues and recent empirical findings: animal social behavior, pro-social behavior, aggression, group processes, social exchange processes, and social psychology in changing world. Prerequisite: PSYC 201 or SOC 101.
PSYC 313. Research in Social Psychology (4) II. Field and laboratory research techniques in social psychology, attitude change, conformity, attraction, environmental effects on social behavior, aggression, group processes. Three lecture hours; two laboratory hours. Prerequisites: PSYC 270, 290 and 311.

PSYC 320. Conditioning (4) I. Classical conditioning and instrumental learning from empirical and theoretical point of view. Three lecture hours; two laboratory hours. Prerequisites: PSYC 270 and 290.
PSYC 321. Human Learning and Memory (4) I, II. Principles and theories of human learning and memory, applied to the acquisition of knowledge and skills. Three lecture hours; two laboratory hours. Prerequisites: PSYC 270 and 290.
PSYC 322. Psychology of Thinking (4) I, II. Theory and research on the nature of human thinking, problem solving, reasoning, concept formation, and language. Three lecture hours; two laboratory hours. Prerequisites: PSYC 270 and 290.
PSYC 324. American Sign Language of Deaf (3) I, II. Basic vocabulary and grammatical structure of the visual language system used by deaf persons in North America. Implications of deafness for language and communication, psycho-linguistic studies of Sign.

PSYC 328. Psychophysiology (4) I, II. Laboratory course in psychophysiology; relationship between psychological states and physiological responses in humans; conditioning of autonomic responses, orienting responses, psychosomatic relationships and biofeedback, detection of deception. Four lecture hours, laboratory by arrangement. Prerequisites: PSYC 270 and 290.
PSYC 330. Psychobiology of Emotions and Motivation (4) II. Biological causes of motivated behaviors such as sleep, hunger, thirst, fear, aggression, and sexual behavior; how motivated behaviors and related emotional states are organized in brain, as elucidated by electrical and chemical stimulation and ablation of living brain. Prerequisites: PSYC 270 and 290, or consent of instructor.
PSYC 340. Sensation and Perception (4) II. Measurement, development and neurophysiological mechanisms of sensory and perceptual processes. Emphasis on vision and hearing. Three lecture hours; two laboratory hours. Prerequisites: PSYC 270 and 290.
PSYC 352. Quality of Work Life (4) II. Impact of organizational environments on individuals and individual behavior. Topics include job design, leadership, organizational climate, job satisfaction and work motivation. Prerequisite: PSYC 270 or consent of instructor.
PSYC 354. Assessment of Work Effectiveness (3) II. Emphasis on the design, measurement, and evaluation of human and machine performance and productivity. Assessment of factors related to training, efficiency, and safety. Prerequisites: PSYC 270 and one other course in PSYC, or consent of instructor.
PSYC 370. Quantitative Methods II (3) I, II. Analysis of variance and other multivariate methods for analyzing behavioral measurements. Prerequisite: PSYC 270.
PSYC 395. Workshop on Current Topics (1-5) On demand. Intensive educational experience on selected topics. Typically an all-day or similar concentrated format. Requirements usually completed within time format. May be repeated on approval of adviser.
PSYC 401. History of Psychology (3) I.
Selected topics, reading of original sources,
Psychopathology, animal psychology, behaviorism, cognitive psychology, personality theory, others. Prerequisite: PSYC 201 or consent of instructor.
PSYC 403. Personality Theory (3) II. Scientific constructs in personality theory; contemporary theories with historical antecedents; assessment of relationship to general psychology. Prerequisite: eight hours in PSYC.

- PSYC 405. Psychology of Abnormal Behavior (3) I, Il, summer. Data and concepts used in understanding, labeling, and modifying deviant behavior. Prerequisite: PSYC 201.
PSYC 406. Behavior Pathology in Children (3) II. Major behavioral disorders of childhood: description, etiological implications, treatment issues, approaches and problems, and related research. Prerequisite: PSYC 201 or consent of instructor.
PSYC 421. Psychology of Language (3) II.
Theoretical and empirical issues in psycholinguistics, speech perception, and language development. Prerequisite: PSYC 201 or consent of instructor.

PSYC 425. Communisy Mental Health (3) I, summer. Development, concepts and current models in community mental health; individual and system-centered approaches that promote health and prevent psychological maladustment; federal, state, and county programs. Prerequisite: PSYC 201 or consent of insiructor.

PSYC 43\%. Hental Health Worker Training (4) L. One of two prerequisites for field placement as mental health worker, taken simultaneously with PSYC 432 . Relationship enhancement and behavioral analysis and intervention skills. Field experiences. Prerequisites: PSYC 201 and consent of instructor.
pSYC al2 Principies of Mental Health Work (4) I. Exposure to models and roles associated with delivery of mental health services. Participation with practicing clinical "team"; field experiences. Prerequisites: PSYC 201 and consent of instructor. Graded S/U.
PSVE 433. Wental Health Worker Practicum I (3) II. Students engage in those mental health activlties they trained for during previous semester. Includes placement in one of variety of mental healith settings. Prerequisites: PSYC 431 and 432 and consent of instructor.
psyc 434. Mental Health Worker Practicum II (4) 11 . Field experience for mental health worker. Student increases experience with broad range of mental health problems working in community mental health selting. Case study presentation. Prerequisites: PSYC 431 and 432 and consent of instructor. Graded S/U.
PSVC 437. Fieid Sudy: Deanness and ASL (1) 1 Orientation to deafness and on-site observation of educational approaches and communication methods used at elementary, secondary; and post-secondary levels by pro-- grams for deaf chidren. Conducted at Galtaudet College, Washington, D.C., between semesters Prerequisites: PSYC 324 or equivalont and consent of instructor. Lab fee.
PSYC 440. General Seminar ( $1-4$ ) 1 , 11 , summer. Specific content areas offered depends on demand and interest of staff. May be repeated three times. Prerequisite: consent of instructor.
PGYC 452. Personnel Selection (4) I. Methods of selection and assessment in industrial and other organizations. Includes recruitment, hiring, promotion, etc. Compliance with fair employment and equal employment opportunity regulations. Prerequisite: PSYC 201.
PSYC 454. Interviewing (3) II. Laboratory exercises in administering and responding to interviews differing in structure, behavior, decisions, and interrelationships within interviews, validity and reduction of bias. Prerequisite: PSCy 201.
PSVC 435. Siress Factors of Work (3) I. Sources and effects of psychological stress at work and research on stress reduction.
Topics include perceived work loads, role ciemands and ambiguities, job involvement, and carear stresses such as those in dualcareer families.
PSyc Aco. Introduction to Psychological Testing (3) 1, 11. Theory and methods of measuring human behavior. Basic measurement principles and applications; representative standardized tests of intelligence, interest, aptitude and personality. Prerequisites: PSYC 201 and 270 or equivalent.

PSYC 490. Special Problems in Psychology ( $\dagger-3$ ) I, II, summer. Supervised independent minor research or intensive reading on selected problems. No student may register for course without written approval of stafi member concerned. May be repeated to six hours. Prerequisite: 7 hours of psychology. Graded S/U.

PSYC 495. Senior Honors Seminar (3) I. Seminar in general psychology for senior major. Student required to plan and carry out research project under direction of faculty member. Prerequisite: senior major, approval by department undergraduate committee.
PSYC 496. Senior Honors Seminar (3) II. Seminar in general psychology for senior major. Student required to plan and carry out research project under direction of faculty member. Prerequisite: senior major, approval by department undergraduate committee.

## Radio-Television-Film (RTVF)

RTVF 255. Introduction to Broadcasting (3) II. Survey of components of broadcasting system in America, including technical bases, economics, programming, \& regulation. No prerequisites. Intended for majors,
RTVF 260. Broadcasting and Society (3) I, II, summer. Functions and effects of electronic media for individual and society.
\#RTVF 261. Understanding Movies (3) I, II, Summer. Film as art. Essential elements of film; editing, camera work, sound and composition explored in some classic motion pictures. Various approaches to looking at movies and writing about them.

- RTVF 262. Radio Writing, Announcing and Producing (4) l. Writing for broadcasting; style and basic principles and practices of announcing; theories and processes of audio production. Laboratory hours. Prerequisite: B or better in RTVF 255.
RTVF 263. Television Programming and Production (4) II. Theories and practices involved in programming decisions; basic theories and tasks of video production, including scripting, organization, and aesthetics. In-studio experience in equipment operation, program directing. Laboratory hours. Prerequisite: B or better in RTVF 255.
RTVF 264. 8 mm Film Making (3) 1 , II. Basic techniques of 8 mm motion picture photography. Understanding of lens, film, and camera characteristics, lighting, camera operation, and editing. Student furnishes camera and some materials.
RTVF 360. Procedures of Audience Measurement (3) I \& II. Overview of approaches to social research; survey methods, including sampling, measurement, interviewing, questionnaire design, and presentation of results; content analysis; ratings; and interpretation of elementary descriptive statistics.
RTVF 364. Producing and Directing for Television (3) I. Theories and processes of producing, and directing video programs, including scripting, visualization, personnel management, \& budgeting. Includes multi-camera \& single camera productions, video editing techniques. Laboratory hours. Prerequisite: RTVF 263 or equivalent experience.
RTVF 365. Broadcast History (3) I. Current U.S. broadcasting with view of antecedents in regulations, economics, programs, audiences, slations, networks, technology, and employment. Prerequisite: eight hours of RTVF.

RTVF 366. Processes and Eflects of Mass Communication (3) I, II. Seminal models and studies; current approaches to effects; critical viewing strategies; structure and corisequences of media institutions and organizations.
RTVF 368. Radio Workshop (1) I, II. Development of program ideas through all stages of planning, writing, directing, and selling. Individual program projects for possible use on WBGU or WFAL May be repeated to three hours. Prerequisite: RTVF 262.

RTVF 395. Workshop on Current Topics (1-3) On demand. Intensive educational experience on selected topics. Typically, an all-day or similar concentrated format. Requirements usually completed within time format. May be repeated if topics differ on approval of adviser.
RTVF 460. Regulation of Broadcasting (3) II. Roles of federal, state and local government in regulation of broadcasting. Analysis of Federal Communications Commission. Legal problems engendered by regulation.
RTVF 464.16 mm Film Making (3) II. Concepts, theories, and mechanics of film production; applications of cinema to television news, documentaries, informational presentations, and feature and art film production. Lectures and laboratory. Prerequisites: RTVF 264 or JOUR 306 or VCT 282; and permission of instructor.
RTVF 466. History and Criticism of Film (3) II. Historical development of theatrical, documentary, and avant-garde films. Function, content, and style of film criticism.
RTVF 468. Television Workshop (3) I, 11. Production of dramatic and public affairs television programs. Writing, producing, and directing emphasized. May be repeated once. Prerequisite: RTVF 354 or consent of instructor.
RTVF 469. Seminar: Contemporary Aspects of Broadcasting and Film (1-3) On demand. Investigation and analysis of area of radio. television, and film. Various topics of current concern; public and instructional broadcasting, audience, CATV, political broadcasting, censorship and freedom in film, film movements and styles. May be repeated with permission of adviser to six hours.
RTVF 489. Internship in Radio-Television-Fitm (1-6) I, II. Supervised field experience in electronic communication. Student must arrange for experience with approval of intern supervisor in advance of registration. May be repeated up to six hours. Limited to RTVF majors. Prerequisite: 2.5 overall GPA. Graded S/U.
RTVF 490. Problems in Radio-TV-Film (1-3) :, II. For advanced student who wishes to do intensive study in radio, television, or film Independently, or in conjunction with courses regularly offered. May be repeated. Prerequisite: consent of department.

## Recreation and Dance (RED)

RED 106. Ballroom Dance I (2) II. Basic skills and knowledges specific to social and ballroom styles; beginning teaching methods.
RED 111. Folk and Square Dance I (2) I. Basic skills and knowiedges specific to folk and square dance styles; beginning teaching methods.
RED 115. Modern Dance I (2) I, II. The first in a series of progressions in modern dance, exploring basic movement skills and correct body alignment; may be repeated up to six hours.

RED 120. Classical Ballet I (2) I, II. Studio instruction of classical ballet fundamentals with emphasis on correct body alignment, barre, and basic center work; may be repeated up to six hours. Prerequisite: beginning competency and permission of instructor.

RED 178. Camp Leadership (2) II. Organized camp movement; uniqueness of the camping experience and setting; role of the counselor; and programming and counseling principles.

## RED 190. Recreation Leadership (3) I, II.

Selecting, creating and conducting activities suitable for the wants and needs of various populations; leadership theories, styles and techniques; activity assessment; social activities pattern and recreation leadership kit.
RED 210. Major Concepts in Recreation (2) II. Philosophical concepts and historical foundations; exploration of ećonomic, sociological, and psychological aspects; leisure service delivery systems and professional leadership.
RED 215. Modern Dance II (2) I, II. The second in a series of progressions, including studio instruction in modern dance with floor and center work in varying modern styles; may be repeated up to six hours. Prerequisite: RED 115 or permission of instructor.
RED 220. Classical Ballel II (2) I, II. The second of a graded series of progressions, including studio instruction in classical ballet techniques with emphasis on adagio and allegro enchainements; may be repeated up to six hours. Prerequisite: RED 120 or permission of instructor.
RED 224. Dance Performance Workshop (1) I, II. Experience in choreography and participation as members of the concert group, may be repeated up to six hours. Prerequisites: audition and permission of instructor.
RED 226. Perspectives in Dance (1) II. Introduction to the art of dance, including current trends in modern dance, classical ballet and vernacular dance form, exploration of the philosophies and aesthetic principles.
RED 260. Recreation and Physical Activity for Older Americans (2) I, II. Characteristics of older Americans; therapeutic benefits of activity; leisure services and settings; program planning; administrative concerns. Prerequisites: RED 190 and RED 210 or consent of instructor.
RED 294. Outdoor Leadership (3) II. Knowledge and leadership in outdoor living skills, backpacking, bicycle touring and canoe tripping. One weekend trip required.
RED 304. Outdoor Recreation (3) I. Outdoor recreation resource bases; governmental agencies and private organization management and operations; behavioral patterns in outdoor recreation pursuits; legal, economic, and political impacts.
RED 315. Modern Dance III (1) I, II. The third in a graded progression including studio instruction in varying styles of modern dance, emphasis will be placed on horizontal and oblique designs, turns, falls, jumps, leaps and complicated rhythms, may be repeated up to six times. Prerequisite: RED 215 or permission of instructor.
RED 320. Classical Ballet III (1) I, II. The third in a graded series of progressions, including studies instruction in classical ballet techniques, added difficulty in barre, adagio, and allegro work and introduction to pointe work, may be repeated up to six hours. Prerequisite: RED 220 or permission of instructor.

RED 323. Camp Administration (2) I. Role of camping in society; patterns of organization; programming guidelines, management aspects, personnel, and site and facilities.
RED 325. Theory and Methods of Teaching Dance (1) I. A seminar experience in pedagogical practices, in classical ballet and modern dance forms. Prerequisites: RED 215, 220, or permission of instructor.
RED 326. Dance Composition (2) II. Basic principles of form and flow of movement and their application to compositions in dance. Prerequisites: RED 215, RED 220 or permission of instructor.
RED 327. Choreography Workshop (1) I. Studio analysis of the elements of choreography; development of dance compositions, evaluation of compositions; specific assignments of selected problems; may be repeated up to six hours. Prerequisite: RED 326 or permission of instructor.
RED 380. Concepts and Techniques in Outdoor Education (4) II. Outdoor education through school curricula, interpretive services, recreation agencies and community action; philosophical bases; identification and utilization of resources; the methods associated with the learning process; field-based experiences.
RED 384. Organization and Administration of Leisure Services (3) I, II. Basic concepts of administration, personnel management, fiscal management, public relations techniques, motivation theory, grant writing and fund raising, marketing, legal aspects of administration; budget proposal preparation and development of employment seeking skills. Prerequisite: RED 190, 210 and 30 hours.
RED 385. Recreation Program Development (3) I. Principles of program planning, organization, and administration; operation of areas and facilities; current practices in publicity and public relations; supervision of program and staff; tournament scheduling; program budgeting. Prerequisite: RED 190, RED 210 and 30 hours.
RED 386. Internship Preparation (1) I, II. A comparative analysis of leisure services and their roles in society with focus on personal and professional development. Prerequisite: 60 hours.
RED 387. Practicum: Leadership/Programming (1-5) I, II, summer. Application of leadership and program theory to field setting; Prerequisite: approval of adviser.
RED 395. Workshop on Current Topics (1-3). On demand. Intensive educational experience - on selected topics related to enrichment of curricular content.
RED 424. History and Philosophy of Dance (3) I. Events, personalities, and philosophies of dance from primitive to modern times, including the development of ballet and the emergence of modern dance.
RED 426. Dance Production (3) II. Classroom and hands-on experience; problems and techniques in dance lighting, sound, costuming, direction, publicity and general management.
RED 470. Independent Study (1-3) II, II, summer. An in-depth project of significance to the student. Credit allocation by project supervisor and approval by chair prior to registration. Prerequisite: by permission of instructor.
RED 482. Evaluation of Recreation Services
(3) II. Methods, techniques and application of evaluation processes. Prerequisites: RED 384, RED 385, and 2.5 GPA.

RED 483. Recreation Areas and Facilities (3) I. Planning and design principles; acquisition, development, construction and maintenance of specific types of recreation areas and facilities. Prerequisites: RED 384, RED 385, and 2.5 GPA.

RED 484. Contemporary Issues in Recreation (2) I. Seminar in current issues. Prerequisite: 90 hours.
RED 487. Practicum: Supervision / Administration (1-5) I, II, summer. Application of program, supervision, and administration theory to a field setting; may be repeated. Prerequisite: RED 387, 2.5 GPA, and approval of adviser.

RED 488. Internship (15) I, II, summer. A concentrated professional experience for students preparing for a career in recreation. Prerequisites: grade point average of $2.5,90$ hours, RED 384, RED 385, RED 386, RED 387 and consent of adviser.

## Respiratory Care Technology (RT)

RT 100. Physical Science for Respiratory
Therapy (2) I. Basic mathematical, physical and chemical principles related to matter, gases, solutions and ions, and flow of fluids. Medical gases, humidity, aerosols and devices for their administration are examined. One hour of lecture and three hours of lab.
RT 102. Pharmacology for Respiratory Therapy (3) II. General pharmacologic principles, including drug dosage calculations and dispensing systems. Study of major drug groups related to practice of respiratory care. Emphasis on aerosolized drugs administred by the therapist. Three hours of lecture. Prerequisite: Must meet clinical matriculation standards or consent of instructor.

RT 150. Respiratory Therapy Procedures I (4) II. Introduction to respiratory care profession. Respiratory and cardiovascular anatomy and physiology. Basic nursing care and patient assessment. CPR, manual resuscitators, airway management, sterilization, IPPB, incentive spirometry and chest physiotherapy. Three hours of lecture and three hours of lab. Prerequisite: Must meet clinical matriculation standards. Corequisite: RT 151.
RT 151. Respiratory Therapy Clinical Applications I (2) II. Introduction to the hospital environment. Directed clinical practice including basic nursing skills, patient assessment, charting, oxygen therapy, aerosol administration, incentive spirometry, IPPB, chest physiotherapy. CPR and equipment processing. Ten hours of field study per week. Prerequisite: Must meet clinical matriculation standards. Corequisite: 150. Prerequisite or corequisite: RT 102.

RT 152. Respiratory Therapy Procedures II (4) I. Endotracheal intubation, mechanical ventilation, pulmonary function testing, hemodynamic and other physiologic monitoring, radiologic assessment of the chest, EKG interpretation, non-invasive blood gas monitoring, pulmonary rehabilitation, neonatal and pediatric respiratory care, and management of the respiratory care department. Three hours of lecture and three hours of lab. Prerequisites: RT 150 and 200. Corequisite: RT 250.
RT 200. Cardiopulmonary/Renal Anatomy and Physiology (3) summer. Anatomy and physiology of respiratory, cardiovascular and renal systems as they relate to gas exchange, acid-base balance, and fluid and electrolyte regulation. Arterial blood gas interpretation, sampling and analysis. Six hours of lecture, eight weeks. Prerequisite: BIOL 104 or 205, or consent of instructor.
nT 250, Respiratory Therapy Clinical Applicathons II (4) 1. Directed clinical practice at a local hospital. Students will gain hands-on experience in managing artificial airways and mechanical ventilators, performing arterial punctures and analyzing samples, and interpreting and applying physiologic data. in the cardio-pulmonary laboraiony, the student will perform various tests of pulmonary function. Twenty-seven hours of field study per week. Prerequisites: RT 151 and 200, plus meet clinical matriculation standards. Corequisite: RT 152.
RT 251. Resplatory Therapy Clinical Specialties (4) II. Students will rotate to various hospitals during the semester to gain exposure to specialized equipment and techniques which may be unique to that institution, while continuing to practice advanced procedures learned the previous semester. Twenty-seven hours of field situdy per week. Prerequisite: RT 250, plus meet clinical matriculation standards.

## Romance Languages (ROML)

hO触 200. European and Latin American Cinema (3). Films of cultural and literary significance from Mediterranean and Latin American countries seen through study of selected topics, themes, or movements. Taught in English. Includes viewing of films with subtitles.
HOML 262. Atricen Literature in Translation (3). Literary masterpieces from or about Africa, including negritude movement. Works originally written in romance languages. Does not count toward French or Spanish major or minor.
ROW1. 470. Reacings in Romance Languages and Lterature (1-3). Independent reading for edvanced studients wishing to conduct comparative study in particular period, author or authors, problem, or genre. Prerequisites: consent of chair of department and instructor.
nCME 495. Literary Transiation (3). Translation into English of poems and short prose works of stucients' choice, with advice and consent of instructor. From French, Spanish, Italian and Potuguese. Open to majors, minors and graduate students in French and in creative writing and graduate students in Spanish. Prerequisite: FREN, SPAN or ITAL 202, 212, 500 or equivalent.

## Russian (RUSN)

Entering sfudents who had Russian in high school should take the placement test during summer preregistration or prior to enrollment in a course.
PLESM 132. Hitroduction to Language Study:
hussian (1). On demand. Lecture-reading course in English introducing students to the culural development of the Russian language.
FRUSN T01. Elmmentary Language and Culture (1) i. Cultural approach to beginning language study in the four skills: listening, speaking, reading, writing. Four class periods and laboratory practice each week.
GRUSN 102. Elementary Language and Cuiture (II (4) II. RUSN 101 continued. Four class periods and laboratory practice each week. Prerequisite: RUSN 101, or by placement.
ffusit 204 . Antermediate Russian I (3) I. RUSN 101-102 continued. Development of the four skills. Three class periods and laboratory practice eech week. Prerequisite: RUSN 102, or by placement.

IRUSN 202. Intermediate Russian Il (3) II.
RUSN 201 continued. Three class periods and laboratory practice each week. Prerequisite: RUSN 201, or by placement.
RUSN 303. Insroduction to Scientific Russian (2) II. Reading and grammar designed for science-oriented students who wish to develop an effective reading knowledge of scientific Russian. Prerequisite: RUSN 202,
RUSN 311. Russian Literature: From Beginnings to Dostoevsky (3) I. Literary trends from 11th to mid-19th century; medieval and baroque periods, 18th century classicism and sentimentalism, and the Golden Age. Writers include Pushkin, Gogol, Goncharov, Lermontov, and Turgenev. Lectures in English. Open to nonmajors who will read assigned works in translation.

## RUSN 312. Russian Literature from Dosto-

 evsky to Present (3) II. Social, political and cultural trends of pre- and post-revolutionary periods. Writers include Dostoevsky, Tolstoy, Chekhov, Gorki, Zoshchenko, Bulgakov, Pasternak and Solzhenitsyn. Lectures in English. Open to nonmajors who will read assigned works in translation.RUSN 315. Russian Culture (3) II. Culture and civilization of the Russian people from their origins to the recent past. Lectures, audiovisual presentations and readings in English.
RUSN 316. Readings in Russian Culture (2) On demand. Language, Syntax and topics of academic and literary Russian in the natural sciences, social sciences and humanities. Prerequisite: RUSN 202.
RUSN 317. Composition and Conversation (3) I. Intensive oral and written practice; emphasis on mastery of basic structural patterns employed in conversation and writing. Prerequisite: RUSN 202, or by placement.
RUSN 318. Composition and Conversation II (3) II. RUSN 317 continued. Prerequisite: RUSN 317.
RUSN 319. Journalistic Russian (2). On demand. Practice in the language and syntax of contemporary Russian journalism; expository prose, newspapers, journals, monographs, magazines, etc. Prerequisite: RUSN 202.

RUSN 331. Workshop in Translation (1-3). On demand. Individualized and/or small group work in translation of scientific, technical or business writing, or other types of expository prose in the student's area of specialty. May be repeated to six hours. Prerequisite: RUSN 202.

RUSN 401. Russian Poetry (3). On demand. Russian lyric from the mid-18th century through contemporary Soviet verse. Prerequisite: RUSN 202.
RUSN 402. Russian Novel (3) I. Detailed study of the great tradition of the Russian novel. Primary readings consist of authors such as Karamzin, Pushkin, Gogol, Turgenev, Tolstoy, Dostoyevsky, Gorky, Solzhenitsyn. May be repeated for credit when offered with different content. Prerequisites: RUSN 311 and 312, or permission of instructor. Open to nonmajors who will read assigned works in translation.
RUSN 403. Russian Drama (3) II. Major works of Russian dramatic literature as exemplified by Polotski, Fonvizin, Griboyedov, Pushkin, Ostrovski, Turgenev, Tolstoy; emphasis on Chekhov and Moderns. Prerequisites: RUSN 311 and 312, or permission of instructor. Open to nonmajors who will read assigned works in translation.

RUSN 415. Cultural and Literary Aspects of Soviet Film (3). On demand. Soviet film both as visualization of Russian literature and as instrument of social and political persuasion through various esthetics - expressionism, socialist realism, psychological realism.
RUSN 417. Advanced Composition and Conversation (3). On demand. Development of increased facility in written composition and the spoken language. Grammatical structure and levels of style in writing and colloquial idiom in spoken dialogue. Prerequisite: RUSN 318.

RUSN 432. Russian Folklore (3). On demand. Survey of major genres of Russian folk literature and culture, and their iniluence on language and literature. Prerequisite: RUSN 102, or permission of instructor. Open to nonmajors who will read assigned works in translation.
RUSN 480. Selected Topics (2). On demand. Topic chosen to meet curriculum needs and student requests. May be repeated to six hours. Prerequisite: RUSN 202.
RUSN 491. Selecied Topics (2). On demand. Independent reading for the advanced student. Prerequisite: arrangement with instructor and consent of department chair prior to registration.

## Social Work (SOWK)

SOWK 110. Survey of Social Services (3) I, II. Social service programs; functions of social workers within these programs.
SOWK 220. Observation and Interviewing in Social Work (3) I, II. Development of observational, interviewing and recording skills through classroom experiences and volunteer experiences in community social agencies. Prerequisite: SOWK 110.
SOWK 225. Human Behavior and the Secial Environment (2) I, II. Impaci of biological, psychological, and socio-cultural systems on human development and behavior. Prerequisite: junior standing.
SOWK 227. Sccial Work: Ethric Perspective (3) I, II. Issues and concepts important to understanding problems surrounding ethnicity and relationship to social work. Prerequisite: sophomore standing.
SOWK 32t. Social Weltare Institutions (3) I. Social welfare as social institution; history, developmental forces, value systems, relationships between, and various roles of public and private agencies. Prerequisite: SOWK 220.

SOWK 322. Social Policy and Social Services (3) It. Social problems, social policy, and social services as interrelated areas. Basic models for evaluating and influencing social policy. Prerequisite: SOWK 321.
SOWK 325. Social Work Practice I (3) I, II. Components of generic social work practice; problem identification, selection of interventive techniques, development of skills. Prerequisites: SOWK 321, junior standing, and social work major.
SOWK 326. Social Work Practice II (3) I, II, summer. Social work practice models, strategies for community organization and change. Prerequisites: SOWK 325, junior standing, and social work major.

SOWK 330. Rural Social Work Assessment (3)
I. Issues involved in rural social work practice. Visitation of selected rural agencies, assessment of needs and services in selected agencies. Prerequisites: SOWK 220 and permission of instructor.
SOWK 332. Law for Social Workers (3) I. Legal issues related to social work; court procedure, crime, poverty, income maintenance, and family law. Prerequisite: junior standing.
SOWK 400. Topics in Social Work (1-3). On demand. Courses being considered for offering on regular basis. May be repeated.
SOWK 423. Field Instruction (12) I, II, summer. Experience working in selected social agency under supervision. Emphasis on practice rather than observation. Weekly seminar required. Application deadline: May 15 of school year before placement. Prerequisites: senior standing, social work major, and 2.5 GPA in core courses. Graded S/U.

SOWK 430. Practice Skills Seminar (2) I, II, summer. Faculty and field instructors conjointly teach this course. Conceptual frameworks, precise techniques and practitioner styles are considered as they underlie the student's problem solving in field instruction. Taken concurrently with SOWK 326 and 423. Graded S/U.
SOWK 470. Independent Study (1-3) I, II, summer. Student designs and carries out study or special project in area of interest. Prerequisite: junior standing, social work major, faculty sponsor, and permission of program director. May be repeated up to six hours.

## Sociology (SOC)

T $\uparrow$ SOC 101. Principles of Sociology (3) I, II, summer. Elements and concepts of social organization, social change, and group relationships.
T $\$$ SOC 202. Social Problems (3) I, II, summer. Sociological analysis of contemporary social problems. Prerequisite: SOC 101.
*SOC 210. Sociology of Religion (3). Role of religion in society; influence of religion upon society and effects of social structure on religious beliefs. Prerequisite: SOC 101.
I $\downarrow$ 231. Cultural Anthropology (3). Basic concepts and objectives in study of culture. Range of cultural phenomena and approaches to their study.
SOC 289. Field Study in Applied Sociology (1-3) I, II, summer. Field experience in an applied sociology setting. May be repeated once. Only three hours may be applied to a sociology major or minor. Prerequisite: Six hours in SOC. Graded S/U.
-SOC 300. Topics in Sociology (1-3). On demand. Courses being considered for offering on regular basis. See class schedule for listing. May be repeated. Prerequisite: SOC 101.
©SOC 301. Social Psychology (3). Social behavior; process of interaction and interpersonal influence. Prerequisites: SOC 101 and PSYC 201.
SOC 302. Introduction to Classical Sociological Theory (3). Major theories and concepts of sociology. Prerequisite: SOC 101.
SOC 303. Introduction to Contemporary Sociological Theory (3). Concepts and frames of reference of major contemporary theories. Prerequisite: SOC 101.

SOC 311. Community and Urban Sociology (3). Communal life from beginnings in folk society; contemporary urban-metropolitan communities, folk urban contrasts, and community types. Prerequisite: SOC 101.
SOC 312. Population and Society (3). Population growth and distribution; bearing on current economic, political, and social problems. Prerequisite: SOC 101 or consent of instructor.
SOC 313. Fertility and Family Planning (3). Sociological causes and consequences of human fertility patterns with emphasis on trends and differentials in the United States, including: fertility decision making, value and costs of children, contraception and abortion, unplanned parenthood, voluntary childlessness, illegitimacy, sex education and related public policies. Prerequisite: SOC 101.
SOC 314. Popular Music and Society (3). Formal organization of music industry and its impact on American society. Each facet of the industry examined: performer, production, marketing, record buying. Prerequisite: SOC 101.

SOC 315. American Society (3). Models of contemporary American society, dominant value orientations. Prerequisite: SOC 101.
-SOC 316. Minority Groups (3). Analysis of ethnic and minority groups in American society; conditions that favor and hinder acceptance of such groups as integral elements in national population. Prerequisite: SOC 101.
SOC 317. Social Stratification and Poverty (3). Inequalities in distributions of wealth, power, and prestige in societies. Types of systems of inequality; caste, estate, class. Consequences of inequalities for society as whole and for segments of society; educational-
occupational opportunities, racial-ethnic relations, social mobility, social change. Prerequisite: SOC 101.
SOC 318. Social Organization (3). Sociological concepts, theories, and models of contemporary complex organizations; impact of social psychological factors on organizational effectiveness, relationship of systems theory to problems of organizational design and behavior. Prerequisite: SOC 101.
SOC 319. Alcohol and Public Policy (3). The social psychology of alcohol abuse with respect to the incidence, causes, and social control of problem drinking. Policy issues considered include those relating to alternative prevention, treatment and intervention strategies. Prerequisite: SOC 101, 301.

SOC 320. Computers and Society (3) Impact of computers on society and the social forces prompting the rapid and widespread adoption of computer technology. Protection of personal privacy, changing labor force composition, the cashless society, modification in beliefs and values, the future of post-industrial society. Not a programming course.
sOC 331. Contemporary Cultures (3). Culture area(s) emphasized varies with staff and student interest. Area announced in schedule of classes (Africa, Europe, Near East, Native North America, Latin America, Asia, Pacific). May be repeated to 12 hours. Prerequisite: SOC 231 or consent of instructor.
SOC 332. Archaeology (2) Prehistory of man; early cultural development throughout world. Prerequisite: SOC 231.

SOC 334. Anthropology and Contemporary Human Problems (3). Contemporary cultures as collective patterns of living and attempts to create more human way of life. Methods of depicting and interpreting cultural codes of behavior, thought, feeling. Prerequisite: SOC 231 or consent of instructor.

SOC 335. Medical Anthropology (3). Crosscultural study of health and disease patterns in human populations. Emphasis on influence of cultural and ecological factors in the response to illness in traditional, rural, ethnic, and urban communities.

SOC 341. Juvenile Delinquency (3). Analysis and processes of development, treatment, prevention, and control of juvenile delinquency. Prerequisite: SOC 101.
SOC 342. Deviance and Social Control (3). History of attempts to define and explain deviant behavior. Social conditions and processes associated with careers of deviants; relationship of deviancy to problems of social control. Prerequisite: SOC 101.
SOC 344. Deviant Sexual Behavior (3). Sociological perspective on sexual behaviors stigmatized in U.S.; such aspects as prevalency, social contexts of occurrence, effects on society, sources and impacts of societal reaction, especially criminal law. Prerequisite: SOC 101.
SOC 352. Collective Behavior (3). How new social groupings and order arise from unstructured situations. Behavior of such collectivities as riots, mobs, and crowds. Prerequisite: SOC 101.
-SOC 361. The Family (3). Traditional and contemporary family types; current similarities and differences of family organization in various cultural environments. Prerequisite: SOC 101.
SOC 369. Introductory Statistics (3) I, II. Data presentation, measures of dispersion, correlation, regression, probability, probability distributions, sampling distributions, hypothesis testing, and analysis of variance. Prerequisite: SOC 101.
SOC 370. Introductory Methodology (3) I, II. Survey course on research methods in sociology: nature of science, theory construction, operationalization of a research problem, alternative research designs (including evaluation), instrumentation, data collection and data analysis. Prerequisite: SOC 101 or consent of instructor.

SOC 371. Applied Survey Research (3). Practical experience in survey research in an applied context: policy issues, problem formulation, measurement, questionnaire-interview design, sampling procedures, data collection, electronic data processing, interpretation and report writing. Prerequisites: SOC 101, 369, 370 or consent of instructor.
SOC 395. Workshop on Current Topics (1-4). On demand. Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format. Requirements usually completed within time format. May be repeated if topics differ, on approval of adviser. Graded S/U.
SOC 404. Social Gerontology (3). Problems of aged in contemporary society. Social gerontology as field of interest of interdisciplinary nature; emphasis on socio-economic approach. Prerequisite: SOC 101.

SOC 414. Society and the Environment (3). Present issues and problems of human environment from a sociological perspective. Special emphasis on analysis of the present problems of resources, pollution, technology, population, consumerism and the use of energy.

Soc 415. Induatrial Sociology (3). Industrialization as a social process, fabor force dynamics, models of organization, human relations, nature of work and job satisfaction. Prerequisite: SOC 101.
Soc 415. Politicel Socioiogy (3). Political behavior in society from standpoint of both classical and contemporary sociology. Prerequisite: SOC 101.
SOC 4tr Sociolegy of Sport (3). Sociological concepts and theories to investigate sporit as soctal institution and relationship to other social instivtions; organizational theory and small group research applied to sport, social psychological aspects of sports. Prerequisite: SOC 101.
SOC 4t Sociai Change and Development (3). Theories of social change, coniemporary technology, current social trends and their consequences. The problems of development, raditional and non-iraditional efforts to achieve social change, planning and predicing social change. Prerequisite: SOC 101.
今SOC Ad1. Erminology (3). Nature, causes, treatment, and prevention of crime. Prerequisite: SOC 101.
SOC 442. Corrections (3). Socio-psychological approach to origins and development of federal, state, and local penal instiutions. Prerequisíte: SOC 101.
Soc ans. White tellit and Organized Crime (2). Criminal behavior wilhin and by organizations; analyses of employea theit, graft, corporate crime; governmental crime, professional crima, syndicated crime. Prerequisite: SOC 101.
soc 449. Feld werk, Correcthns (1-2). Field work experience in approyed corrections agency. Arrangements (usualiy one full day per week plus individual conferences and group seminiar for two consective quarters) must be approved in advence by instructor. May be repeated once. Frerequisite: senior standing. Graded $\mathrm{E} / \mathrm{U}$.
SOC 453. Ethnological Theery (3). Anthropologleat theories and varying uses of concept of culture in social sciences. Prarequisites: SOC 231 and consent of instructor.
soc tace. Famiy and gem poles (3). Theoretical and empirical literature on tamily and sex roles; socialization, changing nature of women's and men's roles and prospects for future institutional sources of womeri's and men's roles in oher cultures. Prerequisie:: SOC 101
SOC 453. Leisure, Work, and hetrement (3). Sociological analysis of three aspects of life cyole. Crisis in personal life occasioned by each of these stages and by transitions from one stage to anothor. Prerequisite: SOC 101.
soc 4rd. Readings, Research and internship (i-8) 1 , 1 , summer. Supervised independent work in selecied areas. Extensive reading of more acivanced literature, planned research, or field placement in an approved setting. May be repeated, bui cannoi exceed a total of 12 hours. Prerequisites: junior standing and a minimum of 12 hours of accumulated credit in regularly scheduled SOC courses. Prior written permission of instructor and department chair required. Graded S/U.
SOC 480. Sentor Seminar (3). On demand. Selected topics in sociology. Recent seminars have included sociology of women, individual and sociology, contemporary social critics, the iamily, allernatives and critiques. May be repeated Frerequisites: SOC 101 and consent of instructor.

SOC 489. Internship (1-5) I, II, summer. Provides practical experience in applied sociology such as criminology, hurnan services, population studies, community planning, and survey research. May be repeated. Only five hours may be applied to SOC major or minor. Prerequisite: 12 hours in SOC. Graded S/U.

## Spanish (SPAN)

Entering students who had Spanish in high school should take the placement test during summer preregistration or prior to enrollment in a course.
T1 SPAN 101. Elementary Spanish I (4) I, II. Beginning oral-aural study of language with attention to grammar. Four class periods and scheduled oral practice each week.
If SPAN 102. Elementary Spanish II (4) I, II.
SPAN 101 continued. Four class periods and scheduled oral practice each week. Prerequisite: SPAN 101 or one year of Spanish in high school.
ISPAN 111. Hispanic Cultural Series I (4) I, II. Study of Hispanic cultures, combined with development of language awareness essential for reading comprehension. Discussion in English. No laboratory.
ISPAN 112. Hispanic Cultural Series II (4) I, II SPAN 111 continued. No laboratory. Prerequisite: SPAN 101 or SPAN 111 or one year of Spanish in high school.
SPAN 141. Conversational Spanish for Medical Personnel (3). Practice in speaking and understanding oral Spanish; essential expressions, questions, and directions needed by medical personnel.
f) SPAN 201. Intermediate Spanish I (3) I, II. Grammar review. Development of the four skills. Three class periods and laboratory practice each week. Prerequisite: SPAN 102 or two years of Spanish in high school.
IT SPAN 202. Intermediate Spanish II (3) I, II. SPAN 201 continued. Three class periods and laboratory practice each week. Prerequisite: SPAN 201 or three years of Spanish in high school.
IT SPAN 211. Hispanic Cultural Series III (3) I, II. Development of reading comprehension in Spanish using cultural materials concerning Spain. Conducted in English. Prerequisite: SPAN 102, 112 or two years of Spanish in high school.
I SPAN 212. Hispanic Cultural Series IV (3) IIII. Development of reading comprehension in Spanish using cultural materials concerning Spanish America. Conducted in English. Prerequisite: SPAN 211 or SPAN 201 or three years of Spanish in high school.
SPAN 221. Hispanic Songs (1)I, II. Traditional and popular songs from various Hispanic countries, sung in Spanish; emphasis on study of texts and pronunciation. May be repeated to maximum of three hours. Prerequisite or corequisite: SPAN 101, or consent of instructor.
SPAN 231. Hispanic Folk Dancing (1) ! 111 . Traditional dances of Spain and Spanish America, especially those of Mexico and Colombia. Learning and performance of dances accompanied by regional and historical background. May be repeated to maximum of two hours. No prerequisite.
SPAN 351. Spanish Composition and Conversation I (3). Development of skill in speaking and writing, with appropriate grammar review. Prerequisite: SPAN 202.

SPAN 352. Spanish Composition and Conversation II (3). Continued development of skill in speaking and writing, with appropriate grammar review. Prerequisite: SPAN 202.
SPAN 361. Hispanic Literature in Translation (3). Literature of a specific country, genre, time period, author or theme. May be repeated for credit once if topics are clearly different. Does not count toward major, minor or foreign language requirement. No prerequisite.

SPAN 367. Introduction to Spanish Peninsular Literature (3). Outstanding authors, works and movements of Peninsular literature from the Middle Ages to the present. Prerequisite: SPAN 351 or SPAN 352 or consent of instructor.
SPAN 368. Introducition to Spanish American Literature (3). Outstanding authors, works and movements from the time of discovery to the present. Prerequisite: SPAN 351 or SPAN 352 or consent of instructor.
SPAN 371. Spanish Civilization (3). Political, social, intellectual, artistic development of Spain. Prerequisite: SPAN 351 or SPAN 352.
SPAN 377. Civilization of Mexico and the Caribbean (3). Political, social, intellectual, artistic development of Mexico, Central America, and Spanish-speaking islands of the Caribbean. Prerequisite: SPAN 351 or SPAN 352.

SPAN 378. Civilization of South Amertca (3). Political, social, intellectual, artistic development of Spanish-speaking countries of South America. Prerequisite: SPAN 351 or SPAN 352.

SPAN 380. Introduction to Spanish-English Bilingualism (2). Concepts and principles of bilingual-bicultural programs in the United States. Prerequisite: SPAN 202 or equivalent.
SPAN 382. Spanish Business Correspondence (2). Spanish for commercial purposes; business letter writing, Prerequisite: SPAN 351 or SPAN 352.
SPAN 431. Spanish American Fiction (3). Major authors and works from literary movements of the 19th and 20th centuries, with emphasis on either regionalism or the contemporary novel. Prerequisite: SPAN 368.
SPAN 441. Medieval and Golden Age Literature (3). Representative masterpieces of Spanish literature from the Middle Ages and the Siglo de Oro: Epic, poetry, novel, and theater. Prerequisite: SPAN 367.
SPAN 442. Spanish Literalure of the Nineteenth Century (3). Outstanding works of the 19th century; romanticism, realism, naturalism, prose and poetry. Prerequisite: SPAN 367.

SPAN 444. Spanish Literature of the Twentieth Century (3). Outstanding works from the generation of 1898 to the present, poetry and prose. Prerequisite: SPAN 367.
SPAN 450. Advanced Grammar and Composition (3). Grammar and composition, especially appropriate for future teachers of Spanish. Prerequisite: SPAN 351 and SPAN 352.
SPAN 455. Applied Linguistics (3). Phonological, morphemic, syntactical, semantic aspects of Spanish; application to language learning and teaching. Prerequisite: SPAN 351 and SPAN 352 or consent of instructor.
SPAN 463. Career Spanish (3). Development of translation skills (Spanish to English and English to Spanish) on materials representing a wide range of technical, professional, and business careers. Prerequisile: SPAN 351 and SPAN 352.

SPAN 470. Readings in Hispanic Literature (1-3). Independent reading for the advanced student who wishes to study a particular period or author. Prerequisite: consent of department chair and instructor.
SPAN 481. Spanish-American Literature I: Discovery to Modernism (3). Representative authors from the Chroniclers through the Romanticists; prose and poetry. Prerequisite: SPAN 368 or consent of instructor.

SPAN 482. Spanish-American Líterature II: Modernism to the Present (3). Representative authors from Modernism and subsequent 20th century literary developments; prose and poetry. Prerequisite: SPAN 368 or consent of instructor.
SPAN 488. Contemporary Mexican Literature (3). Outstanding works of the 20th century. Prerequisite: SPAN 368 or consent of instructor.

SPAN 489. Hispanic Studies (3). Intensive study of an author, literary school, genre, or selected theme. May be repeated if topics are clearly different. Prerequisite: SPAN 367 or SPAN 368.

## Speciall Education (EDSE)

EDSE 311. Exceptional Child in Regular Class-
room (2) I, II, summer. Teaching excpetional handicapped children in alternative settings. C/F hrs.: 10.
EDSE 395. Workshop on Current Topics (1-3) On demand. Intensive educational experience related to skill development, content update, materials development. Typically, all-day concentrated time format. Requirements usually met within format. May be repeated on approval.
EDSE 421. Young Handicapped Child in Early Childhood Classroom (3) II nad on demand. Knowledge and skills essential to functioning of general education teacher to mainstreamed early childhood classroom. C/F hrs.: 10.
EDSE 431. Education of Exceptional Children (3) I, II, summer. Problems of exceptional school children, mentally retarded, learning/behavior disorders, speech/hearing handicapped, visually handicapped, gifted; etiology, diagnosis, personal-social problems, and prognosis. C/F hrs.: 11.
EDSE 432. Principles and Purposes of Special Education (2) On demand. Functions of public school and governmental agencies in providing educational services for exceptional children.
EDSE 433. Education of Mentally Retarded Children (2) I, II, summer. Understanding and teaching educable and trainable mentally retarded children: etiology, diagnosis, theory, educational procedures. C/F hrs.: 20. Prerequisite: EDSE 431 or concurrently.
EDSE 437. Occupational Orientation and Job Preparation for Educalbe Mentally Retarded Children (3) I, II, summer. Responsibilities of special class teacher for developing employable skills. Prerequisites: EDSE 431, EDSE 433, and EDSE 451. C/F hrs.: 25.
EDSE 433. Problems in Evaluating, Selecting, and Adapting Specialized Instructional Materials for Exceptional Pupils (3) On demand. Analysis, comparison and use of materials with pupils of specified exceptionality in terms of educational and administrative merit. Prerequisites: FDSE 431, EDSE 451, or consent of department.
上OSE 440. Curriculum Development and Methodology for Teaching Trainable Mentally Retarded Children (3) I, on demand. Materials and techniques emphasizing development and appropriate skills with practical applications.
Prerequisities: EDSE 431, EDSE 451, EDSE 433; or consent of instructor. C/F hrs.: 25.

EDSE 441. Education of the Gifted and Talented Child (3) !. Nature and needs of gifted/talented, identification techniques, curriculum planning and development, teaching strategies and techniques, resources and materials available to teachers, program evaluation for gifted/talented. C/F hrs.: 10.
EDSE 442. Applied Classroom Management with Exceptional Children (3) I, II, summer. Arrangement of environments for handicapped individuals which facilitate learning, recording, analyzing behavior. Reinforcement schedules and criteria for selection; application of therapy and communicating management programs to parents. Prerequisites: EDSE 431, 433, 451 or concurrently. C/F hrs.: 15.
EDSE 443. Practicum with Exceptional Children (1) I, II. Individual participation, and supervised practicum experiences. May be repeated to nine hours. Prerequisite: should be taken concurrently with EDSE 447, 448, 453. Graded S/U. C/F hrs.: 44.
EDSE 445. Adult Service Options for Persons with Moderate to Profound Handicaps (2) I and summer on demand. Sheltered workshops in rehabilitation of mentally retarded. Techniques for job analysis, analyzing skills, specific jobs and job areas. Prerequisites: EDSE 431, EDSE 433, EDSE 451. G/F hrs.: 25.
EDSE 447. Clinical Approaches to Instruction and Language Arts for the Mildiy and Moderately Handicapped Student (3) I, II. Methods, procedures utilized in providing clinical approach to individualization of instruction and methods, materials in reading, spelling, oral and written communication for the mildly and moderately handicapped. Prerequisites: should be taken concurrently with EDSE 448, 453 and 443. C/F hrs.: 14. Lab fee.
EDSE 448. Clinical Approaches to Instruction and Mathematics, Science, and Social Studies for the Mildly and Moderately Handicapped Student (3) I, II. Accommodation and adaptation of curriculum methods and materials for instruction of mathematics, science, and social studies, with application to a life skills curriculum for the mildly and moderately handicapped student. Prerequisites: should be taken concurrently with EDSE 447, 453 and 443. C/F hrs.: 14.
EDSE 451. Educational Understanding of Children with Learning and/or Behavior Disorders (3) I, II, summer. Multiple origins and educational significance of specific learning disabilities and/or behavior disorders. Prerequisite: EDSE 431 or concurrently. C/F hrs.: 15.
EDSE 453. Educational Evaluation of Children with Learning Disabilities and/or Behavior Disorders (3) I, II. Identification and analysis of specific learning disabilities as direct or contributing factors in educational and behavioral failures of otherwise educationally competent children. Prerequisites: should be taken concurrently with EDSE 447, 448 and 443 . C/F hrs.: 15. Lab fee.
EDSE 456. Educational Neuropsychology of the Exceptional Child (3) I, II. Theories and research related to the function and development of the brain as related to language, speech, reading, writing, spelling, mathematics. Major attention given to brain dysfunction, assessment, instructional approaches. Prerequisites: EDSE 431, EDSE 433, EDSE 451. C/F hrs.: 10.
EDSE 457. Parent Education and Interaction (3) I, II, summer. Approaches for educators in communicating with parents of handicapped children. Counseling parents and families; understanding legislated rights of the handicapped child and the role of educators/parents in instruction. Prerequisites: EDSE 431, 433 or concurrently. G/F hrs.: 8.

EDSE 461. Survey Course of the Hearing Impaired (3) I. History, philosophy, psychology, and education of the hearing impaired. Definitions of terms, structure of the ear, causes of deafness, types of hearing impairments, classification of hearing impairments, educational needs. Prerequisites: EDSE 431, EDSE 451, and PSYC 324. C/F hrs.: 15.
EDSE 462. Beginning Methods of Instruction of the Hearing Impaired (3) I. Observation through public schools; review of commercial textbooks (K-HS). Developing lesson plans, unit plans, IEPs plus techniques of teaching supplemented by audio-visual workshops and demonstrations. Prerequisites: EDSE 431, 451, PSYC 324. C/F hrs.: 15.

EDSE 463. Advanced Methods of Instruction for the Hearing Impaired (3) II. This course stresses a mini-practicum experience in the public school program. A block period of four hours, three times per week. Stress on lesson plans, unit planning, development of materials and demonstration of teaching. Prerequisites: EDSE 431, 451, 461, 462, 464, CDIS 434, PSYC 324. C/F hrs.: 25.

EDSE 464. Basic Language Instruction for the Hearing Impaired (3) l. Students will observe and evaluate language; develop a language picture file; know how to analyze language through a hierarchy of language development. Compare normal language with hearing impaired language. Approaches to teaching both receptive and expressive language. Prerequisites: EDSE 431, 451, and PSYC 324. C/F hrs.: 15.

EDSE 465. Advanced Language Instruction for the Hearing Impaired (3) II. Teaching structured language - Fitzgerald Key; teaching language patterns; developing spontaneous language, language charts, stories through oral/written form. Students will analyze and compare language samples of hearing impaired children. Prerequisites: EDSE 431, 451, 461, 464, CDIS 434, PSYC 324. C/F hrs.: 15.

## EDSE 470. Education of Multi-Handicapped

 Children (3) I, summer. Educational dynamics, strategies, logistics, and responsibilities involved in socialization and education of multihandicapped children. Prerequisites: EDSE 431, EDSE 433, EDSE 451. C/F hrs.: 15.EDSE 490. Problems in Education (3) On demand. For advanced students wanting to conduct intensive study of selected problems in education. May be repeated to six hours; undergraduate credit only. Prerequisites: consent of the department.
EDSE 492. Student Teaching (1-10) I, II. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required for elementary and/or kindergarten-primary certification. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs.: 300. May be repeated. Graded S/U.
EDSE 497. Student Teaching (1-10) I, II. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Fee: $\$ 5$ per credit hour. Eligibility requirements must be met. C/F hrs.: 300. May be repeated. Graded S/U.

## Speech Communication (SPCH)

\|SPCH 102. Speech Communication (3) I, II, summer. Basic principles of interpersonal, small-group, and public communication; field of speech communication, with attention to individual needs.

SpCu 351. Administration of Co-curricular Speech Programs (3) Summer. Required of all speech majors and minors in College of Education. Techniques for handling secondary co-curricular speech programs such as debate, forensics, and theatre. Field experiences required. Prerequisites for majors: EDCI 372 and IPCO 204 and THEA 241 and THEA 243 and THEA 341.

## Sport Management (SMD)

SRD 24E. Aquatics Operation and Management (3) l even years. Designing, construction, planning, programming, operating and administering aquatic facilities. Prerequisites: CHEM 115 , BUSE 101.
STE 250. Computer Utilization in HPER Services (3) I, H. Manipulation and application of microcompuier software to selected problems in sport management, recreation and activity settings; two lectures, two lab hours per week.
SMO 29\%, Practicum in Athetic Training (1-2) 1. Athietic training clinical experience working with a varsity intercollegiate sports program, under the supervision of an athletic training staff member. Bi-monthly seminars. May be repeated for a total of 3 credits. Prerequisites: SMO 310 and permission of instructor.

Smb 30E. Sporis Officiaung: (Sub-Tite) (i) 1 11. Lecture and laboratory experience in the tules and mechanics of officiating; prepares for OHSAA examination. May be repeated. Two lab hours per week.
SWO 306A - Basketball (1) II. (odd years) SHO $306 E$ - Football (1) I. (even years) SHio 30se - haseball/Softball (1) I. (odd years) 3ND 3060 - Track/Fieid (1) Il. (even years) Sho 306 E - Volleyball (1) 1 .
San 30er - Soccer (1) On demand.
3H0 306G - Wresiling (1) On demand.
SHLD 306t - Swimming/Diving (1) On demand.
Sand 310. Care anct Prevention of Sports injuries (2) I, II. Prevention, evaluation, and temporary care of injuries; laboratory experience in bandaging, strapping, evaluating case studles, and use of the training room. One lecture, two lab hours per week. Prerequisite: C or better in PEP 230 or permission of instructor.
Sthe 322. Princlples, Ethics, and Problems of Athletic Coaching (3) 1,11 . Non-technical, "off-the-field" aspects of athletic coaching educational implications; coaching ethics; public relations; equipment; financing; liability; coach-athlete rapport.

SThD 329. Coaching Football (3) I. Development of personal skills and understandings in foolball; team administration, organization, philosophy, theory, fundamentals, strategy, methods and responsibilties of coaching toctuall. Two lectures, two lab hours per week. Prerequisite: sophomore standing.
SMO 330. Coaching Traci/Fleld (2) II. (odd years). Administretion, orgenization, philosophy, theory, strategy, methods and responsibilities of coaching track and field. One lecture, two lab hours per week. Prerequisite: PEP 123 - Track/ Fleld.
SMO 33\%. Coaching Basketball (2) 1. Administration, organization, philosophy, theory, fundamentais, strategy, methods and responsibilities of coeching basketball. One lecture, two lab hours per week. Prerequisite; PEP 203 - Baskeiball.

SMD 332. Coaching Baseball (3) I. Development of personal skills and understandings in baseball; administration, organization, philosophy, theory, strategy, methods, drills, field preparation, and responsibilities of coaching. Two lectures, two lab hours per week. Prerequisite: sophomore standing.
SMD 333. Coaching Volleyball (2) II (odd years). Administration, organization, philosophy, theory, sỉrategy, methods, and responsibilities of coaching volleyball. One lecture, two lab hours per week. Prerequisite: PEP 124 - Volleyball.
SMD 334. Coaching Softba! (2) II. (even years). Administration, organization, philosophy, theory, strategy, methods, and responsibilities of coaching softball. One lecture, two lab hours per week. Prerequisite: PEP 217 - Softball.

SMD 336. Coaching Swimming/Diving (3) II. (even years). Administration, organization, philosophy, theory, strategy, methods, and responsibilities of coaching swimming and diving. One lecture, Iwo lab hours per week. Prerequisite: PEP 218 - Swimming.
SMD 361. Applied Exercise Physiology (3) II. Metabolism, body composition, cardiac pathophysiology, training for fitness, exercise prescription and instrumentation. Practical applications and assessments are presented. Prerequisite: PEP 360.
SND 387. Practicum-Physical Activity and Sport (4-5) I, II, summer. Under supervision of SMD Division of School of HPER; petitioning required before registration; credit hours approved separately by program area. Prerequisites: formal matriculation into the sport management program and approval of appropriate division faculty.
SMD 390. Legal Issues of Sport and Recreation (3) I. Negligence liability; control of amateur, professionai, and school sport; violence/crowd control; product liability; risk management; selected current issues. Prerequisite: Junior standing.

SMD 391. Practicum in Athletic Studies (2) I, II. For athietic coaching and athletic training minors only. Field experience with interscholastic athletic programs in an approved setting; weekly on-campus seminars; may be repeated once by athletic coaching minors: Prerequisites: athletic coaching minors-SMD 310 and 328, current certification in American Red Cross CPR and Advanced First Aid and Emergency Care, SMD coaching course in the appropriate sport and permission of instructor; athletic training minors-C or better in PEP 230, B or better in SMD 310 and 328, current certification in American Red Cross CPR and Advanced First Aid and Emergency Care, minimum of 90 credit hours, minimum of 600 clinical clock hours in athietic training under supervision of certified athletic trainer and permission of instructor.

SMD 395. Workshop on Current Topics (1-3). On demand. Intensive educational experience in selected topics related to skill development, content update, or material development typically, an all-day or similar concentrated time format.
SMD 410. Advanced Techniques of Athletic Training (3) II. (odd years) Mechanism of sport injuries, recognition of severity, examination, treatment, and rehabilitation of specific areas of injuries. Prerequisites: C or better in PEP 230, B or better in SMD 310 or consent of instructor.

SMD 411. Therapeutic Exercise and Athletic Training Modalities (3) II, even years.
Examination of the application and physiological response to selected therapeutic modailties and exercise techniques available to the athletic trainer. Prerequisites: SMD 310, PEP 230 and permission of instructor.

SMD 421. History and Philosophy of Sport (3) 1, II. Major historical and philosophical developments in sport.
SMD 423. Scientific Foundations of Physical Filness (3) 1. Assessment and development of physical finess. Prerequisite: PEP 360.
SMD 425. Women and Sport (3) II (odd years). Historical, cultural, and physiological considerations of women's participation in sport.
SMD 429. Principles and Problems of Athetic Conditioning (2) I, II. Physiological foundations of conditioning and the basic fundamentals of conditioning techniques based on principles of strength, power, endurance, speed, etc., relevant to athletic fitness and performance. Prerequisites: BIOL 332 or PEP $360 / 443$ or consent of instructor.

SMD 431. Program Planning and Managerient for Recreational and Youth Sports (3) II. Planning, management, financing, promoting of intramural, club, youth, community and special sport programs. Prerequisite: Junior standing or permission of instructor.
SMD 440. Designing and Directing of Fitness and Sport Programs (3) It. Objectives, transactions and procedures to conduct professional physical activity and sport programs. Prerequisites: SMD 387 and SMD 423, or SMD 431.
SMD 470 . Independent Study in Sport Management ( $1-3$ ) I, 11 , summer. An indepth study project of a topic of particular significance to the student; project must be approved by project supervisor and program area chair prior to registration; may be repeated. Prerequisite: by permission.
SMD 487. Practicum - Physical Activity and Sport ( $1-5$ ) I, II, summer. Under supervision of Sport Management Division of School of HPER, petitioning required before registration; credit hours approved separately by program area. Prerequisites: SMD 387 and approval of appropriate division faculty.
SMD 489. Internship in Sport Mlanagement (12) I, II, summer. Field experience for sport management majors only. Petitioning required before registration. Prerequisites: 52 hours in major field, satisfactory completion of SMD 387. GPA of 2.5, an average of 2.7 in the major field, approval of appropriate division facuity, and HED 313. (Option I majors only must complete HED 313 as prerequisites).
SMD 490. Professional Resources in Sport Activities (3) I, II. Professional resources for leadership roles in sport and activity. Prereauisite: SMD 387.

## Technology (TECH)

(Additionat costs for materials in all laboratory experiences)
TECH 121. Industrial Mathematics (3) I, II, summer. Mathematics as applied in industry and technology. Problems in geometry, algebra, trigonometry. Open only to freshmen and sophomores.

TECH 152. Introduction to Technology - The Man-Made World (3) I, II, summer. Through active participation in a variety of individual small group, and class problem solving activities, students are introduced to principles and developments which consider technology as shaper of the man-made world, man's caree and other roles, and influences of future.
†TECH 218. Management and Supervision (2) I. Responsibilities of management and supervision within manufacturing industries; organization, duties and responsibilities, human relations, training, promotion, and managementemployee relations. Use of case studies and personal experiences of guest speakers.
TECH 223. Mechanical Power Transmission (3) II odd numbered years. Mechanical drive systems and applications. Design, operation, maintenance of mechanical power systems used in industry. Four hours of lecture and laboratory. Prerequisite: ET 191.
-TECH 289. Cooperative Education (3 or 5) I, II, summer. Work and study in business, industry, service, or government agency in schoolapproved 10 or 16 week, paid, full-time position related to student's intended areas of concentration. Prerequisites: consent of department. Graded S/U.
TECH 302. Technology Systems in Societies (3) I, summer on demand. Current issues and their relationship to technology and systems in various cultures throughout the world; emphasis on explaining technological behaviors, and on showing how technology permeates all human affairs. Prerequisites: TECH core and junior status or consent of instructor.

TECH 313. Handicrafts (3) I, II, summers on demand. Creative possibilities inherent in wide variety of materials and tool operations. Development of lifetime recreational interests, and abilities to direct activities in schools, camps for handicapped, and adult education. Four hours of lecture and laboratory.
TECH 322. Introduction to Technology - Manmade World (3) I, II, summer. Individual, small and large group problem solving activities around principles and developments which consider technology as shaper of man-made world, man's career and other roles, influence on the future. For transfer students only. Obtain permission of college.
TECH 323. Fluid Power Transmission (3) Odd numbered years. Pumps, motors, valves, circuits, applications of hydraulic and pneumatic power systems. Design, operation, maintenance of fluid power systems used in industry. Four hours of lecture and laboratory. Prerequisite: ET 191.
TECH 389. Cooperative Education (3 or 5) I, II, summer. Work and study in business, industry, service, or government agency in schoolapproved 10 or 16 week, paid, full-time position related to student's area of concentration. Prerequisite: TECH 289 and consent of department. Graded S/U.
TECH 391. Internal Combustion Engines (3) I, II, summer on demand. Otto (gasoline) or diesel cycles engines; emphasizes fundamentals of assembly, disassembly, testing and measurement procedures. One one-hour lecture and two two-hour laboratories. Prerequisite: ET 191 or consent of instructor.
TECH 402. Innovation in Technology (3) II, summer on demand. Techniques and procedures involved in innovation and experimentation related to technology; emphasis on product and prototype innovation, experimentation, problem solving, research and development, diffusion and adaption of innovations. Prerequisite: junior status or consent of instructor. Lab fee.
TECH 454. Energy Conversion and Power Transmission (3) On demand. Existing and developing systems of energy conversion and power problems of fuel efficiency, pollution, potential, maintenance and application. Four hours of lecture and laboratory. Prerequisite: ET 191.

TECH 457. Handicrafts for Recreation, Therapy and Teaching Professions. (3) I, II, Summers on demand. Creative possibilities using various materials and tools in development of personal lifetime recreational interests and skill in directing other in such activitles. Four hours of lecture and laboratory. Prerequisite: TECH 313 or permission of instructor.
TECH 480. Topics in Technology. I, summer on demand. Current trends and developments in industry and business, particularly as they have significance to equipment, materials, processes, systems and facilities related to the education of technologists. May be repeated on approval of adviser.
TECH 489. Cooperative Education (3 or 5) I, II, summer. Work and study in business, industry, service, or government agency in schoolapproved 10 or 16 week, paid, full-time position related to student's intended areas of concentration. May be repeated to six hours. Prerequisite: TECH 389 and consent of department. Graded S/U.

TECH 490. Problems in Technology. (1-3) On demand. For advanced students wanting to conduct intensive study of selected problems in technology. Prerequisite: consent of college. Graded S/U.

## Theatre (THEA)

$\dagger$ THEA 139. Dramatic Production (1) I, II. Laboratory course for student who participates as performer or technician in Firelands College productions. May be repeated to two hours. Any combination of THEA 139 and THEA 146 may not exceed two hours. Prerequisite: consent of instructor.
ITHEA 141. The Theatre Experience (3) I, II, summer. Art of theatre; heritage and contemporary values as humanistic discipline; importance as social/cultural experience; opportunity for some involvement in theatrical activities. Laboratory hours required.

- THEA 146. Dramatic Production (1) I, II, summer. Laboratory course for student who participates as performer or technician in University Theatre productions. May be repeated to two hours. Prerequisite: consent of theatre program. Graded S/U.

T THEA 202. Oral Interpretation (3) I, II, summer. Logical and aesthetic meaning in drama, prose, and poetry for oral performance; selection of materials for programs; and vocal and physical techniques of performance.
THEA 241. Principles of Acting (3) I, II. Basic acting techniques; applied to creating contemporary characters in realistic situations; imaginative, emotional and sensory responsiveness. Three two-hour meetings per week.

- THEA 243. Basic Theatre Technology (3) I, II. Elements of behind the scenes theatre practice, scenery and costume construction, rigging, lighting, and sound; organization and operation of production crews. Laboratory hours arranged.
THEA 302. Advanced Oral Interpretation (3) II. Analysis and communication of logical and aesthetic meaning as found in drama and other significant literature. Experimentation with various forms of oral interpretation such as reader's theatre, chorale reading. Emphasis on advanced, individualized work. Prerequisite: THEA 202.
THEA 339. Dramatic Production (1) I II. Laboratory course for student who participates as performer or technician in Firelands College productions. May be repeated to three hours. Any combination of-THEA 339 and THEA 346 may not exceed three hours. Prerequisite: consent of instructor.

THEA 340. Creative Dramatics (3) I, II, summer. Principles, methods, and laboratory experience in guiding dramatics for preschool, elementary, and secondary school children, as well as recreation programs. Creative approach to dramatic play, language development, storytelling, and story dramatization.
THEA 341. Directing (3) I, II. Theory and techniques of play direction. Laboratory hours arranged. Prerequisites: THEA 141 and THEA 241 and THEA 243 or consent of instructor.
THEA 342. Advanced Directing (3) II. THEA 341 continued. Each student directs at least one short play or series of short scenes. Prerequisite: THEA 341. Laboratory hours arranged.
THEA 343. Lighting Design (3) I. Theories and techniques of lighting stage productions; lighting instruments and equipment.
THEA 344. Intermediate Acting (3) Offered once a year. Understanding and creating characters that are different from the actor in style/or idiom; expressing the inner life of the character; particularizing the role. Prequisite: THEA 241 or consent of instructor. Three two-hour meetings per week.
THEA 345. Advanced Acting (3) II. Intensive and individualized laboratory work for advanced acting students. Three two-hour meetings per week. Prerequisite: THEA 241 and THEA 344 or consent of instructor.

- THEA 346. Dramatic Production (1) I, II, summer. Same as THEA 146 except for juniors and seniors. May be repeated to three hours. Prerequisite: consent of theatre program. Graded S/U.
THEA 347. Theatre History and Literature: Origins-1700 (3) I. History of theatrical production, major dramas and dramatists from primitive time through 1700.
THEA 348. Theatre History and Literature: 1700-Present (3) II. History of the theatrical production, major dramas and dramatists from 1700 to the present.
THEA 349. Costume Design (3) I. Basic principles of costume design for the stage; development and rendering of design concepts; use of historic, stylistic and fantasy elements in stage character realization.

THEA 350. Milestones in Black Theatre (3) II. Read, research and discuss/report on the aesthetics, dramatic intent, historical significance and production history of milestone black plays.
THEA 352. Musical Theatre (3) II. The history, theory, and staging techniques of musical theatre production in the United States.

THEA 395. Workshop on Current Topics (1-3) On demand. Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format. Requirements usually completed within time format. May be repeated if topics differ, on approval of adviser.

THEA 440. Children's Theatre (3) I. Producing plays for child audiences; application of concepts of child development on aesthetic problems of theatre for young audiences, through reading, discussion and participation.
THEA 443. Playwriting (3) I. Writer's workshop involving creation and production of original play for stage; discussion of process of playwriting and mounting a play for production. May be repeated.

THEA A44. Scene Design (3) II. Designing for stage, dramatic action of script as organic olement in design; effects of line, color, and mass on setting, decor, and lighting in enhancing action. Prerequisite: THEA 243 or consent of instructor.

THEA 446. Summer Theatre Performance (1-6) Summer only. Intensive laboratory work in study, preparation, and development of roles. Particular problems of performance in summer theatre. Prerequisite: consent of theatre program.

THEA 4\&\&. Summer Theatre Production (1-6) Summer only. Intensive laboratory work in scenery construction and painting, stage lighting, organization, and operation of backstage crews and technical theatre. Particular problems of technical production in summer theatre. Prerequisite: permission of theatre program.

THEA 449. Contemporary Issues in Theatre (3) On demand. Seminar for advanced students. Specific topics vary and depend on current trends in world theatre as identified by students and faculty members. Prerequlsite: consent of instructor.

THE A 450. Summer Theatre Management (1 6) Summer only. Intensive laboratory work in various aspects of theatre management; publicity, box office, house management, public reiations. particular problems of management of summer theatre. Prerequisite: consent of theatre program
THEA 4as. Theatre Intemship (1-12) I, II, surnmer. Supervised field experience in public or commerclal theatre company. Student must be recommended by adviser and approved by chair of theatre program unit. Open only to stưdent majoring in theatre. Only nine hours applicable to specialized program of BAC or BA degree. Graded S/U.
THEA 480. Problems in Theaire ( $1-3$ ) 1,11 , summer. For advanced student who wishes to do intensive study in theatre, independently, or in conjunction with courses regularly offered. May be repeated. Prerequisite: consent of theatre program.

## Visual Communication Technology (VCT)

(Additional costs for materials in all laboratory counses)
Vht 203. Visual Communication Technology (3) 1, II, summer. Visual communication theory and processes; television production, film making, display theory, slide presentations, multimedia production and image transfer systems. Four hours of lecture/laboratory. Lab fee.
© YCT 20e. Craphic Communications (3) 1,11 , summer. Major printing processes; concentration in offset lithography; line-photography, imege design, image assembly, photo conversion, Image carrier preparation, and image transler. Four hours of lecture/laboratory.
VCT 209. Screen Process Printing (3) I, summer. Hand cut and photographic screen process image conversion; reproduction art ("mechanical") preparation for screen process; single and multiple color process. Four hours of lecture/ taboratory. Prerequisite: VCT 203 or 208. Lab fee.

VCT 282. Photography I (3) I, II, summer Basic camera and darkroom techniques. Experiences in film processing and printing techniques as well as basic camera operation. Four hours of lecture/laboratory. Lab fee.
VCT 308. Photo Ofiset - Prepress (3) 1, II, summer. "Prepress" areas of graphic reproduction. Art preparation techniques, typography, line and halftone photography, exposure calibrating, and tone reproduction printing requirements. Cold type composition, spacing and copyfitting and paper specification. Four hours lecture/laboratory. Lab fee.
VCT 309. Photo Ofiset Printing Prep (3) I, II, summer on demand. Stripping, imposition procedures, and platemaking; offset lithographic printing press theory, maintenance and operation. Ink and paper in relationship to offset presswork. Theory and practical experience in four-color-process reproduction. Four hours lecture/laboratory. Prerequisite: VCT 208. Lab fee.

VCT 382. Photography II (3) | 11, summer. Photographic sensitometric, chemistry, optics, problem solving for specific photo problems and using techniques to produce consistent, quality black and white negatives and prints. Four hours lecture/laboratory. Prerequisite: VCT 282. Lab fee.
VCT 386. Animation Technology (3) on demand. Types and techniques of animation and animated films. Structured experiences in producing simple film and effector animations. Four hours lecture/laboratory. Prerequisite: VCT 203. Lab fee.
VCT 456. Color Process Photography (3) I, II, summer. Process photography for reproduction of photographs and illustrations in black and white and color. Halt-tones, duotones (black and color), mechanical color separation, photographic four-color-separation, color posterization, and color proofing systems. Four hours lecture/laboratory. Prerequisite: VCT 208 and VCT 309. Lab fee.

VCT 460. Photography (3) on demand. Research and experimentation in special effects photography and creative darkroom techniques. Four hours lecture/laboratory. Prerequisite: Permission of instructor. Lab fee.

VCT 465. Commerical Photography (3) I, II. Application of skills and knowledge pertaining to the professional field of commercial photography. Production requirements, studio management, and the use of large format cameras and advanced lighting techniques in both B\&W and color photography. Four hours lecture/ aboratory. Prerequisites: VCT 282, VCT 382 and ART 211. Lab fee.
VCT 466. Projected Communication (3) I, II. Communication problem solving through exploration and experimentation in 35 mm slide presentations; techniques in multiscreen, multi-image, and multimedia as well as special slide composition using a variety of techniques. Four hours lecture/laboratory. Prerequisites: VCT 208, VCT 282, and VCT 382. Lab fee.

VCT 467. Visual Communications Technology Synthesis (3) I, Il, summer on demand. Techniques of problem solving; coordination, scheduling; aesthetic and technical qualities of presentation. Four hours lecture/laboratory. Prerequisites: ART 211, senior standing. Lab fee.
VCT 468. Video Tape Recordings in Visual Communications Technology (3) 1, II. Both $1 / 2^{* \prime}$ and $3 / /^{\prime \prime}$ video tape productions. Television recording theory, production designing, and planning and use techniques with paraprofessional equipment. Four hours lecture/laboratory. Prerequisites: VCT 203. Lab fee.

VCT 482, Zone Photography (3) I, II. Theory, mechanics, and application of the zone system to all areas of photography. Designed to raise the student's level of awareness for the technical and creative content of a photograph. Four hours lecture/laboratory. Prerequisite: VCT 282 and VCT 382. Lab fee.
VCT 483. Color Photography (3) 1,11 . Theories and principles in production of color negatives, prints and transparencies for commercial and industrial photographic applications; emphasizes basic color sensitometry, quality control techniques and use of laboratory color films. Four hours lecture/laboratory. Prerequisite: VCT 382. Lab fee.

VCT 490. Problems in Visual Communication Technology (1-3) On demand. For advanced students wanting to conduct intensive study of selected problems in visual communication technology. Prerequisite: consent of college and instructor. Graded S/U.

## Women's Studies (WS)

IWS 200. Introduction to Women's Studies (3), I, II. Individual and collective achievements of women; roles women do and might perform; "nature" of women and ways it has been imagined in our own and other cultures. Required of all women's studies majors and minors.

WS 300.Topics in Women's Studies (3) 1, II. Topics of interest in studying women in subject area not offered in regular college course offerings. May be repeated twice if topics differ. No prerequisite.

WS 400. Senior Seminar in Women's Studies (3) II. Theories, methods, approaches to women's studies. Interdisciplinary research project required. Required of all women's studies majors and minors. Prerequisite: senior standing or permission of instructor.

WS 470. Independent Study in Women's Studies (1-3) I, II. Study project to be designed by student and member(s) of women's studies faculty in subject area not offered in regular course offering. Prerequisite: junior or senior standing.

# Administration and Faculty 

| Board of Trustees | Term Expires |
| :--- | ---: |
| M. Shad Hanna, Bowling Green | 1986 |
| Robert C. Ludwig, Marion | 1987 |
| Willam F. Spengier J., Toledo | 1988 |
| Melvin L. Murray, Fostoria | 1989 |
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A Accessible with telephones, fountains, no accessibie restrooms
B Accessible first floor only, limited facilities
C Totally accessible, limited facilities

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[^0]:    *Or a B.S. taboratory sequence in one of the sciences meets this requirement. A list of approved courses is printed in the
    College of Arts and Sciences Hanobook.
    "See Department of Mathematics and Statistics for placement test.

